

# ***Waste Management and Minimisation Plan***

## ***Rotorua's Waste Strategy 2016 - 2022***



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## **1 Foreword**

A rapidly increasing global population combined with economic growth is putting ever growing pressure on our resources. The capacity of the environment to cope with the effects of our activities is also under pressure in many parts of the world.

As a district in the Bay of Plenty and Waikato regions we have a responsibility to look after present and future generations by minimising the effects and impacts of our activities on our environment. We can expect our local communities, visitors and economic partners to increasingly scrutinise what we are doing, how we impact on our environment and how we propose to reduce our adverse impacts.

We can also expect that the cost of many of the key commodities and products will rise in real terms as resources come under greater pressure. A key success factor for Rotorua will be how efficiently we use the resources we have, how effectively we reduce our environmental impact and how we offer sustainable and affordable services to our communities. Sustainability is becoming increasingly vital not only for social, environmental and cultural outcomes but to our economic success also.

With this in mind the Rotorua Lakes Council agreed to prepare and adopt a new Waste Management and Minimisation Plan in 2015/16. The Plan represents a major step forward in that for the first time we offer our communities the opportunity to practice waste minimisation and resource recovery at home through enhanced kerbside collections and modified transfer stations. Through this plan we attempt to mitigate adverse impacts from our legacy operations of our landfill, reduce the health and safety risk associated with collection services and link all activity costs to one targeted source of revenue thus making the net cost of the activity transparent and easy to monitor.

This new plan is a key transition point to our journey towards a more responsible and sustainable commitment to protect our environment for future generations. There is no doubt that the Plan will not satisfy everyone. Some in the community may think it does not go far enough; others, too far but the Plan sets an ambitious but achievable work programme including future improvements for managing and reducing waste, while recognising the need for financial prudence and to gather better information upon which to base future decisions.





## THE OFFICE OF THE MAYOR



## FOREWORD

Tēnā koutou katoa

This Waste Management and Minimisation Plan paves a new direction for Rotorua Lakes Council in support of the shared Rotorua 2030 vision we developed with our community. In particular it gives effect to the Rotorua 2030 goals of enhancing our environment and building resilient communities; and to our 2016 priority of sustainable infrastructure and affordable, effective Council services.

The Waste Minimisation Act requires council's to assess their waste services. Rotorua Lakes Council has identified a range of issues and options around collection, recycling and the disposal of waste throughout our district. This plan will see waste-related activity become more effective, efficient, safer, and more accessible for our communities. Significant consultation has occurred with Rotorua residents during the development of this plan and the contributions received have directly shaped the service designs which are currently being implemented. This new waste management approach will:

- Significantly improve the safety of the public and our collections staff,
- Improve waste collection services so that they are more cost effective and efficient,
- Minimise waste and the harmful effect it has on our environment, and
- Sustain the mauri of our people and preserve our natural environment.

The improvements detailed within this plan will increase the level of recycling that is undertaken within the district and reduce the amount of waste being sent to landfill. The introduction of kerbside collection for recyclables and a switch to wheelie-bins that can collect data will provide the community with a modern system that can allow for a user-pays system over time. As our current waste collection vehicle fleet requires replacement, there is no better time to launch these new initiatives.

We have built strong relationships with our commercial partners who will facilitate collections and manage the operation of our landfill. We will continue to improve our services with them, by drawing upon their expertise and the knowledge that they have obtained over many years of successful activity.

We are committed to forging this pathway together with our community, in keeping with the motto on our district crest: *'Tatau tatau – We together.'*

*Mā te mahi tahi kā tutuki – we will succeed by working together.*

A handwritten signature in blue ink, reading 'Steve Chadwick'.

Hon Steve Chadwick JP  
Mayor of Rotorua

## **2 Executive Summary**

The Waste Minimisation Act 2008 The Act requires the Rotorua Lakes Council to consider and adopt a Waste Management and Minimisation Plan for the purpose of enabling the effective and efficient management and minimisation of waste within this District. The Act requires the Plan to contain a summary of the Council's objectives, policies, methods and funding to "achieve effective and efficient waste management and minimisation within the territorial authority's district".

The Act also sets out specific requirements for councils as they develop the Plan. For example, councils must:

- Consider the waste hierarchy – reduction, reuse, recycling, recovery, treatment and disposal (in descending order of importance);
- Ensure that nuisance is not caused by the collection, transport and disposal of waste;
- Have regard to the New Zealand Waste Strategy (NZWS);
- Have regard for the most recent waste assessment undertaken by a council as a requirement of section 51 of The Act and
- Undertake public consultation using the special consultative procedure if the Local Government Act 2002.

The Council developed a "draft" Waste Strategy in 2015/16 through which it reviewed waste collection/diversion services and landfill operations within the district. The review was followed by meaningful community engagement and consultation as part of the Council's Long Term Plan 2015-2025. The consultation identified key objectives and issues that required resolution and improvement across both activities.

The "draft" Waste Strategy presented a series of options to Council with the aim of meeting those objectives. Council selected full kerbside refuse and recycling collections as the option for implementation.

The waste sector was also consulted with regard to potential options of service delivery and the outcome of this consultation shaped proposals which were presented and agreed by Council in March/April 2016.

The purpose of the Plan is to:

- Describe the Council's vision and how we will meet our long term goals for waste management and minimisation for the district;
- Set strategies, objectives, policies and activities to achieve these goals and establish how to measure progress;
- Provide general information on how the Council intend to fund the activities of the Plan; and
- Help to meet all statutory requirements of the Council and in respect to waste management.

The Plan considers waste and diverted materials in keeping with the order of priority in the Act. It recognises the current NZ Waste Strategy goals of:

|   |   |
|---|---|
| ➤ reducing the harmful effects of waste | ➤ improving the efficiency of resource use. |
|---|---|

In line with the requirements of section 50 of the Act, the Plan will be reviewed at least every six years after its adoption.

Councils must undertake a waste assessment under section 51 of The Act. They must also have regard to this assessment when developing the Plan. A Rotorua district waste assessment was undertaken in 2015/16.

The assessment found that there was a need for:

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• improved data collection and reporting to inform future planning</li> <li>• investigating the rationalisation of landfill operations</li> <li>• addressing the erosion of the landfill's financial sustainability</li> <li>• increasing the level of recovery of recyclable materials from the household waste stream</li> </ul> | <ul style="list-style-type: none"> <li>• improving waste and recycling collection services especially to those areas in rural sector</li> <li>• addressing the high level of recyclable materials deposited in household waste</li> <li>• improving the health and safety risk profile of the collection services and landfill</li> <li>• implementing a consistent approach to kerbside recycling collection</li> </ul> |
|---|--|

The Plan seeks to address many of these issues. The overall vision of the Plan is to provide residents and ratepayers with highly effective, efficient and safe waste management and minimisation services in order to protect the environment from harm and provide environmental, social, economic and cultural benefits.

Our goals and objectives for solid waste management and minimisation are:

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>➤ achieving waste minimisation through reduction, reuse, recycling and recovery where it is effective and efficient to do so;</li> <li>➤ achieving effective and efficient waste management through highly cost effective services;</li> <li>➤ lower health and safety risk for Council as a PCBU under the relevant statute;</li> <li>➤ improved statutory compliance with resource consent conditions;</li> <li>➤ improved environmental outcomes through diversion of household waste and minimising the harmful effects of waste wherever practical;</li> </ul> | <ul style="list-style-type: none"> <li>➤ providing economic benefit by using resources more efficiently;</li> <li>➤ gaining better information upon which to base future decisions regarding waste management and minimisation;</li> <li>➤ improved levels of service to residents and ratepayers through modernisation of collection methodologies and kerb side; and</li> <li>➤ broad compliance with the Council's funding and revenue policy which it is seeking to contain the cost of the activity (current and anticipated) inside the targeted annual levies and related user fees as agreed by Council.</li> </ul> |
|--|---|

The general policies of the Plan are based on the principles of:

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>▪ responsibility</li> <li>▪ stewardship</li> <li>▪ safety</li> <li>▪ transparency</li> </ul> | <ul style="list-style-type: none"> <li>▪ efficiency</li> <li>▪ improvement</li> <li>▪ innovation</li> <li>▪ co-operation and pragmatism</li> </ul> |
|---|--|

The Council intends to oversee, facilitate and manage a range of programmes and interventions to achieve efficient waste management and minimisation within the district. We note that there is a range of waste services available provided by council and the private sector. There is adequate waste disposal capacity in the region and appropriate access to hazardous waste disposal services to ensure public health.

The Council will carry out a range of actions for the future provision of waste management and minimisation infrastructure and services. These actions are outlined in **Part B** of the Plan.

Section 43 of The Act requires that the Council includes information about the implementation and funding of the actions of the Plan as well as information about any grants made and expenditure of levy funds. **Section 9.0** - Funding Plan outlines how the Council proposes to meet that requirement.



## Part A - Strategy

### 3 Introduction

#### 3.1 Purpose of the Waste Management and Minimisation Plan

Local Authorities play an important role in managing waste, reducing the harm waste can cause and encouraging communities and businesses to reduce the creation of waste.

This role is recognised in the Waste Management Act 2008 The Act. Under the Act councils are required to develop a Waste Management and Minimisation Plan. Section 43 of the Act requires the Plan to contain a summary of the council's objectives, policies, methods and funding to achieve effective and efficient waste management and minimisation within its district.

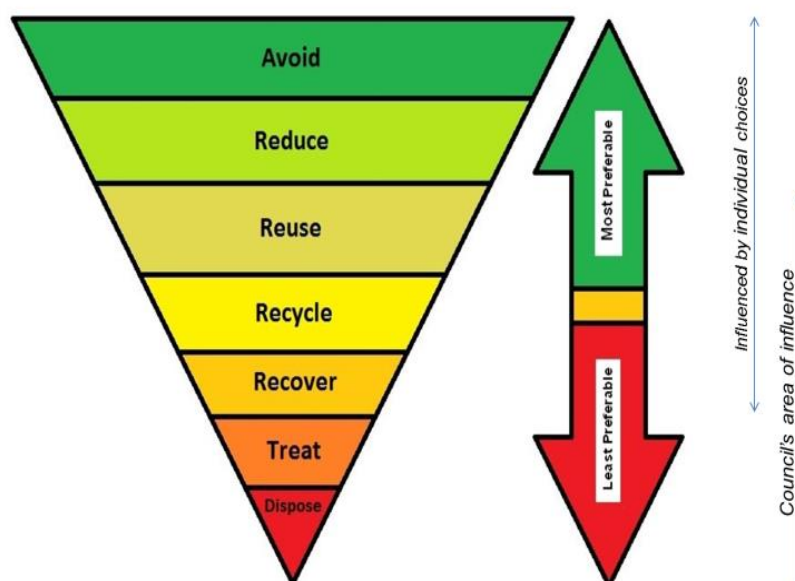
The Plan is a guiding document which identifies Rotorua's waste and recycling objectives in addition to illustrating the method as to how they are to be achieved.

#### 3.2 Scope of the Plan

The Plan considers waste and diverted materials in keeping with the order of priority stated in the Act;

##### Waste Hierarchy

- Reduction
- Reuse
- Recycling
- Recovery
- Treatment
- Disposal



The Plan will describe the historical methods of waste management (until 2015/16) and the recent modifications to the District's waste management and minimisation system and explain in detail the changes that have been made in the following areas:

- Kerbside rubbish and recycling collection
- Lakes and Tarawera area for rubbish and recycling
- Rural Collection Points (proposed)
- Recycling Centre and processing method
- Landfill changes, study and future



### **3.3 Bay of Plenty & Waikato Regional Councils**

The Bay Of Plenty Regional Council and Environmental Waikato play an important role in some aspects of waste management, including supporting information and education activities as well as resource consenting, monitoring and enforcement.

The Regional Councils were given the opportunity and commented on the “draft” strategy and their views and comments were incorporated in the formulation of this Plan. The Rotorua Lakes Council will seek to work closely with the Regional Councils in the implementation of this Plan and in the development of future plans.

### **3.4 Other Legislation that Affects the Plan**

Strategic documents, government policy and legislation are combined in New Zealand to form a national policy framework that councils must consider and address in the development and implementation of their Waste Management and Minimisation Plans.

In addition to the Waste Minimisation Act and the New Zealand Waste Strategy other key legislation that has been considered in the preparation of this Plan includes:

- Local Government Act 2002 (LGA)
- Hazardous Substances and New Organisms Act 1996 (HSNO)
- Resource Management Act 1991 (RMA)
- Health Act 1956; and
- Climate Change (Emissions Trading) Amendment Act 2008.

Taken together, these provide the legislative imperative and tools for managing and minimising waste in New Zealand.

### **3.5 Structure of Plan**

The Plan is split into three parts:

- |        |   |
|--------|---|
| Part A | Strategy, Legislation, Structure of Plan, Waste situation, Key Issues, Vision, Goals, Objectives and Targets, Funding Plan, Monitoring - Clauses 4.0 to 10.2.   |
| Part B | Action Plan – Clauses 10.3 to 10.5.4  |
| Part C | Appendices<br>Appendix 1: Life of Contracts – Waste Activity Cashflow Projection<br>Appendix 2: Draft Waste Strategy 2015/16 and Waste Assessment of 2015<br>Appendix 3: District Health Board Review |

### **3.6 When Plan is to be reviewed**

In line with the requirements of section 50 of the Act, this Plan will be reviewed at least every six years after its adoption. The Council may elect to review any or all aspects of the Plan at any time prior to 2022 if it is considered that circumstances justify such a review.

Any review will be preceded by a waste assessment under section 51 of the Act. A review may not necessarily lead to changes in the Plan. Under the Act, any proposed course of action following a review

must be subject to consultation using the special consultative procedure set out in section 83 of the Local Government Act.

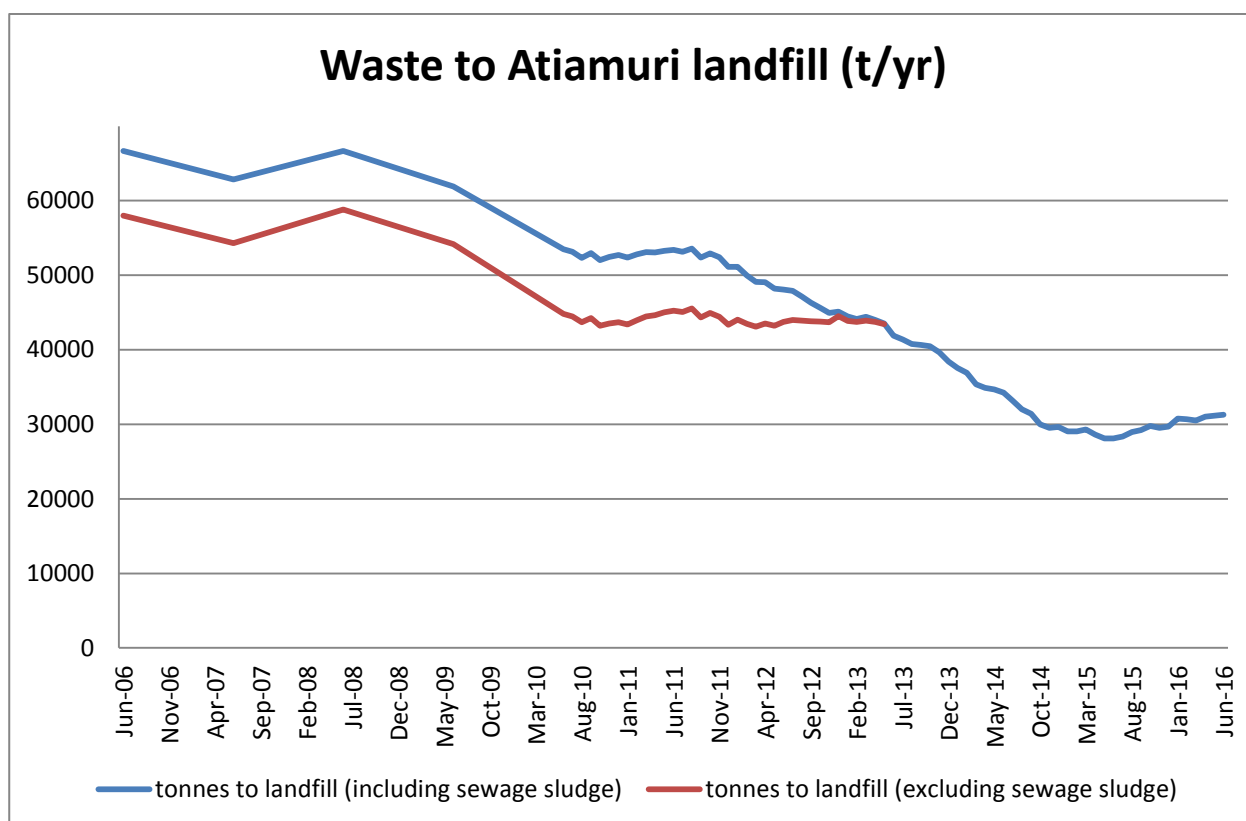
## **4 The Waste Situation in Rotorua up to 2015/16 – Key Findings**

This section summarises the waste situation within the Rotorua District and up to the year 2015/16.

Rotorua Lakes Council completed a Waste Assessment in 2015/16 (see Appendix 2). The assessment was a stock-take of waste generated, diverted material and related services provided throughout the District. It provided an estimate of demand for future services and included options (including new infrastructure) for meeting that anticipated demand.

### **4.1 Waste and Diverted Materials Summary**

The following is a summary of Rotorua's volume and composition of Waste and Diverted Materials.

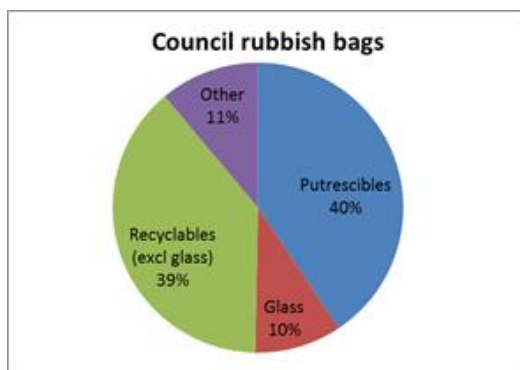


In October 2015 an assessment of the viability of the landfill identified that:

- significant health and safety risks were present at the facility
- declining revenue failed to cover all fixed, operating, capital and after care costs of the facility
- environmental risks were evident due to poor leachate and gas management systems
- significant capital investment was forecasted for the continued operation of the facility.

The composition of material in domestic refuse bags contained a high degree of recyclable materials (49%) which were disposed at the landfill. With a more effective collection system the amount of recovered waste could significantly be increased.

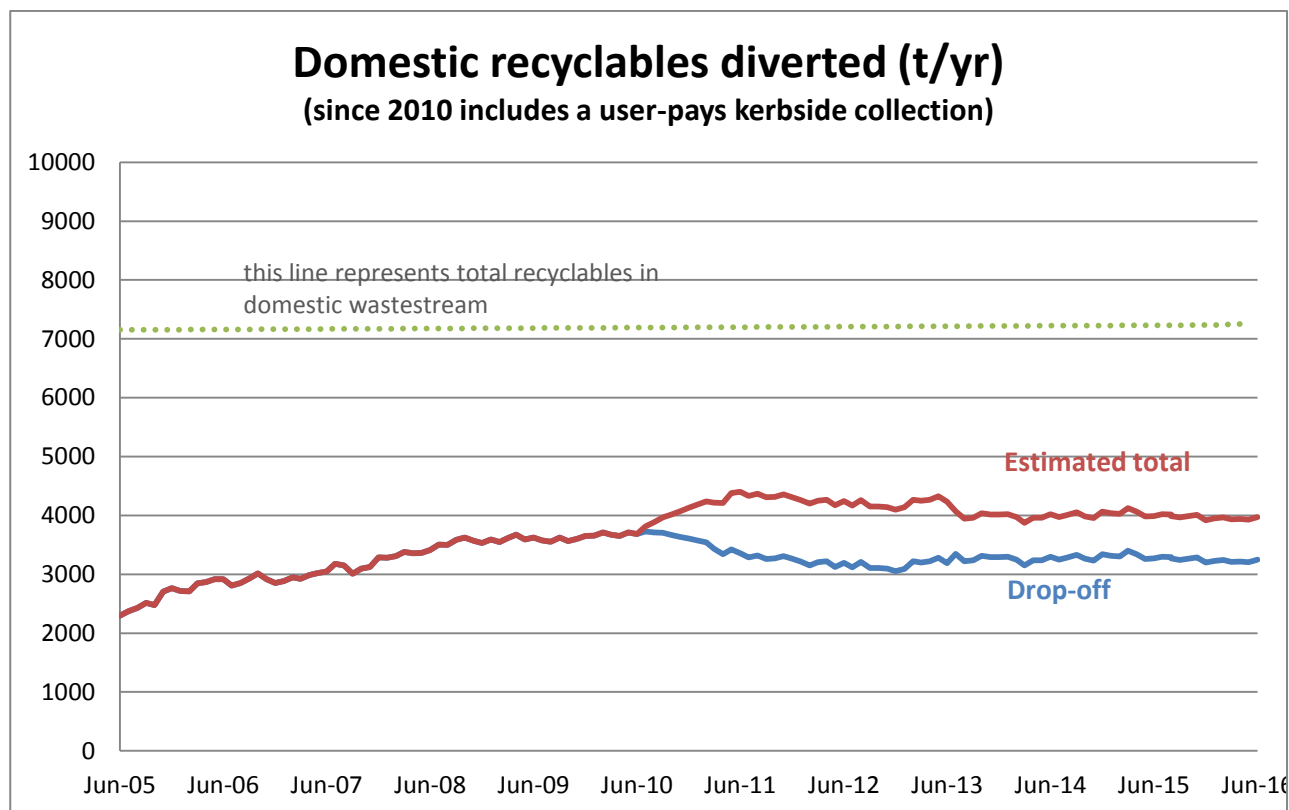
#### Council rubbish bags- Waste Assessment 2015/16



The amount of domestic waste diverted through the Council provided recycling (drop-off) centres did not change appreciably since 2009.

#### Domestic recyclables diverted – Waste Assessment 2016

Tonnes of recyclables received at the drop-off centre and collected at the kerbside by one of the main commercial service providers.



## 4.2 Overview of Waste Management and Minimisation Infrastructure and Services

This section identifies key waste management and minimisation infrastructure, collection services, and education programmes that were operated and/ or offered by the Council or provided by others within the Rotorua District.

#### **4.2.1 Infrastructure**

The Council provided under contract the following waste facilities and infrastructure.

##### **4.2.1.1 Atiamuri Landfill (commonly known as the 'Rotorua Landfill')**

Rotorua Lakes Council operated the Atiamuri Landfill for the disposal of the District's rubbish.

The landfill received household rubbish collected from kerbside public litter bins and illegal dumping etc. in addition to waste from the commercial and industrial sectors.

The landfill had been previously fully funded from user pays charges. However over the last decade operations had been subsidised by the Council funds due to a decrease in tonnages that have been entering the landfill. With additional development and variations to existing consents the landfill has a potential operating lifespan of approximately 50 years.

Rubbish generated by the District's residents is transferred to the Atiamuri Landfill either directly by the resident, via kerbside collection or through a Rural Transfer Station.

The landfill is also used for the collection and processing of both metal and greenwaste.

##### **4.2.1.2 Recycling Centre**

An in-town recycling centre facilitated Rotorua's voluntary recycling requirements. This establishment provided multiple bays for the self-sorting of recyclables. The sorted recyclables were then compacted and bailed before being sold. E-Waste processing was also facilitated at the recycling centre at a cost borne by the ratepayer.

##### **4.2.1.3 Rural Transfer Stations**

Council operated four Rural Transfer Stations for the rural and lakes communities located at:

- Mamaku
- Reporoa
- Tarawera
- Okere Falls

Rural Transfer Stations utilised a gate fee for the disposal of rubbish which was linked to the set fees at the landfill.

Rural Transfer Stations were intended for the disposal of normal household rubbish and other waste, such as commercial or hazardous waste, disposed of at the landfill. Recycling facilities were available at the Rural Transfer Stations where residents may dispose of their recycling free of charge.

#### **4.2.2 Collection Services**

The Council provided residential and to some light commercial premises, kerbside rubbish collection services.

##### **4.2.2.1 Urban**

Urban household rubbish within the Rotorua District was collected weekly from kerbside in 60L paper rubbish bags. Recycling was facilitated through the provision of the Recycling Centre which allowed residents to self-sort and deposit of their Recyclables.

#### 4.2.2.2 Lakeside

Lakeside areas were provided with a kerbside household rubbish collection service equivalent to that of the urban area. Rural Transfer Stations were also located within the lakeside areas to provide residents with access to normal household waste disposal and recycling drop-off facilities.

#### 4.2.2.3 Rural Areas

Urbanised rural areas, such as Reporoa, Mamaku and Rerewhakaaitu, were provided with a kerbside household rubbish service. Rural areas, such as Ngakuru, Waikite and non-urbanised areas, were not provided with a kerbside household rubbish collection service. Residents in these areas were required to either use their nearest Rural Transfer Station or use the Atiamuri Landfill.

Historically, unofficial collection points for Council rubbish bags have occurred in the rural areas with isolated incidents of residents driving their rubbish to Rotorua to deposit on the kerbside in the urban area.

### 4.3 Summary of District-Specific Issues Arising from Waste Assessment

Rotorua's waste management system has served the area for an extended period of time; however the advancement of technology has led to the gradual rise of district specific issues that adversely impact on what it is considered good practice in the context of effective and sustainable waste management.

| Service                        | Issues / Opportunities  |
|--------------------------------|---|
| Kerbside Refuse Collection     | <ul style="list-style-type: none"> <li>Health and safety risks to staff and public due to dated vehicles and collection technology.</li> <li>Diminished amenity due to the spillage of litter from paper bags.</li> </ul>   |
| Centralised Recycling Services | <ul style="list-style-type: none"> <li>Centralised recycling not capturing the majority of the District and not convenient for all.</li> <li>Significant recycling tonnages lost to landfill due to centralised recycling.</li> </ul>   |
| Public Litter Bin Management   | <ul style="list-style-type: none"> <li>Various types of public litter bins within the District a not replaced in accordance with a standardised bin specification resulting in reduced amenity and practicality for the public (i.e. reduced capacity).</li> </ul>  |
| Event Waste Management         | <ul style="list-style-type: none"> <li>Application processes, payment systems and event management procedures not streamlined for the benefit of users, event managers and contractors. Recycling options not provided at events.</li> </ul>  |
| Rural Transfer Stations        | <ul style="list-style-type: none"> <li>Rural Transfer Stations cost not commensurate with outcomes.</li> </ul>  |
| Rural Waste Collection         | <ul style="list-style-type: none"> <li>Waste and recycling collection services not provided to a percentage of rural households contributing to illegal dumping, burning and burying of waste with poor environmental outcomes.</li> </ul>  |
| Landfill                       | <ul style="list-style-type: none"> <li>Significant health and safety risks present due to the public's exposure to the tipping face at the landfill.</li> <li>Declining revenue not covering all fixed, operational and capital costs.</li> <li>Environmental risks present due to inadequate leachate and gas management systems.</li> <li>Significant capital investment forecasted and required for the continued operations in the near future further eroding the facility's financial viability.</li> </ul> |

## **5 Change Process**

This section summarises the change process followed to arrive at a new vision and set of objectives guiding this Plan.

A “Draft” Waste Strategy was submitted and accepted as part of the Council’s 2015 – 2025 Long Term Plan LTP. The draft strategy identified a number of deficiencies within the waste management and minimisation services provided by Council. Amongst other issues the following were highlighted:

1. A steady reduction of waste has eroded the landfill’s financial sustainability.
2. Low level of recovery of recyclable materials from the household waste stream.
3. Around 10% of properties in the district receive no kerbside collection services.
4. General household waste contains a high level of material that could be recycled.
5. Community demand for kerbside recycling services remained high.

Following the community LTP submissions, the Council resolved in June 2015 to:

- Progress Option 4 for the collection services in the urban area.
- Engage further with communities that are difficult to service, on the matter of kerbside collection (e.g. CBD, Lakes and Rural).
- Explore and progress a partnership agreement around the long term management of the landfill.
- Engage further with local communities to develop options and proposals for community involvement in the operation of transfer stations.
- Explore opportunities around resource recovery with businesses.
- Improve litter collection services.

Officers undertook further intensive community engagement and consultation, and reported back to Council in early September 2015 with some key findings and a timeframe for follow up actions.

On 14 October 2015, officers reported on the status of the landfill and informed Council that a number of options for the future management of the facility will be explored. That Requests for Proposals (RFPs) were sought from the sector for both the Kerbside Waste/Recycling Collections and the Management of the Landfill Facility.

Council officers requested industry proposals which would address the identified issues and bring innovation to Council’s essential waste services. Key emphasis was placed on achieving:

- Lower HSE risk profile for the Council as a PCBU under the soon to be enacted new HSE legislation.
- Improved statutory compliance with resource consent conditions.
- Improved environmental outcomes manifested from the increased diversion of household waste.
- Improved levels of service to ratepayers through modernisation of collection methodologies at the kerb side.
- Broad compliance with the Council’s funding and revenue policy in the waste management activity which it is seeking to contain, as far as possible, the costs of the activity (current and anticipated) inside the agreed targeted annual levies and related user fees and the overall revenues generated by the activity.

The community was engaged extensively with regard to the potential options that have been considered for both Collections and Landfill Contracts. The options that were considered by Council were submitted for community consultation as part of the LTP.

Additional consultation was also conducted with communities that would be particularly affected by the changes. Various meetings were held with Mamaku, Ngongotaha, Reporoa, Okere Falls & Rotoiti, Tarawera & Okareka and the residents of Waikite Valley & Ngakuru who represented the rural community. Representatives of the aged, disabled, CBD and other community groups were also engaged. Waste Solutions staff replied to personal enquiries, (e.g. individual meeting, phone call, email or RFS's).

The community consultation directly contributed to the structure of RFP documentation and subsequent community board meetings provided positive feedback as to the actions that the Waste Solutions team have undertaken.

## **6 Vision, Goals, Objectives and Targets**

Waste management is a key activity for the Council. Our approach to waste management and minimisation should contribute to and be consistent with the vision, purpose and performance targets of the LTP and goals of Rotorua 2030. The LTP 2015-2025 was consulted on at the same time as the Draft Waste Strategy. The LTP and the Rotorua 2030 goals describe where the District wants to be, and how Council will contribute to getting there.

The overall vision of the Plan is to provide residents and ratepayers with highly effective, efficient and safe waste management and minimisation services and to contribute to achieving environmental, social, economic and cultural benefits.

The following section details Council's Vision, Goals, Objectives and Targets for the Plan.

### **6.1 Vision**

The 2016 Rotorua Lakes Council Sustainability Strategy seeks to minimise waste and to recover as far as practical value from waste by enabling the community at the collective and individual level to actively contribute to this strategy's outcome.

In support of the RLC Sustainability Strategy, the Plan aims to empower each resident so that they can conveniently recover and recycle materials from the waste stream so that increasingly more waste is diverted from the landfill(s).

In accordance with the above, the Plan vision is:

**'To empower and enable Rotorua residents, so that they may be able to comprehensively minimise waste, recycle all practically possible materials and to recover value from the waste stream'.**

### **6.2 Goals and Objectives**

To enable and empower Rotorua residents to minimise, recycle and recover value from waste in line with The Plan vision significant improvements need to be made to the District's previous waste management system. Changes will be made to support the resident efforts at home and also to improve the logistical systems which process waste and divert materials.

#### **Goal One: Industry Leading Health and Safety Standards**

Council seeks to significantly enhance health and safety across all areas of waste activity so that they fully comply with best level national standards. The safety of residents, visitors and staff is our principal concern.



The previous collection system required the use of runners to collect paper bags from the kerbside. While personal protective equipment was available, the overall collection process placed staff at perpetual risk of harm.

At the Atiamuri Landfill, the public was able to access the operational face directly. This access exposed the public to risks such as machinery, dust, vermin and other moving vehicles.

To address these risks in the waste activity, Council will endeavour to reduce or materially mitigate health and safety risks by making significant operational changes and improvements through the Collection and Landfill Contracts.

- **Objective One:** Enhance Waste Collections Health and Safety performance
- **Objective Two:** Enhance Landfill Health and Safety performance

#### **Goal Two: Significantly improve the District's environmental footprint**

The Council's recycling system was previously focused upon the provision of an in town recycling centre and limited recycling facilities at Transfer Stations that allowed for the self-sorting of Recyclables. It is our objective that with the introduction of kerbside recycling collections diverted materials will increase from 4,000 tonnes per annum to at least 6,500 tonnes per annum, a 60% increase over the life of this Plan.

The Council currently facilitates the composting of organic waste (green waste) dropped off by residents at Atiamuri Landfill. The green waste diverted to composting is currently between 6-7,000 t/yr. The Plan will maintain this initiative with the view of assessing options for further enhancement including options for diverting kitchen and other putrescible waste.

- **Objective Three:** Engage and educate residents and facilitate increased diversion of recyclables
- **Objective Four:** Optimise the diversion of recyclables and achieve reducing trends of waste sent to the landfill(s)
- **Objective Five:** Reduced volumes of organic waste to landfill(s)
- **Objective Six:** Increase customer satisfaction rating for rubbish and recycling collection services in Council's annual community survey

#### **Goal Three: A public litter bin management system that promotes and encourages recycling**

Public spaces in Rotorua are currently serviced through a range of public litter bins types. These bins consist of refurbished steel drums and a variety of litter bins in the CBD and the outer suburbs. The litter bins have been installed in a demand responsive manner over an extended period of time and their locations and capacities are sub-optimum to the objectives of this Plan.

Appropriately designed public litter bins that are sited within strategic context and with due consideration to the unique litter collection requirements of each serviced area will contribute greatly to improved disposal of litter management and an enhanced public amenity. Additionally, conformance with national waste colour standards will reinforce behaviour through passive education, by the frequent observation of the correct colours both in the home and in the public space.

- **Objective Seven:** Optimise the litter bins network throughout the District
- **Objective Eight:** Promote passive waste minimisation education through standardisation and the deployment of the national waste colour framework

#### **Goal Four: Improve the Atiamuri Landfill**

- Significant health and safety risks are present at the landfill due to public's exposure at the operational face of the facility.
  - Declining revenue not covering all fixed, operational and capital costs. Environmental residual risks due to inadequate leachate and gas management systems.
  - Significant capital investment forecasted for the continued operations in the near future.
- **Objective Eight:** Minimise health and safety risks and impact on the environment
  - **Objective Nine:** Establish a sustainable long term option for the Atiamuri Landfill

### **6.3 Targets**

Our targets for waste management and minimisation are that by 2022 we will have achieved:

- At least 50% increase from current levels in the recovery of recyclables
- 30% reduction in kg per household of waste in the kerbside collection

### **6.4 Council's Intended Role**

The Council intends to oversee and manage a range of programmes and interventions to achieve effective and efficient waste management and waste minimisation within the district. The Council will do this through our internal structures responsible for waste management. Council will be responsible for a range of contracts and undertakings to provide waste management and waste minimisation services to the residents and ratepayers of the district.

### **6.5 Protecting Public Health**

The improvements outlined in this Plan will see Rotorua's waste management standards improve to a national best practice standard.

The range of public and private waste services in the Rotorua District and the Bay of Plenty and Waikato regions ensure public health will be adequately protected in the future. Rotorua has access to landfills that meet statutory requirements for at least 50 years or more. This plan proposes services for enhanced waste minimisation. The community has adequate access to Council or privately-owned drop-off and collection services for rubbish, hazardous waste and litter and further waste minimisation is achievable.

The local District Health Board, Toi Te Ora, has reviewed the Waste Assessment and the 2015/16 Draft Waste Strategy. Acknowledging that the Draft Waste Strategy was a consultation document, Toi Te Ora was extensively engaged during the development of the Plan.

Having reviewed this plan and its preceding documents, Toi Te Ora has been supportive of the changes currently being implemented by Council, due to the significant improvements that will occur to public health and safety.

Toi Te Ora's support of this plan can be reviewed in detail within Appendix 3.

## 7 Methods for Achieving Effective and Efficient Waste Management and Waste Minimisation

The following are Council's proposed methods for achieving effective and efficient waste management and waste minimisation.

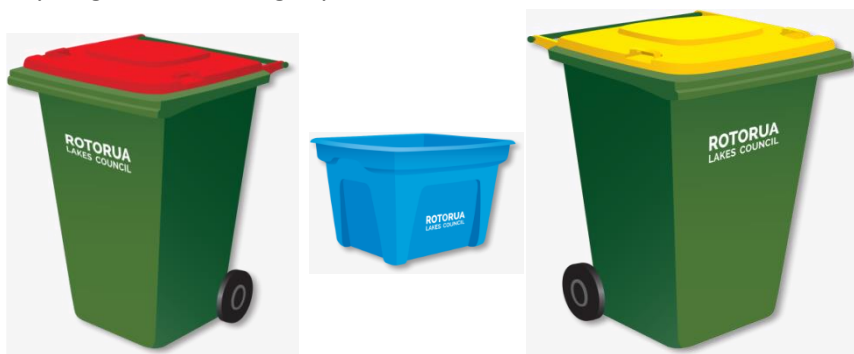
### 7.1 The New Waste Management System

The Draft Waste Strategy 2015/16 provided residents with the opportunity to comment on a number of potential waste management solutions developed by Council to address the District specific issues.

The following system was adopted:

#### Full Kerbside Rubbish and Recycling Wheelie Bin Based Collection

- 140L Rubbish Bin – Collected Weekly
- 240L Comingled Recycling Bin (Paper, Tin & Plastic) – Fortnightly Collection
- 45L Glass Recycling Crate – Fortnightly Collection



In addition to the introduction of wheelie bins the Council is in the process of other improvements e.g. Rural Transfer Stations management, future operation and management of the Atiamuri Landfill, so that the Council provided waste activity is improved in its entirety. Where kerbside wheelie bin collection has not been suitable, alternative options have been identified.

### 7.2 Discussion / Major Changes

The introduction of wheelie bins and kerbside recycling will necessitate additional changes to long established processes.

#### 7.2.1 Recycling Centre Changes

The Recycling Centre has for many years facilitated recycling within the Rotorua District. The Recycling Centre will continue to operate as an overflow facility and it is anticipated that the implementation of kerbside recycling will see a significant decline in its use by the public.

With the community actively adopting the new system the amount of diverted materials will significantly increase. This increase will create new challenges such as how recyclables will be processed. In-district processing of recyclables for subsequent sale is preferable provided the economic business case can be justified. It has been determined that in the interim the best option is to transport recyclables to an existing Materials Recovery Facility (MRF) out of the district for sorting.

This prudent step will ensure that risk is minimised during the programmed transitional period enabling the new collections contractor to focus upon mobilisation activities and utilise familiar and existing facilities. This action also allows Council and the service provider to record and evaluate actual quantities received and make future decisions based on evidence of the financial sustainability of an in-district MRF.

### **7.2.2 Landfill**

Informed by legacy issues, canvassed earlier in this Plan, a partnering contract has been entered between Council and Waste Management NZ (WMNZ). Under this contract the overall management and operation of the landfill has been assigned to WMNZ. The principal objective of this arrangement in the short term is to stabilise risks (statutory and financial) so Council in collaboration with WMNZ, can conduct a comprehensive Landfill Study so that all options can be considered, and the Landfill's long term future determined.

So that immediate concerns are addressed, an on-site transfer station will be established and public access to the operational face will cease. Once Landfill capacity is reached in the coming 12 months, the Landfill will be capped, sealed and mothballed so that the Landfill Study can occur unimpeded. Rubbish received at the Atiamuri Landfill Transfer Station will subsequently be transported to a private, out of district landfill.

Once the Landfill Study has been completed (12-24 months) the most viable option will be selected and recommended. At that time the current contract will be reviewed and adjusted in line with the anticipated operational future of the facility.

## **8 Funding the Plan**

Funding support and certainty for the implementation of the Plan is critical to its success. The following describes how the Council's waste services' action plan will be funded. Where individuals opt to contract private service providers for their waste management requirements those relationships will be covered under private agreements.

Funding considerations take into account a number of factors including:

- Prioritising harmful wastes
- Waste minimisation and reduction of residual waste to landfill(s)
- Full-cost pricing – “polluter pays”
- Protection of public health
- Affordability
- Cost effectiveness
- That the environmental effects of production, distribution, consumption and disposal of goods and services should be consistently costed and charged as closely as possible to the point they occur to ensure that price incentives cover all costs.

### **8.1 Plan Implementation Funding**

The Council's previous waste management funding model was based on mixed sources. In conjunction with the transition to a new model (as proposed and consulted in 2015/16) a 15 year anticipated cost and funding streams model was articulated (see table – Appendix 1).

The Council may use a range of funding options to assist in the delivery of effective and efficient waste minimisation and management. This may include the following options;

- General Council funding
- Uniform Annual General Charge (UAGC – paid by all ratepayers)
- Polluter pays
- Targeted rates (charge is targeted according to property)
- Waste levy (funds received from the Government)

To highlight the overall funding principles of this Plan the following table is illustrative (average and indicative annual estimates used).

| Activity Cost         |                |             | Funding Plan             |      |
|-----------------------|----------------|-------------|--------------------------|------|
| Sub-Activity          | \$ Cost x000   | %           | Funding Contributor      | %    |
| Core Contracts        | \$4.600        | 67          | Targeted Waste Levy      | 90.5 |
| Financing Legacy      | \$0.900        | 14          | Waste Minimisation Levy  | 3.5  |
| Depreciation          | \$0.300        | 4           | Landfill Royalties       | 2    |
| Charges/Fees          | \$0.300        | 4           | Grants and Other Sources | 4    |
| Education             | \$0.100        | 1.5         |                          |      |
| *Targeted Communities | \$0.100        | 1.5         |                          |      |
| Waste Solutions Team  | \$0.300        | 4           |                          |      |
| Corporate OHs         | \$0.300        | 4           |                          |      |
| <b>TOTAL COSTS</b>    | <b>\$6.900</b> | <b>100%</b> |                          |      |

**Note:** Council may resolve to alter the indicated funding plan through its Annual Plan process to recognise shifts in activity benefits, additional services, community affordability and/or different objectives in its funding and revenue policy.

### 8.1.1 Landfill Funding

Landfill operations were intended to be predominately funded through user pays. However the declining landfill tonnage resulted in a corresponding revenue/cost gap that was subsequently bridged through Council general rates funding.

The new Landfill Management and Operation Contract commenced a significant shift from the previous landfill funding model. User pays apply through gate fees designed to meet all current and anticipated costs for the facility incurred by the operator. The Council will be receiving royalties against incoming tonnages to the Landfill or the transfer station and intended to cover landfill legacy costs which the contractor had no responsibility for and where these remain Council's liabilities.

### 8.1.2 Collections and Related Activities-Funding

The Targeted Waste Levy will be calibrated annually to fund the gross cost of kerbside collections (waste and recycling), the recycling centre, the operation of lakes and rural transfer stations, public litter bins collection and management, the response to and removal of illegal dumping, all education and public awareness programmes and targeted communities' waste services. The historical dependence on general rates to bridge funding gaps resulted in ambiguity and a lack of understanding by the public as to the true cost of the waste management activity.

So that the situation is appropriately acknowledged and become more transparent, the entire waste activity is proposed to be mainly funded through the Targeted Waste Levy which will be calibrated to take into consideration other likely revenue sources and/or broader Council objectives.

It is also intended to propose (through Council's Annual Plan process) the standardisation of the Targeted Waste Levy. Standardisation would remove the existing levy variations which are based on the location of the ratepayer's residence. Whilst this may result in an increase or decrease for the individual ratepayer, the outcome will be a Targeted Waste Levy that is more equitable in relation to the efficiencies of scale extracted through services covering the whole of the district and are readily identifiable in the Council's Long Term Plan. Such standardisation will also simplify Council's processes further contributing to efficiencies.

### **8.1.3 E-Waste Recycling**

E-Waste recycling has historically been provided as a free of charge service to users at the Recycling Centre. E-Waste received is transported to Tokoroa and subsequently processed by the South Waikato Achievement Trust which extract and on-sell recoverable materials.

The E-Waste processing costs were borne by the general ratepayer in a fiscally unsustainable and inequitable manner. The objective is to ensure that this service is provided as a cost neutral activity and a proportionate cost recovery charge will be applied to E-Waste. Pending any possible e-waste stewardship charges that may be enacted at national level the cost recovery principle will be applied by Council for this waste stream.

## **8.2 Waste Minimisation Levy Expenditure**

The Act requires that all waste levy funding received by the Council must be spent on matters to promote waste minimisation and in accordance with their Waste Management Minimisation Plan. Waste levy funds can be spent on existing waste minimisation services, new services or a combination of both.

The Council has used the Waste Minimisation Levy funds, returned by the government, as Council's contribution to the TERAX™ Waste Conversion trial of which Council was a strategic partner. The Council's financial support to this project concluded at the end of the 2015 financial year. Council is now in a position to reallocate this Waste Minimisation Levy funding.

Council is in the process of implementing a modern, efficient and effective kerbside recycling collection service. This transition will deliver significant results for the District that are, visible, community centric and environmentally more sustainable. With this in mind, Council will allocate Waste Minimisation Levy funding in a practical manner that supports kerbside recycling collection, operations, waste minimisation education and other supporting waste reduction projects and programmes.

## **9 Monitoring, Evaluation and Reporting Progress**

The Council will monitor and report on progress towards the aims and objectives of the Plan.

### **9.1 Monitoring and Evaluation**

The Council's LTP 2015 - 2025 sets out levels of service, performance measures and performance targets for evaluating progress of the implementation of the Plan. The Council intends to monitor and report on progress regarding the Plan and will develop and implement a clear, transparent monitoring and reporting system for this. Accurate information on how services are performing is essential for monitoring progress and planning for future demand.

Key areas for monitoring include level of service adherence, compliance (with statutory requirements), waste reduction and waste diversion trends. Data will be gathered through a variety of means including community satisfaction surveys, contract reports and audits, Solid Waste Analysis Protocol Audits (SWAPs). Progress will be reported through Council publications, website and the annual report.

### **9.2 Reporting**

Council proposes to report progress on the Plan implementation through Annual Reports. The Council will also provide progress reports of expenditure of its waste levy funds to the Ministry for the Environment.

## Part B – Action Plan

### Introduction

This action plan outlines a six-year programme to achieve the vision, goals, objectives and targets presented in Part A (although some actions will be ongoing). Some aspects of the Plan's funding structure will be updated each year as part of the Council's annual plan following a period of public consultation, as required by the Local Government Act 2002.

The Plan will be reviewed within six years. Any significant changes will be incorporated into the Council's LTP process and subject to public consultation.

This action plan is the result of the findings of the Rotorua Lakes Council Waste Assessment feedback on issues from key stakeholders and feedback from submissions in the statutory consultation process for the Draft Waste Strategy 2015/16.

The Action Plan is intended to address the key issues listed in section 4.3-Summary of District Specific Issues, and to ensure that we accommodate any future growth and changes in the District.

The Council intends to carry out a range of actions for the current and future provision of waste management and minimisation infrastructure and services. The action plans outline the Council's programme for achieving the vision, goals, objectives and outcomes of the Plan. The actions have been assessed taking into consideration the following:

|   |   |
|---|---|
| <ul style="list-style-type: none"><li>➤ The benefits of each action in relation to the present and future social, economic, environmental and cultural well-being of the district.</li><li>➤ Operational imperatives.</li><li>➤ The effects of using waste levy funds for minimisation activities on any existing waste minimisation services, facilities or activities provided either by the Council or others.</li></ul> | <ul style="list-style-type: none"><li>➤ How an action will contribute to the NZWS and the Council's waste management and minimisation goals, objectives and preferred outcomes.</li><li>➤ The Council's role in implementing the action.</li><li>➤ The Council's role in promoting effective and efficient waste minimisation and management.</li></ul> |
|---|---|

### Targets and Measurement

The Plan targets that will be used to measure how well the Council is achieving its waste management and minimisation goals include:

- Reducing trends in the amount of rubbish/waste that is collected from kerbside collection per household
- Increasing trends for recyclables and recovered materials
- Meeting target customer satisfaction with the Council's rubbish and recycling services.

### The Action Plan

The Council has made decisions on methods and actions in the Plan in accordance with the Local Government Act 2002, section 77. The following criteria have been used for evaluating options.



**Environmental issues:**

- waste minimisation (e.g. volume of waste reduction or diversion from landfill)
- resource efficiency benefits
- environmental harm
- climate change related issues and impacts.

**Social and cultural issues:**

- health and safety considerations (including public health, staff and contractor-related issues)
- public concern and interest
- partnership and community involvement
- the level to which producer and consumer responsibility is supported.

**Economic issues:**

- estimated whole-of-life cost
- consideration of whether revenue is generated by the initiative (where relevant)
- other economic impacts, such as avoided costs or other benefits to the Council or other stakeholders.

**Action Plan Tables**

The actions in the action plan tables have been developed to ensure that waste management and minimisation is effective and efficient, and reduces potential for public harm, as required by the Waste Minimisation Act 2008 The Act.

Under the plan, actions will be implemented over a short to medium timeframe. They are expected to drive changes in behaviour, efficiencies in waste management and, ultimately, a significant reduction in waste per capita. They will align waste and recycling outcomes with statutory requirements.

Actions fall into two broad categories:

- policy and operations
- communications and waste minimisation programmes.

Policy and operations actions describe how the Council will change and implement services across the District. Communications and waste minimisation programmes actions provide the support needed to ensure the success of the changes, along with ongoing programmes for businesses, schools, and the wider community.

| Objective  | Action  | New or existing action | Implementation Timeframe                    | Funding       |
|--|---|------------------------|---|---------------|
| <p><b>Enhance Collections Health and Safety Standards</b></p> <p><b>Increase customer satisfaction rating for rubbish and recycling collection services in Council's annual community survey</b></p> | <p><b>Collections - Refuse wheelie bin, recyclables wheelie bin, glass crate</b></p> <ul style="list-style-type: none"> <li>Automated/Mechanised kerbside collection service for refuse and recyclables using mobile garbage bins (MGBs), with glass collected separately in a crate.</li> <li>Urban/rural areas refuse collected weekly and recyclables fortnightly.</li> <li>Lake side area MGBs and rubbish bags - refuse collected weekly and recyclables fortnightly.</li> <li>The waste collection service area will be extended to include all viable residential properties, i.e. each separate use of an inhabited part of a rating unit including commercial properties.</li> </ul> | New                    | 2016 - 2017 service starts and then ongoing | Targeted Levy |
| <p><b>Maximise the diversion of recyclables and minimise waste sent to landfill</b></p>  | <p><b>Recycling – drop off facility for sorted and commingled recyclables</b></p> <ul style="list-style-type: none"> <li>Operate a drop off recycling facility to receive, sort, prepare/ bale commingled or pre-sorted recyclables from (but not limited to) the Rotorua District, including the kerbside and private collections and public drop-off, and on-sale recyclables when viable.</li> <li>Facility continue to be located at the in-town recycling centre, or in future to be associated with a transfer station or materials recovery facility in another location.</li> <li>Explore the option for the collected materials to be processed locally</li> </ul>                   | New                    | 2016/17 - service revised and then ongoing  | Targeted Levy |

| Objective  | Action   | New or existing action | Implementation Timeframe   | Funding       |
|--|--|------------------------|--|---------------|
| <b>Maximise the diversion of recyclables and minimise waste sent to landfill</b> | <b>Community Resource Recovery Centre &amp; second hand shops</b> <ul style="list-style-type: none"> <li>Continue to support low-cost space and provide discretionary support for second hand shops.</li> <li>If space is available encourage further enterprise related to the reuse and recycling of waste such as dismantling, repairing, processing, and on-selling.</li> </ul>  | Existing/New           | Ongoing  | Targeted Levy |
| <b>Maximise the diversion of recyclables and minimise waste sent to landfill</b> | <b>Rural Transfer Stations</b> <ul style="list-style-type: none"> <li>Operate effectively the Rural Transfer Stations.</li> <li>Investigate options to improve the cost effectiveness of the transfer stations.</li> <li>Engage with the rural and lakes communities to identify opportunities for enhanced diversion through highly responsive facilities.</li> </ul>   | Existing/New           | Review current service provision with new service provider and identify improvement options in 2016 and then ongoing | Targeted Levy |
| <b>To minimise organic waste to landfill</b>                                     | <b>Green waste</b> <ul style="list-style-type: none"> <li>Maintain and support garden waste disposal at the Landfill through appropriate contractual requirements for green waste disposal and processing.</li> <li>Research for collection options for future implementation (i.e. organic kerbside collection).</li> </ul>   | New                    | New and future (2018 onwards)  | User          |
| <b>Enhance waste minimisation and awareness of residents.</b>                    | <b>Education and Information</b> <ul style="list-style-type: none"> <li>Waste minimisation education in a way that recognises principles of sustainability and Kaitiakitanga, and with a single approach to schools.</li> <li>Use all media channels to expand and explain the changes in the level of service and related bylaws.</li> <li>Develop and implement a comprehensive Waste Education Strategy which focuses upon behaviour change around individual recycling.</li> </ul> | New/Existing           | 2016/2017 - 2022   | Targeted Levy |

| Objective  | Action   | New or existing action | Implementation Timeframe  | Funding       |
|--|--|------------------------|---|---------------|
| <p><b>Enhance Waste Collections Health and Safety Standards</b></p> <p><b>Improve litter control and reduce fly tipping incidents.</b></p>   | <p><b>Litter</b></p> <ul style="list-style-type: none"> <li>The new level of service will allow for collection and sorting of commingled recyclables (with glass separated) and include bins for Recyclables in public places incorporated into the collection service where feasible through mechanical means.</li> <li>Options for providing for recycling at events through standardised mechanical procedures.</li> <li>Fly-tipping from public places will continue to be collected and targeted education campaigns will augment enforcement.</li> <li>Continue to actively support community involvement in clean-ups.</li> </ul> | New/Existing           | <ul style="list-style-type: none"> <li>Litter bins installation - 2016 - 2018</li> <li>Collection ongoing</li> <li>Events - 2016 - ongoing</li> <li>Fly-tipping removal – ongoing</li> <li>Community clean-ups - ongoing</li> </ul> | Targeted Levy |
| <p><b>Elevate community and residents education and awareness and facilitate the maximum diversion of recyclables</b></p>  | <p><b>Other waste minimisation activities</b></p> <ul style="list-style-type: none"> <li>Marketing/behaviour change campaign to promote increased recycling and/or 'smart shopping' towards reducing packaging consumption.</li> </ul>   | New                    | Ongoing to 2022   | Targeted Levy |
| <p><b>Enhance Landfill Health and Safety Standards</b></p> <p><b>Minimise the impact on the environment</b></p> <p><b>Establish a sustainable long term option for the Atiamuri Landfill</b></p> | <p><b>Landfill</b></p> <ul style="list-style-type: none"> <li>Separate the public from the operational face of the landfill through the provision of a transfer station.</li> <li>Capping of the current landfill stages, seal and control storm-water infiltration to reduce leachate.</li> <li>Complete a joint Landfill Study with the aim of establishing a sustainable and long term option for the Atiamuri Landfill</li> </ul>  | New                    | 2016 - 2022   | User          |
| <p><b>Maximise the diversion of recyclables and minimise waste sent to landfill</b></p>  | <p><b>Service review and procurement</b></p> <ul style="list-style-type: none"> <li>Review waste service requirements through the procurement process to ensure delivery of the</li> </ul>   | New                    | 2016 - 2022   | Targeted Levy |

**Waste Management and Minimisation Plan**  
**Rotorua's Waste Strategy 2016 – 2022**

| Objective  | Action   | New or existing action | Implementation Timeframe | Funding   |
|--|--|------------------------|--------------------------|---|
| <b>Minimise the impact on the environment</b>                                    | requirements of the Plan, and include effective and efficient options proposed by the private sector during the procurement process  |                        |                          |   |
| <b>FUTURE IMPROVEMENT ACTIONS</b>  |  |                        | 2016-2022                |   |
| <b>Improved data collection to allow better future planning.</b>                 | Waste data is not known for some activities/services provided by the private sector. To enable better planning for future waste strategies and to meet the Act requirements for assessing “all” waste in the district – not just waste under the Council’s control, further data is required. Transferable data reporting will allow better benchmarking and pursuit of best practice. | New                    | 2016-2022                | To be decided in collaboration with the industry. |
| <b>Maximise diversion of waste to beneficial use.</b>                            | Investigate organic waste collection options/systems to complement the processing system.<br><br>To investigate and determine if there is a viable business case for an organic collection system.   | New                    | 2018-2022                | Targeted Levy                                     |
| <b>Maximise diversion of waste to beneficial use.</b>                            | Investigate opportunities (regional) for the diversion and management of polystyrene.<br><br>The recycling of polystyrene is problematic by individual TLAs and a regional approach will be required.  | New                    | 2018-2022                | Targeted Levy                                     |
| <b>Maximise diversion of waste to beneficial use. Reduce environmental harm.</b> | Examine options for special wastes and hazardous wastes related to environmental harm.<br><br>Potential hazardous wastes include: tyres, e-waste, batteries, metals, used oils.  | New                    | 2018-2022                | Targeted Levy                                     |

**Waste Management and Minimisation Plan**  
**Rotorua's Waste Strategy 2016 – 2022**

| Objective  | Action  | New or existing action | Implementation Timeframe | Funding       |
|--|---|------------------------|--------------------------|---------------|
|  | <ul style="list-style-type: none"> <li>Education programmes on effects of these wastes</li> <li>Possible Council seeding resource to private companies</li> <li>Advocacy for extended producer responsibility for these wastes</li> <li>Possible regional approach to gain efficiencies of scale</li> </ul> |                        |                          |               |
| <b>Reduce environmental harm.</b>  | <p>Sustainable communities programme.</p> <p>Explore community interest in establishing “greenest street” competition, neighbourhood workshops, community group involvement.</p>  | New                    | 2017-2022                | Targeted Levy |
| <b>Maximise diversion of waste to beneficial use. Reduce environmental harm.</b> | <p>National E-Day participation once per year.</p> <p>Explore organising drop off points for certain e-waste types to educate residents and to offer a convenient way for households and schools to dispose of old computers and mobile phones etc in an environmentally sound manner.</p>                  | New                    | 2018-2022                | To be decided |

## **Part C - Appendices**

### **Appendix 1:**

#### **Life of Contracts Waste**

#### **Activity Cash-flow Projection**



# Waste Management and Minimisation Plan

## Rotorua's Waste Strategy 2016 – 2022

|                                      | Year 1             | Year 2             | Year 3             | Year 4             | Year 5             | Year 6             | Year 7             | Year 8             | Year 9             | Year 10            | Year 11            | Year 12            | Year 13            | Year 14            | Year 15            |
|--------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>REVENUE</b>                       |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| <b>COLLECTIONS</b>                   |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| <b>CPI Adjustment Rate</b>           | <b>N/A</b>         | <b>2.20%</b>       | <b>2.20%</b>       | <b>2.30%</b>       | <b>2.30%</b>       | <b>2.40%</b>       | <b>2.40%</b>       | <b>2.50%</b>       | <b>2.50%</b>       | <b>2.60%</b>       | <b>2.60%</b>       | <b>2.70%</b>       | <b>2.70%</b>       | <b>2.80%</b>       | <b>2.80%</b>       |
| Targeted Waste Levy                  | \$4,257,000        | \$4,350,654        | \$4,446,368        | \$4,548,635        | \$4,653,253        | \$4,764,932        | \$4,879,290        | \$5,001,272        | \$5,126,304        | \$5,259,588        | \$5,396,337        | \$5,542,038        | \$5,691,673        | \$5,851,040        | \$6,014,869        |
| Residential Profit Share             | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           | \$65,000           |
| Recovery Surplus                     | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          | \$126,000          |
| Waste Levy                           | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          | \$220,000          |
| General Rates                        | \$2,093,622.48     | \$1,747,070.65     | \$1,689,315.10     | \$1,629,787.41     | \$1,464,716.20     | \$1,341,525.51     | \$1,264,397.82     | \$1,075,862.91     | \$920,812.32       | \$817,139.39       | \$605,727.45       | \$432,631.74       | \$290,615.49       | \$45,593.59        | \$0.00             |
| <b>Sub-Total (W/O General Rates)</b> | <b>\$4,668,000</b> | <b>\$4,761,654</b> | <b>\$4,857,368</b> | <b>\$4,959,635</b> | <b>\$5,064,253</b> | <b>\$5,175,932</b> | <b>\$5,290,290</b> | <b>\$5,412,272</b> | <b>\$5,537,304</b> | <b>\$5,670,588</b> | <b>\$5,807,337</b> | <b>\$5,953,038</b> | <b>\$6,102,673</b> | <b>\$6,262,040</b> | <b>\$6,425,869</b> |
| <b>Subtotal</b>                      | <b>\$6,761,622</b> | <b>\$6,508,725</b> | <b>\$6,546,683</b> | <b>\$6,589,422</b> | <b>\$6,528,970</b> | <b>\$6,517,457</b> | <b>\$6,554,688</b> | <b>\$6,488,135</b> | <b>\$6,458,116</b> | <b>\$6,487,727</b> | <b>\$6,413,065</b> | <b>\$6,385,670</b> | <b>\$6,393,289</b> | <b>\$6,307,634</b> | <b>\$6,425,869</b> |
| <b>LANDFILL</b>                      |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| Waste Rebate                         | \$175,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          |
| Royalties                            | \$150,000          | \$165,000          | \$181,500          | \$199,650          | \$219,615          | \$241,577          | \$265,734          | \$292,308          | \$321,538          | \$353,692          | \$389,061          | \$427,968          | \$470,764          | \$517,841          | \$569,625          |
| <b>Sub-Total</b>                     | <b>\$325,000</b>   | <b>\$315,000</b>   | <b>\$331,500</b>   | <b>\$349,650</b>   | <b>\$369,615</b>   | <b>\$391,577</b>   | <b>\$415,734</b>   | <b>\$442,308</b>   | <b>\$471,538</b>   | <b>\$503,692</b>   | <b>\$539,061</b>   | <b>\$577,968</b>   | <b>\$620,764</b>   | <b>\$667,841</b>   | <b>\$719,625</b>   |
| <b>Revenue Total</b>                 | <b>\$7,086,622</b> | <b>\$6,823,725</b> | <b>\$6,878,183</b> | <b>\$6,939,072</b> | <b>\$6,898,585</b> | <b>\$6,909,034</b> | <b>\$6,970,422</b> | <b>\$6,930,443</b> | <b>\$6,929,655</b> | <b>\$6,991,419</b> | <b>\$6,952,126</b> | <b>\$6,963,637</b> | <b>\$7,014,053</b> | <b>\$6,975,474</b> | <b>\$7,145,494</b> |
| <b>EXPENDITURE</b>                   |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| <b>INDIRECT COSTS</b>                |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| Staff                                | \$380,000          | \$383,800          | \$387,638          | \$391,514          | \$395,430          | \$399,384          | \$403,378          | \$407,411          | \$411,486          | \$415,600          | \$419,756          | \$423,954          | \$428,194          | \$432,475          | \$436,800          |
| Overheads                            | \$300,000          | \$306,000          | \$312,120          | \$318,362          | \$324,730          | \$331,224          | \$337,849          | \$344,606          | \$351,498          | \$358,528          | \$365,698          | \$373,012          | \$380,473          | \$388,082          | \$395,844          |
| Finance                              | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          | \$900,000          |
| Depreciation                         | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          | \$300,000          |
| Sustainability projects              | \$0                | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          |
| Partial Year Costs (Approx.)         | \$1,200,000        |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| <b>Sub-Total</b>                     | <b>\$3,080,000</b> | <b>\$1,989,800</b> | <b>\$1,999,758</b> | <b>\$2,009,877</b> | <b>\$2,020,159</b> | <b>\$2,030,608</b> | <b>\$2,041,226</b> | <b>\$2,052,017</b> | <b>\$2,062,983</b> | <b>\$2,074,128</b> | <b>\$2,085,455</b> | <b>\$2,096,966</b> | <b>\$2,108,666</b> | <b>\$2,120,557</b> | <b>\$2,132,644</b> |
| <b>COLLECTIONS</b>                   |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| Collections Contract (Index Adjust)  | \$3,106,622        | \$3,933,925        | \$3,978,425        | \$4,029,195        | \$3,978,425        | \$3,978,425        | \$4,029,195        | \$3,978,425        | \$3,966,671        | \$4,017,291        | \$3,966,671        | \$3,966,671        | \$4,005,387        | \$3,954,917        | \$3,954,917        |
| Disposal Costs (Approx.)             | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          | \$600,000          |
| <b>Sub-Total</b>                     | <b>\$3,706,622</b> | <b>\$4,533,925</b> | <b>\$4,578,425</b> | <b>\$4,629,195</b> | <b>\$4,578,425</b> | <b>\$4,578,425</b> | <b>\$4,629,195</b> | <b>\$4,578,425</b> | <b>\$4,566,671</b> | <b>\$4,617,291</b> | <b>\$4,566,671</b> | <b>\$4,566,671</b> | <b>\$4,605,387</b> | <b>\$4,554,917</b> | <b>\$4,554,917</b> |
| <b>LANDFILL</b>                      |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| Monitoring                           | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          |
| Trade Waste                          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          |
| Misc                                 | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           | \$50,000           |
| <b>Sub-Total</b>                     | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   | <b>\$300,000</b>   |
| <b>Expenditure Total</b>             | <b>\$7,086,622</b> | <b>\$6,823,725</b> | <b>\$6,878,183</b> | <b>\$6,939,072</b> | <b>\$6,898,585</b> | <b>\$6,909,034</b> | <b>\$6,970,422</b> | <b>\$6,930,443</b> | <b>\$6,929,655</b> | <b>\$6,991,419</b> | <b>\$6,952,126</b> | <b>\$6,963,637</b> | <b>\$7,014,053</b> | <b>\$6,975,474</b> | <b>\$6,987,561</b> |

## **Appendix 2:**

**Draft Waste Strategy 2015/16**

**and**

**Waste Assessment of 2015**

# ROTORUA LAKES COUNCIL

Te kaunihera o ngā roto o Rotorua

## Draft Waste Strategy 2015



CONSULTATION  
DOCUMENT

**ROTORUA**  
LAKES COUNCIL

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Collection Option 4. Council provides a kerbside wheelie bin for refuse + recyclables (glass separate)

Collection Option 5. Council provides a kerbside wheelie bin for refuse + recyclables (glass separate) + organic waste

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Comments received from the pop-up shop (summer 2014/15) in regards to waste in Rotorua

## Introduction

### Purpose

This waste strategy sets out how the Council will progress efficient and effective waste management and minimisation in the Rotorua District. It paves the way forward, considering current policy and the legal framework and Rotorua Lakes Council 2030 goals, with an overarching suite of guiding principles and objectives.

This Waste Strategy fulfils Council's obligations under the Waste Minimisation Act The Act



(2008). It comprises:

- Rotorua Lakes Council Waste Management and Minimisation Plan 2015
- Rotorua Lakes Council Waste Assessment 2015 (included in the Draft Waste Strategy only)

### Waste Minimisation Act

The Waste Minimisation Act (2008) establishes the Council's responsibility for waste management and minimisation. The purpose of the legislation is to “encourage waste minimisation and decrease waste disposal in order to protect the environment from harm; provide environmental, social, economic and cultural benefits”. In particular, Section 42 of the Act states **"A territorial authority must promote effective and efficient waste management and minimisation within its district"**. This differs to the previous obligation for Councils in the Local Government Act, which was limited to the promotion of effective waste management (i.e. did not include a duty to promote waste minimisation). The Act requires Council to develop and adopt a Waste Management and Minimisation Plan, and to undertake a Waste Assessment to inform the Plan. An overview of the planning process for preparing, implementing and reviewing the Plan is shown below.

A Waste Assessment is required to inform the Plan, by:

- Providing a review of current waste services
- Providing a statement of options available for meeting the demands of the District
- Providing a statement of how Councils proposes to provide for waste and how it will be funded
- Providing a statement about that the proposals will ensure that public health is adequately protected, and promote effective and efficient waste management and minimisation.



A Waste Management and Minimisation Plan must:

- Consider the waste hierarchy
- Ensure that the collection, transport and disposal of waste does not, or is not likely to, cause a nuisance
- Have regard to the NZ Waste Strategy, other related government policy, the most recent Waste Assessment
- Document Council’s strategic direction (vision, goals, objectives) an action plan for achieving effective and efficient waste management and minimisation within the district and how this is to be funded.

### Scope

The Waste Strategy covers waste generated in the Rotorua District including bio-solids generated from wastewater treatment. Some waste minimisation activities included in the Plan, overlap with the scope of the ‘three waters’, such as education, plastic water bottle minimisation, treatment of landfill leachate.

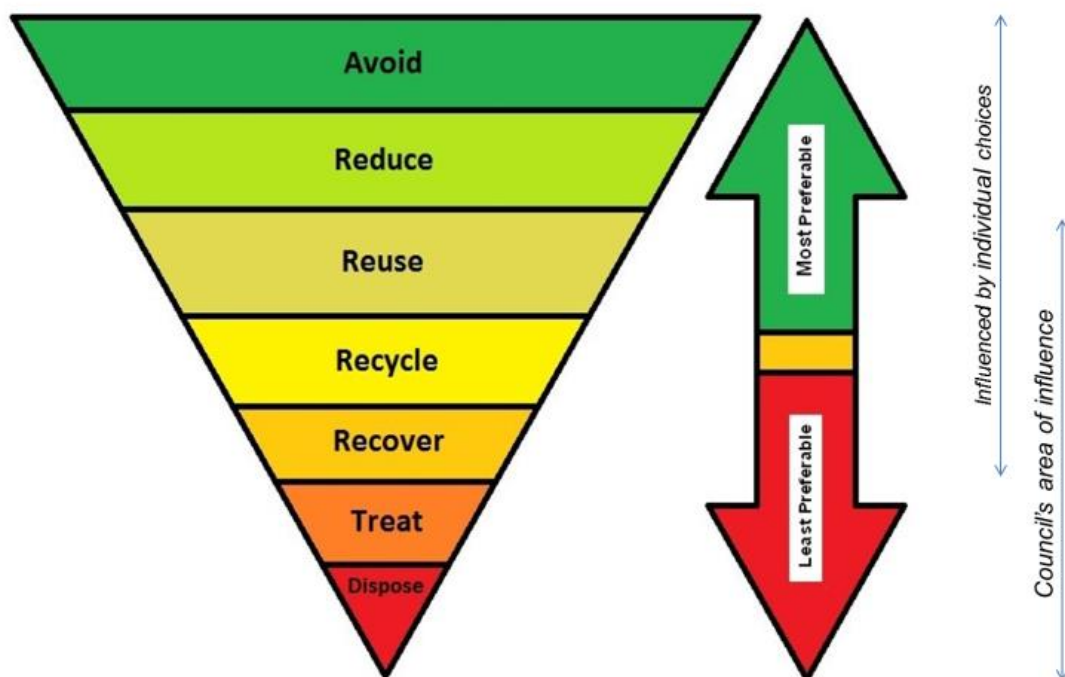
### What is waste and waste minimisation?

**Waste** Anything that has no further use and is disposed of or discarded. Types can be defined by composition or source e.g. organic waste, electronic waste, construction and demolition waste, including any component or element of diverted material that is disposed of or discarded.

**Waste minimisation** Reduction of waste for disposal, reuse, recycling and recovery of waste and diverted material. Waste minimisation activities may affect both the waste and diverted materials streams.

**Diverted material** Any material that is reused, recycled or recovered, instead of disposed of or discarded. Term is used to distinguish between diverted material and residual waste.

### The waste hierarchy



**Waste hierarchy** Internationally accepted waste reductions in descending order of importance.

**Recyclables** (noun) used to describe the inorganic materials that are commonly diverted from household refuse for recycling: paper, cardboard, glass, plastics 1-7, steel cans, aluminium cans, glass bottles and jars.

**Recycling** (noun) often used interchangeably with recyclables; also used to describe all inorganic materials being diverted and recycled, such as: recyclables, scrap metal, whiteware, tyres, e-waste).

**Reduce** (verb) – to use less material, use more efficiently and use products that generate less waste.

**Reuse** (verb) further use of material in its existing form.

**Recycle** (verb) process so the material can be used again in the same cycle, including composting.

**Recover** (verb) Process to produce new substances, products, or components that can be used.

**Treat** (verb) process to ensure no harm to environment.

**Dispose** (verb) the final (or more than short-term) deposit of waste into or onto land set apart for that purpose, or incineration of waste.

## Draft Waste Management and Minimisation Plan 2015

### Where we want to be

Together we can achieve more effective and efficient waste management and minimisation in our district. Council is proposing a fresh approach with objectives and targets that pave the way forward for the provision of waste services. They have been developed after consideration of the Rotorua 2030 goals and priorities and with a suite of overarching principles as a guide.

We are proposing a fresh approach, where:

- waste services in Rotorua district are cost effective and efficient;

- the harmful effects of waste are minimised, while resource-use efficiency is optimised; and
- the connectivity and 'mauri' of our people, land and nature are guarded and protected

### **Our community goals - Rotorua 2030**

The Rotorua Lakes Council is embarking on a journey for positive tomorrow. Seven goals for 2030 were identified:

1. A resilient community
2. Homes that match needs
3. Outstanding places to play
4. Vibrant city heart
5. Business innovation and prosperity
6. Employment choices
7. Enhanced environment

Starting with some priorities that we want to achieve together by 2016:

1. Develop a vibrant city heart that attracts people and activity
2. Develop our economic base by growing existing and attracting new businesses to our region
3. Support reinvigorated neighbourhoods and the creation of healthy homes
4. Sustainable infrastructure and affordable, effective Council services

### **Our guiding principles**

The following suite of suite of principles was considered, and is proposed to guide our way forward:

1. Address all legislative requirements
2. Align with the NZ Waste Strategy and works towards zero waste and a reducing carbon footprint
3. Align with the Rotorua 2030 vision
4. Recognise principles of kaitiakitanga and sustainability
5. Prioritise actions based on the internationally recognised waste hierarchy
6. Allow for the integration of technology and recycling and recovery processes
7. Acknowledge that behaviour change is required to minimise waste, and convenience, accessibility, and affordability influence behaviour



### Recognising principles of sustainability and Kaitiakitanga

Kaitiakitanga and sustainability is recognised by viewing the economy as central to our society, which is connected to land and nature, through which the mauri or life energy permeates and flows, giving life. The strategy aims to meet our needs without compromising the future, and while protecting the connectivity and the mauri of our people, land and nature, by:

- Ensuring the risk of harm to the environment and people is minimised
- Ensuring the future is not compromised by using resources efficiently, recycling, composting and recovering energy and nutrients where feasible and cost effective
- paru (human waste) is converted into other material before it is returned to nature
- Māori organisational views are incorporated into educational and promotional material and Resource Recovery Centre props as they are updated
- Communities are able to develop innovative solutions for the waste from their maraes and neighbourhood aligned with the guiding principles

### Our objectives

Our waste strategy aims to:

1. Improve health and safety
2. Increase efficiencies and cost effectiveness
3. Increase influence over the waste stream to maximise benefits and minimise negative impacts  
(act as service delivery manager where possible)
4. Increase the recovery of recyclable materials
5. Prioritise on-selling of recyclables within NZ
6. Improve access and/or convenience of recycling services
7. Maximise local economic development opportunities
8. Increase organic waste diversion from landfill
9. Recover nutrients and energy from waste where viable
10. Reduce litter and illegal dumping and related costs
11. Reduce the volume of waste being disposed to landfill
12. Reduce the carbon footprint of the waste stream
13. Promote producer responsibility for waste through advocacy

### Our targets

Our targets for 2021:

- 15% increase in recovery of recyclables
- 10% reduction in waste in the kerbside collection

## Key performance indicators

The following set of key performance indicators (KPIs) is proposed:

| Level of Service                                     | Performance Measure  | Data Source      | 2014 (actual) | 2015               | 2016               | 2017               | 2018               | 2019-25            |
|--|--|------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Provide efficient household waste collection service | Percentage of residents very/fairly satisfied with refuse and recycling collection service | NRB Survey       |               |                    | 90%                | 95%                | 95%                | 95%                |
| Provide sustainable recycling services               | Council services data  |                  | 3296          |                    |                    |                    |                    |                    |
|  | Other data   |                  | 1179          |                    |                    |                    |                    |                    |
|  | Increasing number of tonnes per annum of recyclables recovered                             | Waste database   | 4,475         | 4,475              | 4,475              | 4,700              | 4,900              | 5,100              |
| Minimise waste and impact on environment             | No breaches of consent conditions notified by BOPRC  | Consent database | Achieved      | Achieved           | Achieved           | Achieved           | Achieved           | Achieved           |
|  | Reduce the amount of waste for disposal from kerbside collection per household             | Waste database   |               | 336 kg / household | 336 kg / household | 330 kg / household | 315 kg / household | 300 kg / household |

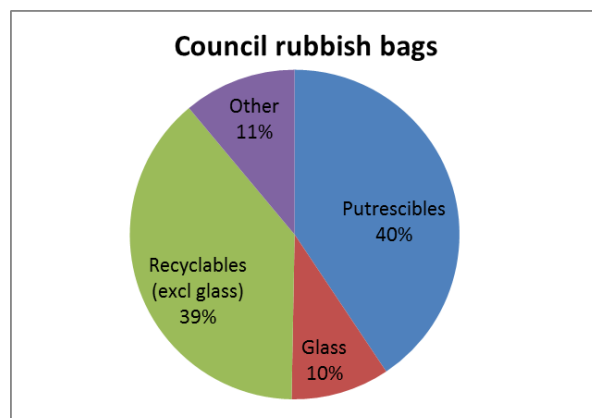
## Council's role

Council was historically the main provider of waste services in the district, and private companies became increasingly involved to fill the gaps in services, and to provide cheaper alternatives for waste disposal in large efficient but distant landfills. Council is proposing to be the 'lead agency' in the delivery of services, to work together with the private companies to meet the demands of the community in the most effective and efficient way possible. The aim is to achieve the gains in efficiencies and lower costs that are associated with scale, to prevent further fragmentation of services and the waste streams, and to ensure that at some point in the future it will be possible to incorporate additional local or regional services e.g. processing of recyclables.

## Our waste

The district is currently sending 28,000 t of rubbish to the Atiamuri landfill and an unknown quantity through private collections and transfer stations to private landfills. Around 8400 t is from the Council kerbside collection, 3000t is from litter bins and events in public places, and the remainder from the private sector. More detailed information on our waste is provided in the Waste Assessment (Part B).

We are still disposing of waste in our rubbish bags could be recycled or composted.



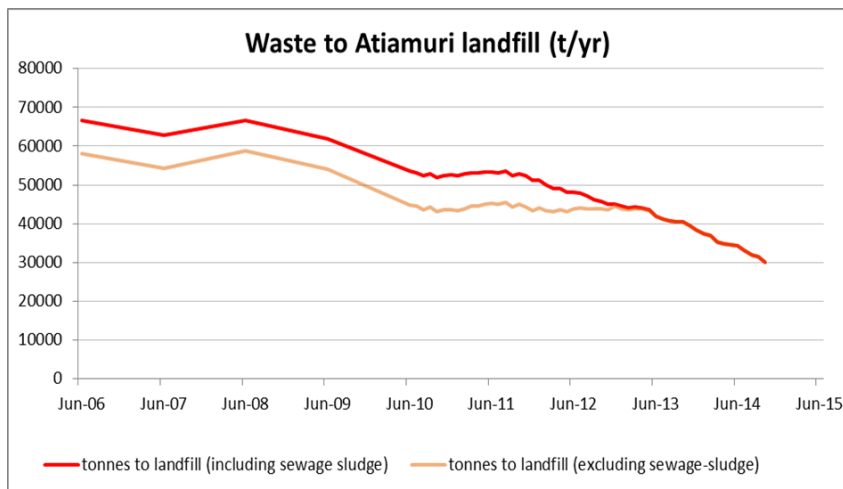
## Existing waste services and facilities

### Provided for by Council

Council provides a range of waste collection, recycling, processing and disposal services in the district that are funded through rates and user-pays. More detail is provided in the Waste Assessment (Part B).

The main services and facilities include:

- Rubbish bag collection
- Rubbish bin collection public places, events
- Recycle centre
- Rural transfer stations
- Greenwaste composting facility
- Fly tipping
- Hazardous waste
- Atiamuri landfill



External revenue dropped as waste disposed at our landfill declined from 70,000 tonnes per year in 2009 to 45,000 tonnes in 2012. Companies are taking more waste to cheaper large commercial purpose-built landfills out of the Rotorua region. This year only 28,000 tonnes will go to our landfill and is at risk of further declining

### Provided by private companies

Private companies meet the requirements of business and households beyond those supplied by Council and at an additional cost, including:

- A number of private companies are providing collections for rubbish bins, co-mingled recyclables, greenwaste
- Private transfer station, transporting a significant portion of the districts waste to private landfills (Tirohia).

## Cost of the current level of service

The current level of service costs on average \$226 per ratepayer per year, and the cost has been increasing as landfill revenue reduces. Targeted refuse rates fund the kerbside collection, the landfill contributes some profit and general rates fund the remainder of the waste service provided by Council.

| Service                  | Service description   | Targeted rates | General rates/<br>Landfill profit | Other      | Nett Cost    | Current Revenue |
|--------------------------|---|----------------|-----------------------------------|------------|--------------|-----------------|
| Kerbside collection      | Kerbside rubbish bag collection available to 90% of ratepayers  | √              |                                   |            | \$892,000    | \$2,315,800     |
| Kerbside disposal        | Disposal of waste from the kerbside collection (included in landfill revenue)   | √              |                                   |            | \$1,008,000  |                 |
| Kerbside paper bags      | Cost of paper rubbish bags  | √              |                                   |            | \$505,650    |                 |
| Recycling services       | In-town and/or at the landfill: drop-off for recyclables, whiteware, greenwaste, untreated woodwaste, car bodies, hazardous waste, oil; concrete/asphalt crushing/on-selling; recyclables baling/on-selling |                | √                                 |            | \$1,073,250  | \$3,249,800     |
| Litter                   | Rubbish bins in CBD, public places/parks, events in public places & illegal dumping - collection and disposal   |                | √                                 |            | \$565,000    |                 |
| Transfer stations        | Operate transfer stations for refuse and recyclables at Mamaku, Reporoa, Tarawera, Okere - gatefees as for landfill   |                | √                                 |            | \$415,000    |                 |
| Greenwaste               | Greenwaste composting and on-selling  |                | √                                 |            | \$216,000    |                 |
| Other waste minimisation | Education, advocacy, litter reduction/clean-ups   |                | √                                 |            | \$32,000     |                 |
| Disposal facility        | Atiamuri landfill was large revenue earner, declining profit (excl finance cost)  |                | √                                 |            | -\$1,160,000 |                 |
| Staff costs              | Staff   |                | √                                 |            | \$362,500    |                 |
| Other council costs      | Finance, renewals, administration, corporate overheads  |                | √                                 |            | \$1,656,200  |                 |
| Recovery                 | Research Terax™ process for residual waste  |                |                                   | Waste levy | \$200,000    | \$200,000       |
| Sludge processing        | Vermicomposting   |                |                                   | Wastewater | -            |                 |
| Sludge processing        | Investigate Terax™ as sustainable alternative   |                |                                   | MfE grant  | -            |                 |
| Other                    | Commercial operators provide other services if financially viable   |                |                                   | Private    | -            |                 |
| SUM                      |   |                |                                   |            | \$5,765,600  | \$5,765,600     |

## Main issues with the current level of service

The following main issues were identified:

- Significantly less waste is going to our landfill which has reduced external revenue;
- The cost of operating transfer stations is high with users not covering the cost;
- 10% of properties do not have a kerbside collection;
- Our kerbside collection fleet is approaching its end of life;
- Health and safety issues are higher for manual collection systems (people picking up bags) compared to automated collection systems (machine pick up of bins);
- Our rubbish contains a lot of material that could be recycled;
- The demand for a council kerbside recycling collection is high; and
- We do not know how much waste we are producing because we have not required private operators to supply data on waste leaving the district (through bylaw to licence operators).

## Our challenge

Together we can achieve more effective and efficient waste management and minimisation in our district. We have identified issues around the collection, recycling and disposal of waste and are proposing a plan of action. We will be looking to build partnerships with commercial operators for use of our local landfill. If this can be done in a cost-effective way it should help prevent waste from being transported out of our district.

We are committed to forging this pathway together with our community, in keeping with the motto on our district crest: *‘Tātau tātau – We together.’*



## Options being considered and costs

In considering what a future waste management service could look like, collection, transfer, recycling, minimisation and disposal method need to be considered.

The table below shows the cost of different kerbside collection and landfill options.

It is predicted that if we continue business as usual for the operation of the landfill, the volume of waste will continue to decline as waste is being collected and disposed to more cost-competitive private landfills. This will mean revenue will continue to fall. An option is to look to partner with commercial operators for the operation of our landfill. If this can be done in a cost-effective way it should help prevent waste from being transported out of our district, and reduce the risk of further decline in revenue. There is a possibility that the volume of waste and revenue could increase, and reduce the cost to the ratepayer in the future.

Further information on the options is provided in the Waste Assessment part of this strategy.

| OPTIONS TABLE   | Option 1<br>Refuse –<br>paper bag<br>weekly | Option 2<br>Refuse –<br>plastic bag<br>weekly | Option 3<br>Refuse –<br>MGB*<br>Fortnightly | Option 4a<br>Refuse &<br>recyclables<br>fortnightly | Option 4b<br>Refuse &<br>recyclables<br>weekly | Option 5<br>Refuse<br>recyclables<br>& organic | Option 6<br>Baseline<br>services<br>only** |
|---|---|---|---|---|--|--|--|
| <i>Recycling services, litter, waste minimisation</i> | ✓   | ✓   | ✓   | ✓   | ✓  | ✓  | ✓  |
| <i>Refuse collection</i>                              | Paper bag weekly                            | Plastic bag weekly                            | 240 L MGB weekly                            | 140L MGB fortnightly                                | 140 L MGB weekly                               | 140 L MGB fortnightly                          | User pays (> \$100)                        |
| <i>Recyclables collection</i>                         | User pays                                   | User pays                                     | User pays                                   | 240 L MGB + 60L crate for glass fortnightly         | 240 L MGB + 60L crate for glass fortnightly    | 240 L MGB + 60L crate for glass fortnightly    | User pays                                  |
| <i>Food-waste collection &amp; processing</i>         | -   | -   | -   | -   | -  | 240 L MGB fortnightly                          | -  |
| <i>Greenwaste collection &amp; composting</i>         | User pays                                   | User pays                                     | User pays                                   | User pays   | User pays                                      | User pays                                      | User pays                                  |
| <i>Other services</i>                                 | User pays                                   | User pays                                     | User pays                                   | User pays   | User pays                                      | User pays                                      | User pays                                  |
| <i>Business as usual</i>                              | \$226                                       | \$216   | \$200                                       | \$196   | \$213  | \$275  | \$134                                      |
| <i>Close landfill</i>                                 | \$297                                       | \$287   | \$271                                       | \$266   | \$283  | \$345  | \$204                                      |
| <i>Partnership</i>                                    | \$273                                       | \$263   | \$247                                       | \$242   | \$259  | \$321  | \$180                                      |

\*MGB = Mobile Garbage Bin = Wheelie bin

\*\* Baseline services include: recycling depot and associated activities depending on contract; litter bins in CBD, public places, parks, events on Council property; illegal dumping; other waste minimisation activities, and does not include the cost to the household of a commercial operator providing the kerbside refuse collection service, or any other services



## Proposed way forward

### Proposed level of service

Councils preferred option is highlighted in the options table. From 2015/16 targeted rates for waste would be:

- \$242 plus GST for urban and rural
- \$116 plus GST for an additional collection, such as the double-frequency collection in the CBD or for those who want an additional set of kerbside bins; and
- \$126 plus GST for those outside the collection area.

Alternatively we could continue to have a portion, such as 60%, or \$142/household, funded by a targeted rate which would cover the cost of the kerbside collection as well as the recycling facility, with the remainder covered by general rates.

| Service                     | Service description   | Targeted rates | General rates/<br>Landfill profit | Other      | Nett Cost   | Nett Cost   |
|-----------------------------|---|----------------|-----------------------------------|------------|-------------|-------------|
| Kerbside collection         | Kerbside refuse and recyclables collection to 97% ratepayers  | ✓              |                                   |            | \$2,296,544 | \$3,104,073 |
| Kerbside disposal           | Disposal of waste from the kerbside collection (included in landfill revenue)   | ✓              |                                   |            | \$807,529   |             |
| Kerbside paper bags         | Cost of paper rubbish bags  | ✓              |                                   |            | \$0         |             |
| Recycling services          | In-town, landfill or at a main transfer station: drop-off for recyclables, whiteware, e-waste, untreated woodwaste, car bodies, hazardous waste, oil; concrete/asphalt crushing/on-selling; recyclables baling/on-selling | ✓              |                                   |            | \$540,000   | \$3,439,500 |
| Litter                      | Rubbish bins in CBD, public places/parks, events in public places & illegal dumping - collection and disposal   | ✓              |                                   |            | \$632,800   |             |
| Transfer stations           | Operate (or community operate) transfer stations at Mamaku, Reporoa, Tarawera, Okere - user pays basis  | ✓              |                                   |            | \$0         |             |
| Greenwaste                  | Greenwaste drop-off, composting and on-selling  | ✓              |                                   |            | \$216,000   |             |
| Other waste minimisation    | Education, advocacy, litter reduction/clean-ups, additional activities  | ✓              |                                   |            | \$32,000    |             |
| Disposal facility           | Atiamuri landfill - any profit towards activities to further minimise waste   | ✓              |                                   |            | \$0         |             |
| Staff costs                 | Staff   | ✓              |                                   |            | \$362,500   |             |
| Other council costs         | Finance, renewals, administration, corporate overheads  | ✓              |                                   |            | \$1,656,200 |             |
| Recovery/waste minimisation | Consider all recovery technologies and waste minimisation activities  |                |                                   | Waste levy | \$200,000   | \$200,000   |
| Sludge processing           | Terax™ or sustainable alternatives  |                |                                   | Wastewater | -           |             |
| Other                       | Commercial operators provide other services if financially viable   |                |                                   | Private    | -           |             |
| SUM                         |   |                |                                   |            | \$6,743,573 | \$6,743,573 |

This would provide a level of service that:

- Provides fortnightly kerbside collections (refuse one week/recyclables alternate week; weekly CBD at 2\*frequency), that could be extended to include all possible properties
- Provides wheelie bins for refuse and recyclables, glass in a separate crate, with RFID tags that would allow for moving to a user-pays based on weight of refuse in the future
- Provides a location (a recycling centre, materials recovery facility or transfer stations) where additional recyclables, whiteware, untreated woodwaste, car bodies, hazardous waste, oil, concrete and asphalt can be dropped off, depending on the contractual arrangement
- Continues to provide other waste minimisation activities
- Disposes of waste cost-effectively through partnership proposals for the Atiamuri landfill, while minimising impact, minimising risk of further loss of revenue, and using any profit from disposal to fund further waste minimisation initiatives (see Action Plan tables below)
- Considers integration of processing options for plastics
- Continues to investigate recovery options for organic waste

- Uses MfE waste levy for waste minimisation activities and/or recovery of materials or energy from organic waste

## Proposed action plan

The action plan below shows how Council's preferred option addresses the key issues and how the activities will be funded. Further information on discretionary waste minimisation activities is provided in the following section.

| Key Issues with current service   | Proposed Action   | Funding    |
|---|---|------------|
| <ul style="list-style-type: none"> <li>• <b>Collections – Refuse bags</b></li> <li>• Rotorua's current kerbside refuse collection fleet is approaching the end of life and there are health and safety issues associated with the manual bag collection system</li> <li>• Access to recycling facilities is not convenient without private transport and the alternative</li> <li>• Private companies provide collections for recyclables- user pays and lacks economies of scale</li> <li>• The demand for kerbside recycling in Rotorua remains high with low level of satisfaction around current services</li> <li>• The kerbside collection does not extend to Waikite Valley and some other distant properties</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Collections - Refuse wheelie, recyclables wheelie, glass crate</b></li> <li>• Procure cost-effective provider(s) to provide an automated kerbside collection service for refuse and recyclables using mobile garbage bins (MGBs) (wheelie bins), with glass collected separately in a crate.</li> <li>• As the bins are closed (less odours and less accessible to animals and rodents) and larger than the current paper bags, the proposal for the urban/rural area is a fortnightly collection with refuse collected one week and recyclables on the alternative week to reduce costs and for efficient use of vehicles.</li> <li>• The proposal for the CBD is a weekly collection for refuse and recyclables</li> <li>• The waste collection service area will be extended to include all viable residential properties, ie each separately use of inhabited part of a rating unit including those commercial</li> </ul> | TR         |
| <ul style="list-style-type: none"> <li>• <b>Recycling – drop off facility for sorted recyclables</b></li> <li>• Council is currently not equipped to collect and sort recyclables. Private companies equipped to deal with effectively with large volumes or are costly for small volumes or collecting from remote places. We are not providing effectively for recyclables from events and public places</li> <li>• While recyclables are sorted by the public and compressed and baled locally, there is no local or regional processing facility for these materials, which means we are relying on a variable external market with long transport distances to get them to a recycling facility</li> </ul>                 | <ul style="list-style-type: none"> <li>• <b>Recycling – drop off facility for sorted and comingled recyclables</b></li> <li>• Contract a cost-effective provider</li> <li>• Operate a facility to receive, sort, prepare/ bale co-mingled or pre-sorted recyclables from (but not limited to) the Rotorua district, including the kerbside and private collections and public drop-off, and on-sale when viable.</li> <li>• Could continue to be located at the in-town recycling centre, or associated with a transfer station or materials recovery facility in another location, depending on the options put forward by the private sector</li> <li>• Allow for the collected materials to be processed locally or regionally if a feasible viable technology is identified</li> </ul>  | TR         |
| <ul style="list-style-type: none"> <li>• <b>Second hand shops</b></li> <li>• Uncertainty around space/location when recycling centre contract expires – there might be more space or less space available depending on procurement of recycling services</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Community Resource Recovery Centre &amp; Second hand shops</b></li> <li>• Continue to provide low-cost space at the in-town recycle centre (depends on options put forward by private companies for recycling) and provide discretionary support for second hand shops</li> <li>• If space is available encourage further enterprise related to the reuse and recycling of waste such as dismantling, repairing, processing, and on-selling</li> </ul>  | TR         |
| <ul style="list-style-type: none"> <li>• <b>Rural Transfer Stations</b></li> <li>• The cost of operating rural transfer stations is high and is not recovered by gate fees</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Rural Transfer Stations - close or operated by the community</b></li> <li>• As a kerbside collection for refuse and recyclables is proposed for all viable properties, demand for rural transfer stations will reduce</li> <li>• Allow for the possibility that a community might choose to operate them on a user-pays basis</li> <li>• Seek proposals for community operation of the assets, which is likely to involve full cost recovery on a user-pays basis, or consider closure.</li> </ul>  | -          |
| <ul style="list-style-type: none"> <li>• <b>Garden waste collection</b></li> <li>• Private companies provide collection – user pays and lacks economies of scale so not as cost-effective as it could be</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Garden waste collection – optional user-pays through rates</b></li> <li>• Consider procuring more cost-effective collection – optional user-pays through rates</li> </ul>   | Opt        |
| <ul style="list-style-type: none"> <li>• <b>Garden waste – drop off and composting</b></li> <li>• Potential relocation of drop-off depending on</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Garden waste – drop off and composting</b></li> <li>• Procure the continued provision of a drop off facility and</li> </ul>   | TR<br>User |

|   |   |             |
|---|---|-------------|
| options put forward by private companies  | composting facility for garden waste  |             |
| <ul style="list-style-type: none"> <li>• <b>Food waste – no services</b></li> <li>• Currently no collection or publically available facility to process</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Food waste – consider</b></li> <li>• Consider investigating foodwaste or mixed organic waste processing through request for proposal process.</li> <li>• Consider implementation if economically viable</li> </ul>  | Opt Levy    |
| <ul style="list-style-type: none"> <li>• <b>Biosolids processing - vermicomposting</b></li> <li>• Service contract expired now on rolling-monthly procurement</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Biosolids processing – Terax™</b></li> <li>• Procure new vermicomposting contract that provides an out clause once an alternative processing technology has been commissioned</li> <li>• Build a Terax™ plant for solids destruction and nutrient recovery if still viable to integrate with WWTP now that has upgrade requirements</li> <li>• Otherwise investigate alternative recovery, reuse and discharge options along with other organic wastes, ie food waste</li> </ul>  | WWTP Levy   |
| <ul style="list-style-type: none"> <li>• <b>Education and Information</b></li> <li>• School-level waste education not curriculum based</li> <li>• ReSource props not portable; focus is provision of information rather than behavioural change</li> <li>• There is an opportunity to incorporate the delivery of waste minimisation education with the 3-waters with a single approach to schools</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Education and Information</b></li> <li>• Update Resource props so they are portable, hand-on, with behavioural change outcomes</li> <li>• Incorporate the delivery of waste minimisation education with the 3-waters in a way that recognises principles of sustainability and kaitiakitanga, and with a single approach to schools</li> <li>• PR around changes in the level of service and bylaws</li> </ul>  | TR Levy     |
| <ul style="list-style-type: none"> <li>• <b>Litter</b></li> <li>• Bins are provided for refuse in CBD, park, other public places and events but Council is currently not equipped to collect and sort co-mingled recyclables.</li> <li>• Fly-tipping from public places is collected at a high cost to ratepayers</li> <li>• Clean-ups were arranged through KRB who worked with schools, volunteer groups, general public, PD workers at a low cost to ratepayers</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Litter</b></li> <li>• The new level of service will allow for co0llection and sorting of co-mingled recyclables (with glass separated) and the aim is to include bins for recyclables in public places incorporated into the collection service where feasible.</li> <li>• Options for providing for recycling at events will be considered, and while events and public spaces are covered in a separate policy, will work with them</li> <li>• Fly-tipping from public places will continue to be collected</li> <li>• We aim to continue with community involvement in clean-ups and how they will be co-ordinated is yet to be determined.</li> </ul> | TR          |
| <ul style="list-style-type: none"> <li>• <b>Other waste minimisation activities</b></li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Other waste minimisation activities*</b></li> <li>• Continue supporting current and new waste minimisation activities, on an annual case by case basis, prioritise based on outcomes and sustainability portfolio requirements, and as any waste-related revenue allows</li> </ul>  | TR Levy Ext |
| <ul style="list-style-type: none"> <li>• <b>Landfill</b></li> <li>• Waste is being disposed of to landfills outside of the Rotorua region, increasing the economic risk and reducing the economic viability of the current Atiamuri landfill operation</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Landfill</b></li> <li>• Request proposals from private companies for the disposal of residual waste, that includes but is not limited to the operation of the Atiamuri landfill, that includes but is not limited to waste from the Rotorua district, that takes into account the cost of capacity, that has restrictions on special waste such as biosolids from out-of-town.</li> </ul>   | User        |
| <ul style="list-style-type: none"> <li>• <b>Bylaws</b></li> <li>• Needs updating</li> <li>• No good data on the volumes of waste being recycled and disposed of by private companies</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Bylaws</b></li> <li>• Once the procurement process is complete, review the waste bylaws to allow for the procured services and to enable closer monitoring of wastes in the district</li> </ul>   | -           |
| <ul style="list-style-type: none"> <li>• <b>Service review and procurement</b></li> <li>• Review of new service requirements and alternative business options with the intention to that services are cost-effective and achieve improved waste management and minimisation</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Service review and procurement</b></li> <li>• Service requirements will be reviewed through the procurement process to deliver on the requirements of the strategy, and depending on the options put forward by the private sector from July 2015.</li> </ul>   | -           |

TR = Targeted rate; Levy – Waste fund Levy; User = User pays; Opt = optional paid through rates

\*Details on other waste minimisation initiatives is provided in a subsequent table

## Proposed Waste Minimisation Activities

Council will continue to provide for the waste minimisation activities listed below, not in order of priority, to the extent of operational funding available.

| Waste Minimisation Action Plan   |
|--|
| Develop and deliver educational and promotional programmes in order to raise awareness and change behaviour around waste minimisation, including in-school programmes, site visits and the Resource education centre |
| Promote and facilitate waste reduction in the commercial and industrial sectors  |
| Support a Resource Recovery Centre with drop off facility  |
| Continue to provide concrete and asphalt reuse if this service if required   |
| Continue to provide for the recycling of greenwaste or alternatively organic waste and consider collection   |
| Continue to investigate the possibility of the Terax™ process on the solid waste stream  |
| Continue to provide for the separation of vehicle bodies, whiteware, scrap metal and tyres at the landfill site or transfer station as required  |
| Support the collection and disposal/processing/reuse of domestic tyres   |
| Coordinate or support second-hand days or similar  |
| Support –waste recycling initiatives   |
| Coordinate and/or support worm-farm workshops, composting, community gardens   |
| Support the use of non-disposable nappies  |
| Install drinking water fountains to encourage refill/ reuse of drinking vessels and reduce plastic bottle waste  |
| Support the establishment of an organic waste processing facility  |

## Proposed Funding

- It is proposed that the targeted rates fund the entire waste costs, and the rate will depend on the option chosen.
- It is proposed that the waste levy funds research into the use of the Terax™ process for MSW, and following this it is used towards the discretionary waste minimisation activities listed in table above.

## Rates funded waste services

The current cost per annum is around \$200 (plus GST), with \$79.50 and \$82.00 from a targeted rate (urban and rural respectively) and the remainder from general rates.

From 2015/16 targeted rates for waste would be \$242 for urban and rural, \$116 for an additional collection (e.g. CBD or home-owners who would like an additional set of bins), and \$126 for those outside of the collection area. The cost would be added to rates bills for each 'separately used or inhabited part' of a rating unit to which council provide a collection service. Any ratepayer can use these services, including businesses.

The cost includes the initial wheelie bins and crate for glass, and then there is likely to be a one-off charge to the homeowner if replacements are required, and details would be worked out with the company providing the service. There will still be facilities available to drop off additional waste, greenwaste, large quantities of mixed-recyclables etc., potentially on a user-pays basis with gate fee, although there are likely to be receptacles for separated recyclable material at no charge.

## Optional waste services

Private companies could still provide range of additional collection options to meet community demands where viable.

Some Councillors supported organic waste collection and processing, and most supported it in principle, and the concern was that it would not be affordable for everyone. The action plan considers whether it would be feasible, effective and efficient to provide the following services as optional extra:

- Provide an optional kerbside collection for greenwaste from 1 July 2016 if cost effective
- Provide an optional collection for either foodwaste or mixed organic waste if/when cost effective and feasible
- Provide for foodwaste processing if/when there is a collection service, and if/when cost effective and feasible.

## Consultation

We invite you to consider the information provided in this draft strategy, look at the options set out and the questions posed below, and provide the council with feedback.

- What options do you prefer?
- Do you support extending the kerbside collection area?
- The proposal is for a commercial operator to collect and deal with 1-7 plastics (excluding film and expanded foam), cans, paper, cardboard and glass. We will have additional recyclables and other materials such as whiteware, e-waste etc. that are not collected but can be recycled. Should we continue to provide a location for these activities (such as the in-town recycling centre) or should we require the kerbside recyclables contractor to provide this service?
- Should we consider kitchen-waste processing for the district along with either a separate kitchen waste collection or a combined garden and kitchen waste collection?
- In the interim, would you like us to provide for a greenwaste kerbside collection as a separate optional extra on your rates?
- Transfer stations cost us around \$0.5M per year. Should we close them, operate them on a user-pays basis, or seek proposals from the communities they service to operate them in a way that best serves their communities?
- How can we work together to get there?
- What problems do you foresee and what ideas do you have to prevent them?
- Are we heading in the right direction?

Your views will be taken into account before the strategy and final plan are adopted by Rotorua Lakes Council in June 2015. The back page of this document provides information on

## Timeframe

The following is the timetable for consulting and final development of the Waste Strategy 2015 (including Waste Management and Minimisation Plan)

|  |                        |
|--|------------------------|
| Approve <u>draft</u> Waste Strategy, including the <u>draft</u> WMMP | 16 April 2015          |
| Make available for public submissions - public notice                | 20 April 2015          |
| Community Engagement   | 20 April – 20 May 2015 |
| Submissions close  | 20 May 2015            |
| Hearing submissions  | 25, 27-28 May 2015     |
| Deliberations  | 9-11 June 2015         |
| Adoption of the Waste Strategy and the 2015 WMMP                     | 30 June 2015           |
| Request for proposals (RFP) for the delivery of services             | August 2015            |
| Award contracts with intended commencement date 1 July 2016          | December 2015          |
| Waste Bylaws updated   | June 2016              |

# Rotorua Lakes Council

## Waste Assessment 2015

## Introduction

The Rotorua District Council has a statutory responsibility to promote effective and efficient waste management and minimisation within the Rotorua District (Section 42, Waste Minimisation Act 2008). As part of this responsibility, the Council is required to undertake a Waste Assessment which, in turn, assists in developing the Council's Waste Minimisation and Management Plan.

This report has been prepared as a Waste Assessment Report in accordance with Section 51 of the Waste Minimisation Act. As such it provides details of the existing services provided within the District and a forecast of future demand, which is an update of the information provided based on the 2010 Waste Assessment (Good Earth Matters, 2010), and it provides an assessment of options to meet those demands, and a statement as to how the Council will meet the future demands.

The Waste Assessment includes:

- Legislative and policy framework which sets out Council's duty to promote waste management and minimisation
- Existing waste services provided within the District
- Current and future demand for waste services
- Options which have been considered for meeting the future demand for waste services and assessment of the suitability of each of the options
- Council's intended role in providing waste services to meet the future demand

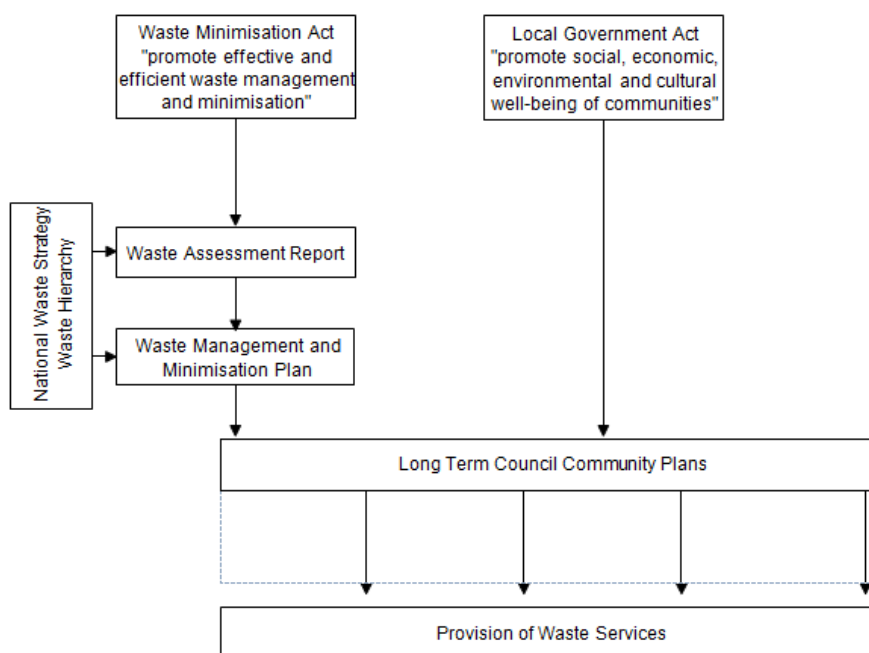
### Status of Report

This report is for Council adoption as part of the 2015 Waste Strategy, and has been used to inform the draft Waste Management and Minimisation Plan.

## Policy and Legislative Framework

This section sets out the legislative and policy framework within which the Council provides waste services within its district, which is summarised in Figure 1. NZ's international commitments were also considered.

Figure 1: Summary of legislative policy framework.



## International commitments

NZ is party to the following key international agreements:

- Montreal Protocol - to protect the ozone layer by phasing out the production of numerous substances.
- Basel Convention - to reduce the movement of hazardous waste between nations.
- Stockholm Convention - to eliminate or restrict the production and use of persistent organic pollutants.
- Waigani Convention - bans export of hazardous or radioactive waste to Pacific Islands Forum countries.

## Waste Minimisation Act

The Waste Minimisation Act (2008) establishes the Council's responsibility for waste management and minimisation. The purpose of the legislation is to **"encourage waste minimisation and decrease waste disposal in order to protect the environment from harm; provide environmental, social, economic and cultural benefits"**. In particular, Section 42 of the Act states **"A territorial authority must promote effective and efficient waste management and minimisation within its district"**.

This differs to the previous obligation for Councils in the Local Government Act, which was limited to the promotion of effective waste management (i.e. did not include a duty to promote waste minimisation).

The Act requires Council to develop and adopt a Waste Management and Minimisation Plan, and to undertake a Waste Assessment to inform the Plan.



## Waste Assessment and Waste Management and Minimisation Plan

An overview of the planning process for preparing, implementing and reviewing the Plan is shown in Figure 2.



A Waste Assessment is required to inform the Plan, by:

- Providing a review of current waste services
- Providing a statement of options available for meeting the demands of the District
- Providing a statement of how Councils proposes to provide for waste and how it will be funded
- Providing a statement about that the proposals will ensure that public health is adequately protected, and promote effective and efficient waste management and minimisation.

A Waste Management and Minimisation Plan must:

- Consider the waste hierarchy
- Ensure that the collection, transport and disposal of waste does not, or is not likely to, cause a nuisance
- Have regard to the NZ Waste Strategy, other related government policy, the most recent Waste Assessment
- Document Council's strategic direction (vision, goals, objectives) an action plan for achieving effective and efficient waste management and minimisation within the district and how this is to be funded.

## Waste Disposal Levy

From 1 July 2009, the Waste Minimisation Act introduced a waste disposal levy on all waste disposed of at disposal facilities, currently \$10 per tonne, to:

- raise revenue for promoting and achieving waste minimisation
- increase the cost of waste disposal, to recognise that disposal imposes costs on the environment, society, and the economy

As the operator of the Atiamuri Landfill, Council is responsible for collecting the levy on behalf of MfE. Half of the levy money is given to territorial authorities on a population basis, and the remainder of the levy is available via a contestable fund. The portion returned to Council can only be spent to promote or achieve waste minimisation.

## Funding of plans

Council is not required to apply cost recovery or user pays principles for any particular service, facility, or activity. Fees can be higher or lower than required to recover costs of the service or facility, or free, if this provides an incentive or disincentive that will promote the objectives of the Plan, if the plan provides for charges to be set in this manner

## Bylaws

The Act enables Councils to make bylaws. A bylaw can allow for licenses to collect and transport waste from households, and require reporting on the quantity, composition, and destination of waste.

## Local Government Act 2002

The Waste Minimisation Act repealed part 31 of the Local Government Act which previously set out Council's responsibilities for waste management. However the Council must still exercise its duties in relation to the Local Government Act. In particular, this includes undertaking its activities in a manner which gives effect to the purpose of local government, namely (Section 10):

- to enable democratic local decision-making and action by, and on behalf of, communities; and
- to promote the social, economic, environmental, and cultural well-being of communities, in the present and for the future."

## Resource Management Act 1991

The purpose of the Resource Management Act 1991 (RMA) is to "promote the sustainable management of natural and physical resources". It does this by controlling, via the resource consent process, the adverse effects of activities as well as devolving responsibility to local government to define objectives, policies and environment outcomes for each region and district. The RMA does not direct or establish waste management goals or policies.

## Regional Policy Statements, Regional Plans and Strategies

Both the Waikato and Bay of Plenty Regional Councils have Regional Plans which contain rules relating to discharges to air, land and water, which will be relevant for facilities (e.g. transfer stations, landfills) and waste processing (e.g. composting, bio-solids processing).

The focus of the regional waste strategies is co-operation between councils, there is a Waikato and Bay of Plenty Waste Liaison Group that we are part of.

## NZ Waste Strategy

The Act requires Council to have regard for the NZ Waste Strategy, which sets two goals:

- to reduce the harmful effects of waste; improve efficiency of resource use; and
- to prepare and adopt a plan that provides for the management and minimisation of waste the Rotorua district

## Other waste-related legislation

The Hazardous Substances and New Organisms Act 1996 that provides regulations and standards related to hazardous substances. The Climate Change Amendment Act 2008 that provides disposal facility regulations, emissions trading scheme. The Health Act provides for the protection of the public.

## Council Long Term Plan - Rotorua 2030

The Rotorua Lakes Council (Council) is embarking on a journey to craft a positive tomorrow. Seven goals for 2030 were identified:

1. A resilient community
2. Homes that match needs
3. Outstanding places to play
4. Vibrant city heart
5. Business innovation and prosperity
6. Employment choices

## 7. Enhanced environment

Starting with some priorities that we want to achieve together by 2016:

1. Develop a vibrant city heart that attracts people and activity
2. Develop our economic base by growing existing and attracting new businesses to our region
3. Support reinvigorated neighbourhoods and the creation of healthy homes
4. Sustainable infrastructure and affordable, effective Council services

### **Existing Waste Services provided in the Rotorua District**

Council provides a range of waste collection, recycling, processing and disposal services in the district that are funded through rates and user-pays (Figure 3). Private companies have been providing services to meet the additional requirements of the community since 2010.

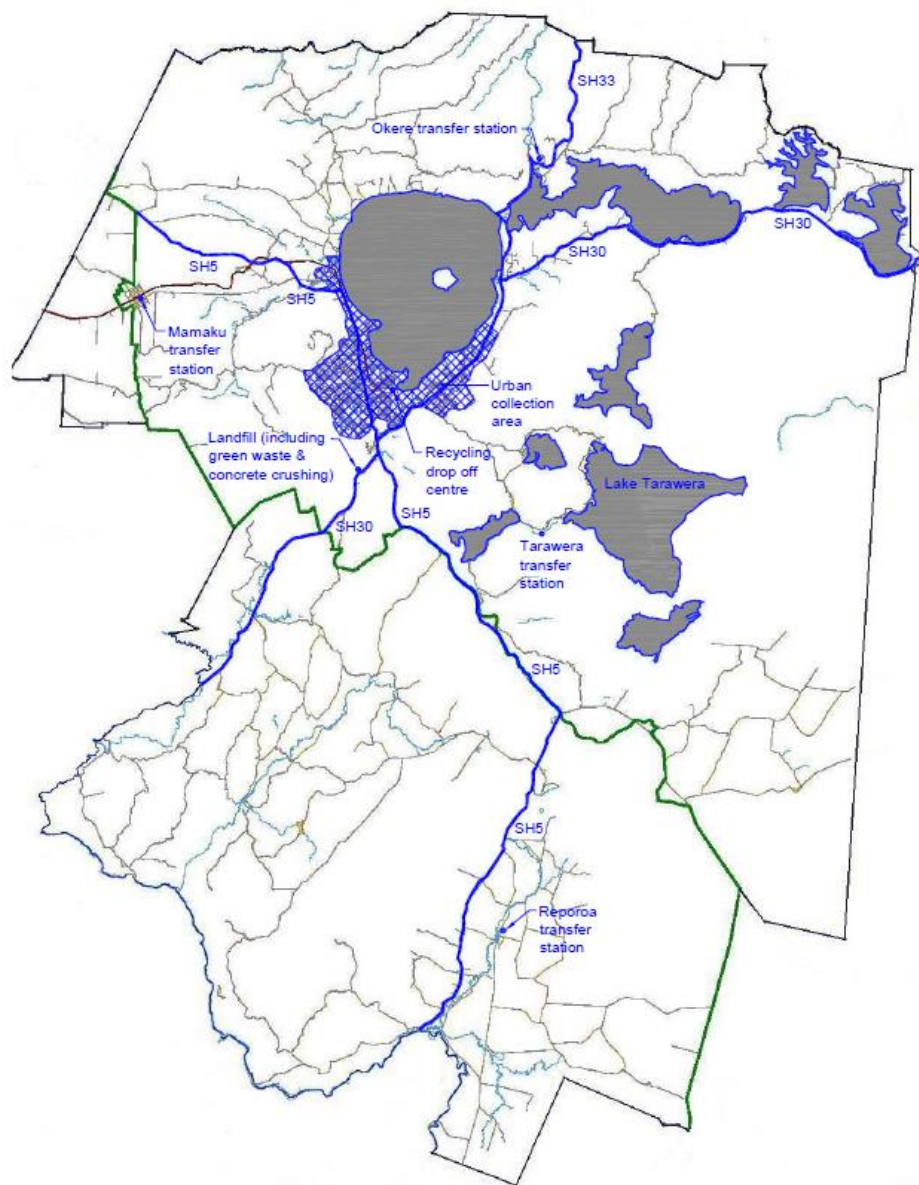
Figure 3. Waste services provided in the Rotorua District.

**Council Provided Services:**

- Atiamuri Landfill
  - Refuse disposal
  - Hazardous waste (residential)
  - Concrete crushing
  - Greenwaste
  - Recycling (metal, whiteware, tyres, recyclables etc)
- Rural transfer stations at Okere, Tarawera, Reporoa and Mamaku
- Recycling drop-off and processing facility
- Kerbside refuse collection
- Education programmes
- Cleaner Production (commercial sector initiative)

**Private services include:**

- Private kerbside refuse collection services
- Private greenwaste collection
- Private paper and cardboard collection (major commercial producers)
- Scrap metal dealers
- Timber and building materials recyclers
- Second-hand retailers



## Waste disposal facilities

A number of facilities provide for the disposal of waste in the Bay of Plenty and Waikato Region (Figure 4) with the Atiamuri landfill providing for waste from the Rotorua District.

In 2013 a private transfer station owned by Waste Management has been in operation in Rotorua and an unknown amount of region's waste and the waste from the Rotorua District is now being disposed of in the Tirihiā Landfill (Figure 4). This has impacted on the completeness of the waste assessment in terms of quantity of the waste being disposed to landfill.

Figure 4. Municipal landfill locations and waste flows in the Bay of Plenty and Waikato Region (from Bay of Plenty Regional Waste Strategy, 2004).



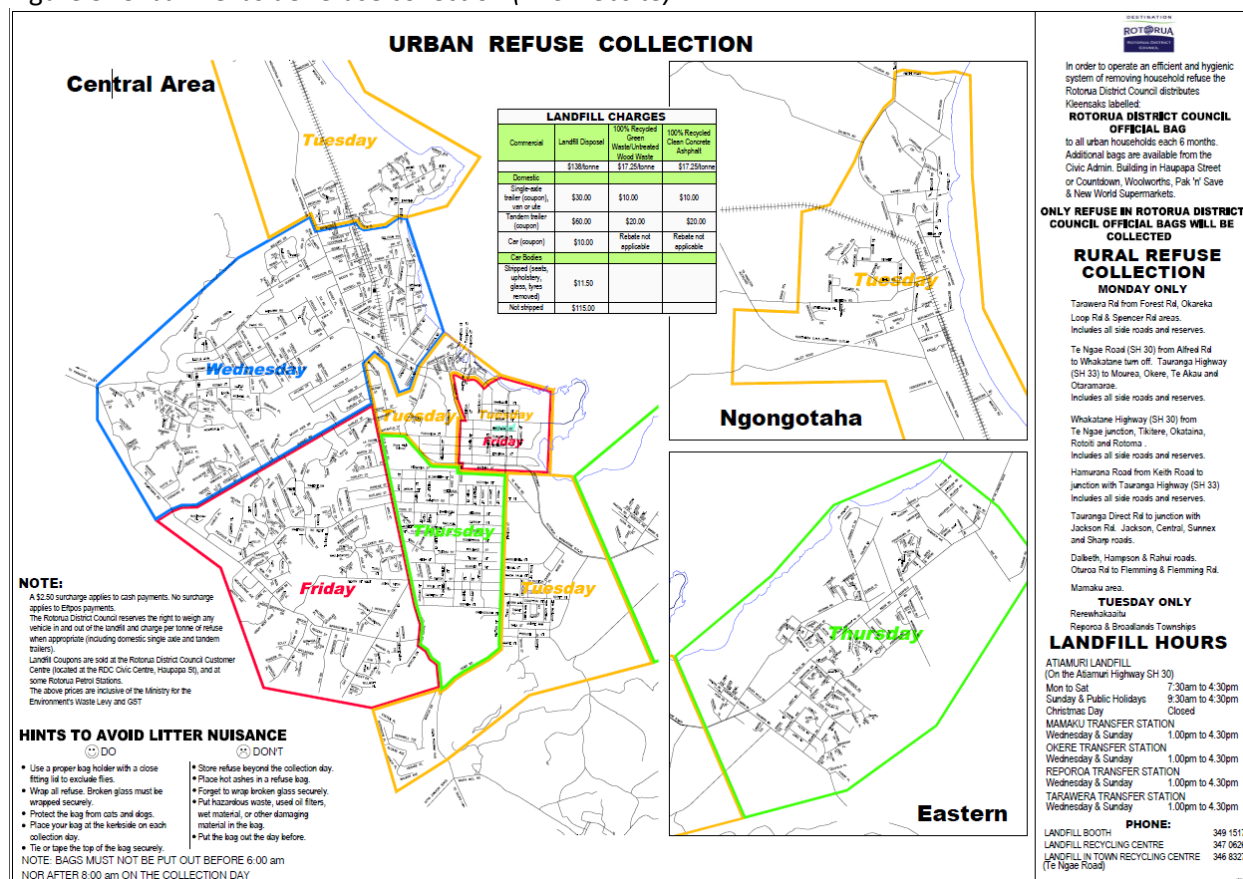
## Kerbside collection services

A manual kerbside collection service for refuse in paper bags is currently provided for by Council to 90% of households in the district. The 2550 households that do not receive kerbside collection have access to rural transfer stations for the disposal of waste and recyclable materials. Further Details of the urban collection service are provided in Figure 5.

They provide kerbside collections in bins to both the domestic and commercial sectors, and they also provide collections for recyclable materials and greenwaste. The services have impacted on the reported quantity of recyclables diverted since 2010.



Figure 5. Urban kerbside refuse collection (RLC website).



## Cost of current rates-funded waste services

The current level of service costs around \$226 per ratepayer per year. Targeted rates are funding the kerbside refuse and general rates fund the remainder (Table 1).

Table 1. The current cost for the existing Council-funded services.

| Service                  | Service description   | Targeted rates | General rates/<br>Landfill profit | Other      | Nett Cost    | Current<br>Revenue |
|--------------------------|---|----------------|-----------------------------------|------------|--------------|--------------------|
| Kerbside collection      | Kerbside rubbish bag collection available to 90% of ratepayers  | ✓              |                                   |            | \$892,000    | \$2,315,800        |
| Kerbside disposal        | Disposal of waste from the kerbside collection (included in landfill revenue)   | ✓              |                                   |            | \$1,008,000  |                    |
| Kerbside paper bags      | Cost of paper rubbish bags  | ✓              |                                   |            | \$505,650    |                    |
| Recycling services       | In-town and/or at the landfill: drop-off for recyclables, whiteware, greenwaste, untreated woodwaste, car bodies, hazardous waste, oil; concrete/asphalt crushing/on-selling; recyclables baling/on-selling |                | ✓                                 |            | \$1,073,250  | \$3,249,800        |
| Litter                   | Rubbish bins in CBD, public places/parks, events in public places & illegal dumping - collection and disposal   |                | ✓                                 |            | \$565,000    |                    |
| Transfer stations        | Operate transfer stations for refuse and recyclables at Mamaku, Reporoa, Tarawera, Okere - gatefees as for landfill   |                | ✓                                 |            | \$415,000    |                    |
| Greenwaste               | Greenwaste composting and on-selling  |                | ✓                                 |            | \$216,000    |                    |
| Other waste minimisation | Education, advocacy, litter reduction/clean-ups   |                | ✓                                 |            | \$32,000     |                    |
| Disposal facility        | Atiamuri landfill was large revenue earner, declining profit (excl finance cost)  |                | ✓                                 |            | -\$1,160,000 |                    |
| Staff costs              | Staff   |                | ✓                                 |            | \$362,500    |                    |
| Other council costs      | Finance, renewals, administration, corporate overheads  |                | ✓                                 |            | \$1,656,200  |                    |
| Recovery                 | Research Terax™ process for residual waste  |                |                                   | Waste levy | \$200,000    | \$200,000          |
| Sludge processing        | Vermicomposting   |                |                                   | Wastewater | -            |                    |
| Sludge processing        | Investigate Terax™ as sustainable alternative   |                |                                   | MfE grant  | -            |                    |
| Other                    | Commercial operators provide other services if financially viable   |                |                                   | Private    | -            |                    |
| SUM                      |   |                |                                   |            | \$5,765,600  | \$5,765,600        |

## Current waste quantities

### Regional waste stocktake

A Bay of Plenty and Waikato Regional waste stocktake estimated that the regions generated around 1.5 million tonnes of waste each year. It was estimated that:

- 87% was from Industrial, commercial and greenwaste; and 13% from kerbside and council drop-off (excludes greenwaste)
- 0.51 tonnes of waste is disposed of at municipal landfill for every resident of the region every year, with 0.183 tonnes of this is from kerbside collection
- Excluding natural materials such as clay, more than this quantity is disposed of at other land disposal sites, i.e. sites exempt from the waste levy and emissions trading scheme requirements, including farm dumps, cleanfills, monofills that accept a small number of industrial by products, construction and demolition fills, B-class landfills and non-municipal landfill (Figure 6)
- Half of the waste disposed of at municipal fills could readily be diverted (Figure 6)
- Diverted materials equates to 23 percent of the waste stream (excluding natural virgin excavated material)



Figure 6. Quantity of waste being generated, diverted and disposed of annually in the Bay of Plenty and Waikato Regions (from Bay of Plenty Waste and Resource Efficiency Strategy).

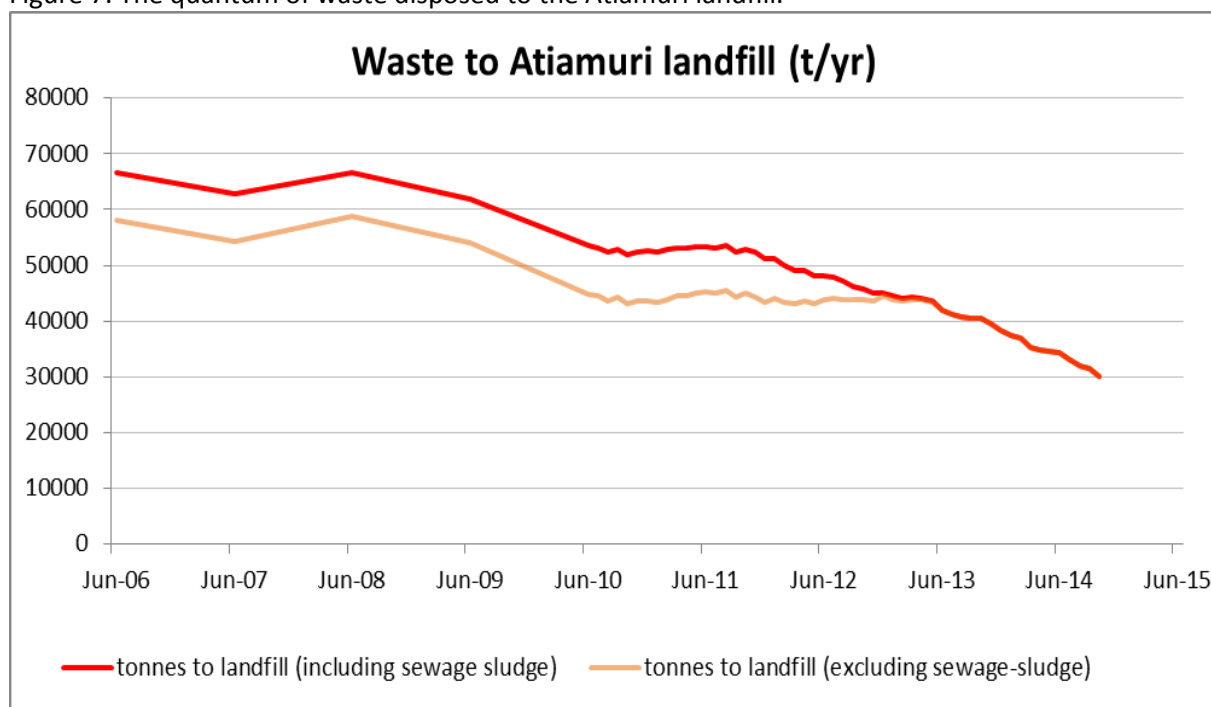


### Quantity of waste generated and disposed to landfill

The quantum of waste disposed to the district landfill was relatively steady at around 70,000t per year prior to 2009, and was projected to increase based on the predicted population growth (Waste Assessment 2010). This increase has not been realised and the quantity of waste steadily declined since 2008 as a result of: the diversion of sewage sludge; waste increasingly being disposed of in out-of-district landfills; and negligible population growth (Figure 7).

From 2010 to 2012, around 45,000t/yr. was disposed to landfill, not including sewage-sludge. In 2012 the cost to dispose of waste increased from \$80 to \$120 per tonne, and since then the quantity of waste being received at the Atiamuri landfill has steadily declined. Waste from the large commercial waste operators is now disposed of in large commercial purpose-built landfills out of the Rotorua region, primarily via the via the Waste Management transfer station.

Figure 7. The quantum of waste disposed to the Atiamuri landfill.



This year approximately 28,000t/yr. will be disposed to the Atiamuri landfill, generating a total of \$3.4 M revenue. The domestic kerbside refuse collection is generating 8,400t (from 25,000 households), litter from city bins, parks and reserves and events generate around 3,000t, and the remainder generates external revenue for Council. It is estimated that \$400,000/yr of this external revenue is at risk as this volume is from larger commercial operators and could readily be disposed of at other landfills.

Reducing the gate-fee at this point in time would reduce the current revenue but it would not result in a significant increase in volume to the Atiamuri landfill as the commercial operators have obligations to dispose the waste they collect elsewhere.

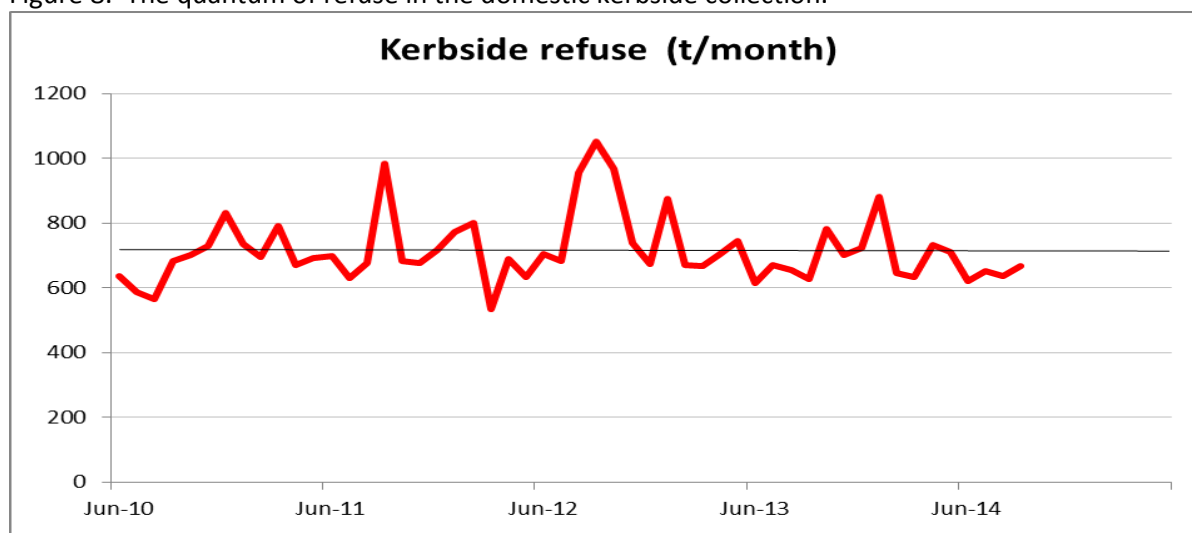
The annual cost of operating the landfill is currently \$2.2M, and \$600,000 of this is the cost associated with monitoring and treating leachate.

### Quantity of waste from the domestic kerbside refuse collection

The Council provides a weekly kerbside refuse collection service to approximately 25,000 properties in the District. Refuse is collected in bags. One bag per week is funded through rates with users paying for additional bags as required. The refuse collected at the kerbside by Council is monitored, and the quantity has been relatively steady over the past 4 years at 700t/month or 8,400t/yr (Figure 8).

The future quantity of waste collected at the kerbside by Council, assuming business as usual, is projected to continue at current levels assuming minimal population growth. If additional kerbside collections for recyclable or organic waste are introduced, then the quantity of refuse would decrease, and these options are discussed further in the section on waste collection.

Figure 8. The quantum of refuse in the domestic kerbside collection.

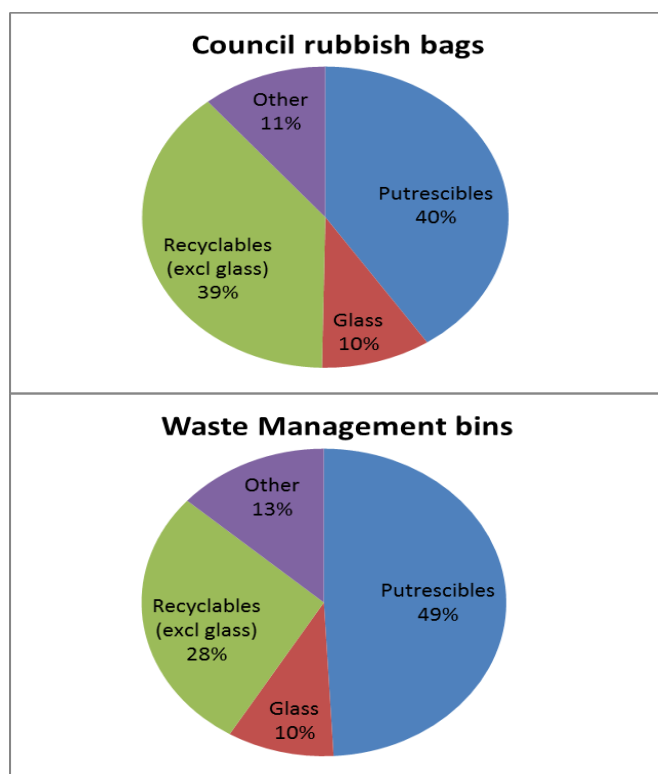


### Composition of waste in the domestic kerbside refuse composition

The composition of waste in 500 rubbish bags in the Council kerbside collection was surveyed in 2003 to provide baseline data (Waste Not Consulting, 2003). In 2008, 200 rubbish bags from the Council kerbside collection and 87 bins from the Waste Management collection were surveyed (Waste Not Consulting, 2008) (Figure 9). There was no change in the composition of waste in council rubbish bags, with around 40% compostable and 49% recyclable.

The Waste Management bins contained relatively more organic waste and less recyclable waste. Rotorua's domestic refuse contained more recyclables than the other councils' surveyed in 2007 (Waitakere City, Papakura District, Franklin District).

Figure 9. The breakdown of waste in the kerbside refuse collection



Although there is no recent survey data, the portion of recyclables in the Council refuse collection is likely to have reduced because an additional 500t/yr. is diverted as a result of private user-pays kerbside collection being available. The diversion of recyclables increased from 3500 t in 2008 to 4000 t in 2014.

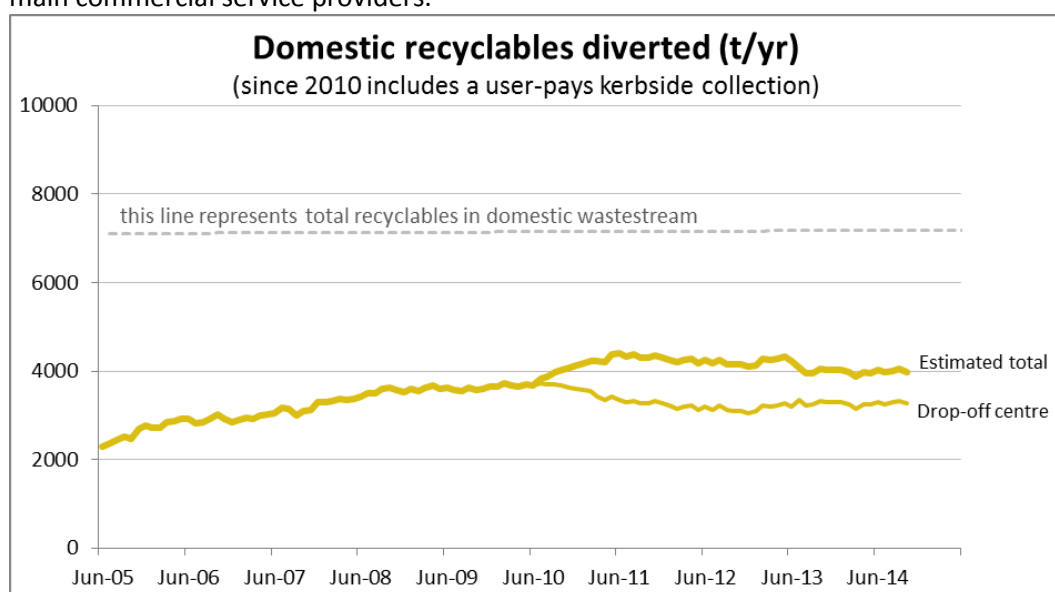
### Quantity of waste diverted (not disposed to landfill)

Data are included in this section to show that the quantity of recyclable materials has not changed appreciably since the 2009 data in the Waste Assessment.

### Recyclables

Council has focused on providing drop-off facilities for recyclables and quantities increased steadily from 2002 and began to plateau in 2009 with high community usage of the recycling centre (Figure 10). The drop off service is available to householders as well as commercial companies.

Figure 10. Tonnes of recyclables received at the drop-off centre and collected at the kerbside by one of the main commercial service providers.



Since 2010, households have had the opportunity to contract private companies to provide a kerbside collection for recyclables. Currently around 3,300 t is received at drop-off facilities and around 800 t is being collected by the main private company providing the kerbside collection. Council has monthly data from the drop-off facility and annual totals for the one kerbside collection which was divided by 12 to provide monthly data points for the graph. A relatively steady 4,000 t/yr is currently being diverted, with some of this material being sourced from the commercial sector, and some recyclables not being unaccounted for as they are being collected from other smaller private companies.

The majority of the recyclable materials are being sold on the open market. Generally plastics go to the Asian market where they are chipped and flaked and processed into new plastic material. Paper, card, glass and metals are generally purchased by a NZ company, with paper/card and glass being processed and reused in NZ. Metal is processed in NZ and then sold to the international market.

### Organic waste

The quantity of greenwaste being received at the recycling section of the landfill continues to be between 6,000 and 7,000t/yr. and this is being composted or mulched and returned to land, hogged for use as industrial fuel, or torrefied for fuel.

There are no facilities to process kitchen or putrescible waste in Rotorua. The quantity of putrescible waste sourced from the commercial sector is unknown, but the previous surveys of the landfill waste estimated as 19% of the waste disposed to landfill in May 2007 and 17% in Oct 2009, which means the Rotorua community is generating around 10,000t of putrescible waste per year. The quantity of putrescible waste in the domestic refuse collection is estimated to be around 3,200t/y, around 40% of the waste in a Council collected rubbish bag (Figure 9).

## Future demand

The Waste Assessment needs to consider future demand for waste services with respect to two issues:

1. Increase quantity of waste to be managed due to increasing population and/or economic growth
2. Increased demand for services and facilities to increase waste minimisation

### Future demand as a result of population and /or economic growth

In the last 10 years, Rotorua district has seen a decrease in population of approximately 1%. It is not currently envisioned that Rotorua will see a surge in population or economic growth that will put any extra loading on to the waste service that is provided in Rotorua during the duration of this Waste Strategy. Therefore the available options that are considered later in the assessment are capable of providing for the current waste streams and any significant increase in demand should they occur.

### Future demand for waste minimisation services and facilities

In 2006 Council undertook an “Environmental Perceptions Survey” which asked respondents questions about reducing waste. Results showed that 95% of respondents considered that it was important or very important to reduce waste. There was a low level of satisfaction with recycling services being provided (Figure 11), significantly lower than that the national average.

The provision of a kerbside recycling service was the favoured measure to encourage waste reduction (Figure 12). Council continues to receive suggestions to provide a kerbside collection for recyclables, and this was the most common suggestion received from visitors to the recent pop-up shop (Appendix 2).

Figure 11. Level of satisfaction with the recycling service (from Environmental Perceptions Survey).

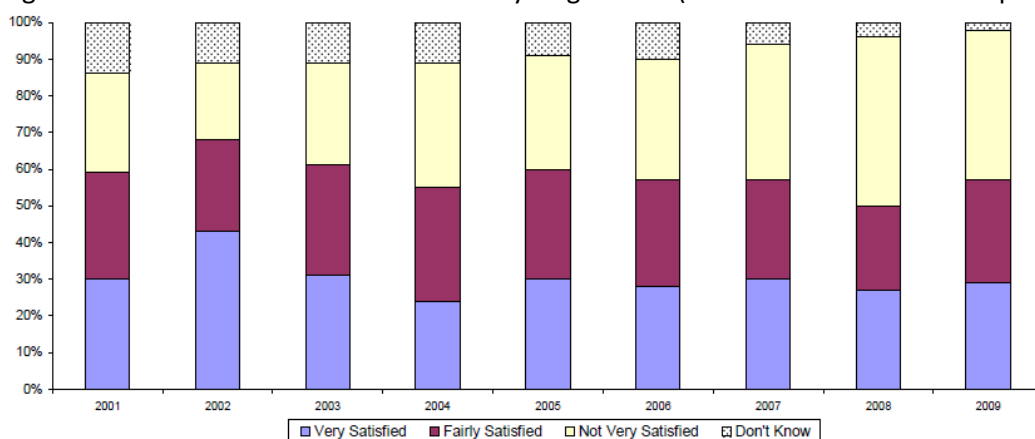
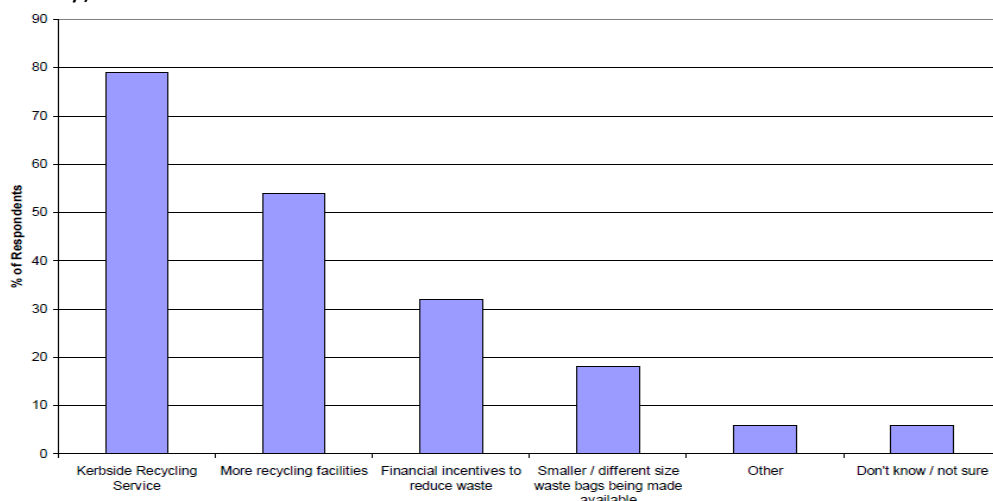


Figure 12. Support for a range of measures to encourage waste reduction (from Environmental Perceptions Survey).



## Options for meeting the future demand for waste disposal

### Disposal considerations

The Atiamuri landfill currently does not have the capacity to receive large volumes to be competitive with other commercial landfills, nor has it been constructed in a way that allows for efficient collection and conversion of landfill gases. We are in a conflicting situation where the landfill requires more volume to be financially viable, but the governments' long-term priorities for waste management and minimisation have targets to move NZ towards the goals of reducing the harmful effects of waste and improving the efficiency of resource use.

A number of factors need to be considered when deciding on disposal options:

- The volume being disposed and revenue from the Atiamuri landfill has declined significantly in recent years.
- This year approximately 28,000t/yr. will be disposed to the Atiamuri landfill, generating a total of \$3.4 M revenue. The domestic kerbside refuse collection is generating 8,400t; litter from city bins, parks and reserves and events generate around 3,000t, and the remainder generates external revenue for Council.
- It is estimated that \$400,000/yr. of this external revenue is at risk as this volume is from larger commercial operators and could readily be disposed of other landfills.
- The risk of further reductions in waste being disposed of in the Atiamuri landfill is high. The volume of waste going to the Atiamuri landfill is currently reducing by around 20% a year. There is an immediate risk of losing around \$400,000 of the current revenue from large commercial operators who could dispose of their waste to other disposal facilities which is a risk of loss of revenue which could increase cost to rate payers.
- The fixed cost for operating the Atiamuri landfill is around \$1.5M regardless of the quantity disposed.
- There is currently capacity for approximately 18-24 months, without the development of a new cell.
- Capital investment is required to increase capacity and ensure ongoing minimal impact from landfill leachate. The cost for the first extension is \$2M which would provide an additional 350,000 m3 volume.
- Waste from out of the region is currently not accepted at the Atiamuri landfill and this could be changed, although there is uncertainty around whether we could offer gate fees that would be competitive. South Waikato are reviewing their landfill and are yet to decide whether they will keep it open in the next few years. The Whakatane contract for disposal is due for renewal in 2020. Council has not yet considered a regional approach with these Councils.
- The waste that is currently leaving the region is unlikely to be disposed of in the Atiamuri landfill without a vested interest by these large commercial operators.

- The ongoing cost of operating the landfill if it was closed would initially be around \$600,000 for monitoring and treatment of the leachate, and this would decrease as the volume of leachate decreased.
- Commercial waste operators are disposing of waste from Rotorua to other landfills in the Region that are cheaper due to high volumes.
- The new large landfills have also been purpose-built to recover harmful landfill gases instead of discharging them to the environment. This means the cost for landfill is less as emissions will be lower.
- The contract for the operation of the landfill expires at the end of June 2016.

## Disposal options and evaluation

### Disposal Option 1. Business as usual

This would involve:

- Issuing a new contract for the operation of the landfill
- Try to increase volume to the landfill in order to make it more commercially viable. Change the bylaw to allow for out-of-district waste, and approach neighbouring areas with the intention of entering into disposal contracts
- The gate fee would need to be reduced to be competitive which would initially result in a reduction in revenue, but with no certainty around increased revenue
- capital investment to increase capacity and ensuring ongoing minimal impact from landfill leachate
- The strength of the leachate would increase in proportion to the amount of organic waste being disposed and the cost to treat this at the Wastewater Treatment plant (WWTP) (currently \$600,000/yr.)
- The landfill gases would increase in proportion to the amount of organic waste being disposed
- The cost of emission trading scheme (ETS) liability would increase
- The incentives to reduce waste would be compromised by the need to generate revenue

### Disposal Option 2. Close or temporarily close the landfill

This would involve:

- Waste would be transported via a transfer station to a private landfill
- there would be an increase in emissions associated with transporting the waste further
- there would be a decrease in landfill gas emissions because the purpose-built private landfills are better able to minimise the impact of landfill gases
- No new contract for the operation of the landfill
- Cells would not need to be extended and the landfill leachate system upgrade would be required
- The strength of the leachate would decrease and the cost to treat this at the WWTP would reduce from \$600,000/yr. as a step change initially and then gradually
- Monitoring would continue
- The landfill gases production would decrease over time
- There would be no costs associated with the ETS liability
- The site could potentially be used as transfer station and/or a site for materials recycling/processing, concrete and asphalt crushing, hazardous waste disposal, receiving and processing timber and green waste for mulch, hog fuel or compost, as well as a user-pays drop-off facility for waste for disposal. These services could still be carried out by a contractor at this site or elsewhere.
- The ability to achieve waste reduction and waste disposal goals would not be compromised, and might be easier without the conflicting situation where more waste created more revenue.
- Consider temporary closure and continuation of the Consent to allow for future use as a landfill or clean fill and/or emergency use.

■

### Disposal Option 3. Partner with commercial landfill operator

This would involve:

- capital investment to increase capacity and ensuring ongoing minimal impact from landfill leachate
- The strength of the leachate would increase in proportion to the amount of organic waste being disposed
- The landfill gas emissions would increase in proportion to the amount of organic waste being disposed of
- The cost of emission trading scheme (ETS) liability would increase
- Calling for proposals from waste companies
- Entering in to an arrangement with an experienced landfill operator, which could
  - allow for the landfill to be operated with a business focus, which could involve negotiating for waste streams that are currently being disposed of to other landfills
  - allow the landfill to be operated with more flexibility to respond to a change in demand in the market
  - lower the risk of further decline in revenue
  - reduce the risk associated with future increases in waste levies, emissions trading costs, trade waste fees
  - provide profit to offset the cost of other waste management services
  - provide an opportunity to reduce the incentive to generate waste and profit if profit is used to fund waste minimisation activities
  - provide more certainty around recovering the capital investment required to increase capacity and to investigate and mitigate impacts
  - transfer responsibility for the operation to the commercial operator including compliance with Consent conditions
  - reduce involvement of council staff

### Non-financial comparison of disposal options

All options ensure that public health is adequately protected by providing facilities for the safe disposal of waste.

The options have been qualitatively evaluated in relation to a proposed suite of guiding principles and objectives (Table 2). The option that stands out in terms of promoting effective waste minimisation is option 2, closing the landfill. This is because the community will need to pay the full market cost of waste disposal, with no return of any profit attributable to the operation of the Atiamuri landfill. While waste in this option will be transported to a distant landfill, it will be one that is purpose-built with minimal impact of leachate and beneficial conversion of landfill gases. Option 3 reduces the carbon footprint associated with disposal because it is likely to reduce the volume of waste being transported distances for disposal, and it will do so without increasing the amount of organic material being disposed of in the Atiamuri landfill.



Table 2. The extent the kerbside collection options align with the guiding principles and objectives.

|   | Landfill options  |                    |                        |
|---|-------------------|--------------------|------------------------|
|   | Business as usual | Close the landfill | Commercial arrangement |
| <b>Guiding principles</b>   |                   |                    |                        |
| 1. Addresses all legislative requirements   | ✓                 | ✓                  | ✓                      |
| 2. Aligns with the NZ Waste Strategy  | ✓                 | ✓                  | ✓                      |
| 3. Aligns with the Rotorua 2030 vision  | ✓                 | ✓                  | ✓                      |
| 4. Recognises principles of kaitiakitanga and sustainability  |                   | ✓                  |                        |
| 5. Prioritises actions based on waste hierarchy   |                   |                    |                        |
| 6. Allows for integration of technology/recycling and recovery processes  | ✓                 | ✓                  | ✓                      |
| 7. Acknowledges that while behaviour change is required to minimise waste, convenience influences behaviour                                     |                   | ✓                  |                        |
| <b>Objectives</b>   |                   |                    |                        |
| 1. Cost effective and efficient solution while minimising waste and the impact of waste, maximising resource recovery                           | ✓                 | ✓                  | ✓                      |
| 2. Increase influence over the waste stream to maximise benefits and minimise negative impacts (act as service delivery manager where possible) | ✓                 |                    | ✓                      |
| 3. Actively promote resource recovery   | ✓                 | ✓                  | ✓                      |
| 4. Achieve efficiencies in waste and resource recovery services   | ✓                 | ✓                  | ✓                      |
| 5. Increase organic waste diversion from landfill   |                   | ✓                  |                        |
| 6. Reduce the carbon footprint of the waste stream  | ✓                 |                    | ✓                      |
| 7. Prioritise on-selling within NZ  |                   |                    |                        |
| 8. Promote producer responsibility for waste through advocacy   |                   |                    |                        |
| 9. Maximise local economic development opportunities  |                   |                    |                        |
| 10. Reduce litter and illegal dumping and related costs   |                   |                    |                        |

## Options for meeting the future demand for kerbside collection services

### Kerbside collection considerations

#### Manual or automated

##### Manual collection with paper or plastic bags

The refuse collection is paid for by a targeted rate - every household that is provided with a kerbside refuse collection pays the same amount for collection and disposal and is provided with 52 bags per year. Additional bags are purchased, so additional waste is effectively user -pays. A cheaper alternative to paper bags for a manual collection is plastic bags with a high tensile strength.

##### Automated collection system - Wheelie bins

One of the emerging issues identified with a bagged collection is health and safety issues for collection workers. Rotorua Contracting (formerly Castlecorp) currently provide the rates-funded kerbside collection service in Rotorua. A summary of accidents and injuries is appended (Appendix 1). The alternative identified in 2010 was to provide wheelie bins to service properties, as these have significantly lower accident and injuries rate, and other non-financial benefits (Table 3).

Typically bins are purchased and provided by the council, with the cost of the bins, collection and disposal charged via targeted rates. In 2010, it was estimated that wheelie bins were a significant additional cost due to: purchase and maintenance of the bins; replacing the vehicle fleet before the end of life to deal with

the wheelie bins; and cost of disposing of the estimated additional quantity of refuse collected in the wheelie bin (Table 4). Costs have been reassessed later in this report.

Table 3. A comparison of non-financial factors associated with a manual bag collection and wheelie bins.

|  | Bags            | Wheelie bin     |
|--|-----------------|-----------------|
| Health and safety                                      | x               | ✓               |
| Rodent proof   | x               | ✓               |
| Waterproof   | x               | ✓               |
| Easy to move   |                 | ✓               |
| Capacity (litre)                                       | 60              | 80, 120, 240    |
| Choice of size   | Additional bags | potentially     |
| Compatible with RFID to pay by weight*                 | x               | ✓               |
| Compatible with kerbside collection of other materials | x               | ✓               |
| Number required/house                                  | 52 per yr.      | 1 per 10-15 yr. |

Table 4. Wheelie bins as an alternative to a manual bagged kerbside collection (from Waste Assessment 2010).

|                            | Bag Collection (Current System)  | Wheelie Bins  |
|----------------------------|--|---|
| Description                | Fixed number of bags provided. Users can purchase additional bags if required.                                     | Council provides wheelie bin to users. Funding is via targeted rate.                                  |
| Collection frequency       | Weekly (unless a putrescible waste collection is provided, in which case fortnightly may be possible)              | Weekly (unless a putrescible waste collection is provided, in which case fortnightly may be possible) |
| Collection method          | Manual collection  | Automated collection  |
| Health and Safety          | Potential issues with manual lifting, working on roads, unacceptable materials in bags                             | Issues associated with bag collection are prevented with automated collection                         |
| Effect on Waste Quantities | None - Status Quo situation. The limit on the number of supplied bags may encourage a degree of waste minimisation | Depending on the size, wheelie bins are unlikely to encourage waste minimisation.                     |
| Average set out weight     | 8.9 kg/bag   | 22.6 kg/bin   |
| Costs                      | \$1.87 million per annum   | \$2.5 - 2.5 million per annum   |

### Radio Frequency Identification (RFID) tags

An automated wheelie-bins service allows a refuse truck to identify each wheelie as it gets emptied using RFID tags. RFID tags can be used to gather information (e.g. how many bins are being emptied, what properties are using the service). Trucks can also be fitted with scales on the lifting arms which would allow for a user-pays system for the collection and disposal of waste from properties. The commercial waste operators suggest that the tags provide useful data but the scales have issues that are yet to be fully resolved.

#### Pros:

- Each bin can be associated with a specific property.
- If any lost bins are located, they can be returned
- Provides data for an efficient collection system.
- Potential to provide a “user pays” system to be implemented in the future, where each property could be charged per kg for the collection and disposal of based on different bin sizes
- Potential to use tags to promote recycling through a rebates or rewards system (e.g. vouchers for local businesses are given to those who recycle)

#### Cons:

- Requires capex for the tags (\$3 each or they can be retro fitted at a later date at a higher cost)
- Requires capex for the software depending on the extent required

## Incentive schemes

Kerbside recycling could be used to benefit to the local economy through reward schemes. By using RFID tags within wheelie bins, the weight each recycling bin from each specific household; this weight of recyclables is then converted in to green points which could be claimed back from local and national businesses. These types of schemes encourage people to recycle more to claim their points; however, it also has the potential to encourage residents reclaiming the green points to use local businesses.

There are a range of schemes currently being operated around the world such as:

- Randwick City Council, Australia – GreenMoney
- Waste Connections of Wichita, USA – RecycleBank
- The Royal Borough of Windsor and Maidenhead, UK – Greenredeem
- City of Grand Rapids, USA – mygrcitypoints.com
- Bracknell Forest Council, UK – Recycling incentive scheme

## Kerbside collection options and evaluation

### Collection Option 1. Business as usual - manual collection system with paper bags for refuse only

- Continue with weekly kerbside collection for refuse
- Continue with the use of paper refuse bags
- No requirement to change the collection fleet
- Continue operation of the recycling centre and associated activities
- Status quo in terms of volume of waste being disposed to landfill
- Status quo in terms of volume of waste being recycled
- Recyclables well separated with high value product for on-selling
- Status quo in terms of high health and safety risks for collection staff
- Likely increase in commercial operators picking up the demand for kerbside recycling
- Increased fragmentation in service provision with waste and recyclable materials scattered
- Difficult to introduce technologies to process recyclables

### Collection Option 2. As for option 1 but using high tensile plastic bags in place of paper bags

- Slightly cheaper than option 1
- Other aspects as for option 1

### Collection Option 3. Council provides a kerbside wheelie bin for refuse

- Change to fortnightly kerbside collection for refuse in 240L wheelie bins
- Could allow for a smaller bin in future to incentive waste reduction, but this is likely to increase illegal dumping if there is no provision for a kerbside collection for recyclables
- Allows for inclusion of FRID tags and future introduction of user-payus based on weight
- An automated system will not meet the needs for all residents e.g. residential units and some rural properties and will require site specific investigations and working with the community to find an effective solution
- Reduced health and safety risks for collection staff
- Reduced amount of litter from split bags, or bags that have been attacked by pests/vermin.
- Other aspects as for option 1

### Collection Option 4. Council provides a kerbside wheelie bin for refuse + recyclables (glass separate)

- Fortnightly kerbside collection for refuse in 140L wheelie bins
- Could allow for a smaller bin in future to incentive waste reduction
- Requires change in collection fleet to accommodate wheelie bins

- An automated system will not meet the needs for all residents e.g. residential units and some rural properties and will require site specific investigations and working with the community to find an effective solution
- Allows for inclusion of FRID tags and better data, and future introduction of user-pays based on weight
- Reduced cost for wheelie bins relative to paper bags when life cycle taken into account
- Introduce a fortnightly collection for co-mingled recyclables (all plastics but no film or polystyrene) in a 240 L wheelie bin with a separate 60L crate for glass bottles/jars
- Reduced health and safety risks for collection staff
- Recyclables less well separated with reduced value products for on-selling
- Enter into a contract for the sorting and on-sale of recyclables and consider the same contractor for the collection service to reduce issues related to the division of responsibilities.
- The recycling/possible drop-off facility could be located at the current recycling centre or with the landfill or transfer station. The location could be decided or considered through the procurement process
- Could allow for the drop-off of additional recyclable material which could be sorted or co-mingled alongside the location that processes the recyclables.
- Does not preclude continuing provision for e-waste, green waste, asphalt/concrete
- Reduced amount of litter from split paper bags or bags that have been attacked by pests/vermin.
- Provide a recycling service that has been requested by the ratepayer.
- Recycling more accessible and therefore expected increase in the volume of recyclables being recycled, and reduction in waste for disposal.
- The kerbside recyclable collection will be cheaper than collections provided by private operators as the cost is divided among more households, and there will also be efficiencies with a combined refuse and recyclables collection
- Would allow for a resource recovery centre to be developed in Rotorua.
- Would keep the recycled waste streams together and allow for the incorporation of technology for processing

#### **Collection Option 5. Council provides a kerbside wheelie bin for refuse + recyclables (glass separate) + organic waste**

- As for option 4
- Weekly collection for mixed organic waste in 240L wheelie bin – greenwaste and foodwaste
- Potential to provide fortnightly if solely greenwaste, at a lower cost.
- Continue to provide for greenwaste drop-off
- Opportunity to combine the processing of the dropped-off greenwaste and the organic waste
- Would require a contract for the processing and on-sale of organic waste, and currently there is no local provider.

#### **Collection Option 6. Council provides the baseline waste management and minimisation services only**

- Allows for a number of private companies to provide waste collection services
- Private operators would be licenced through a waste bylaw
- A licence could require the companies to provide for both refuse and recyclables
- Waste services could be fragmented and fail to be cost effective
- Could be difficult to introduce processing technologies in the future for recyclable materials
- Would require Council to continue to provide for the collection of refuse from households who do not have a contract with a private company for health purposes, and the easiest way is to provide user-pays paper rubbish bags and provide for the collection of the rubbish bags and associated issues
- Council would still need to provide for the collection and disposal of waste from Council property and events
- Council would still be required to provide for waste minimisation

## Waste production associated with the kerbside collection options

The volume of household recyclables, organic waste and total refuse will vary depending on the option chosen (Figure 13-15), and this will in turn affect the landfill profit predictions (Figure 16).

Figure 13. Projected tonnes of recyclables with and without a kerbside recyclables collection

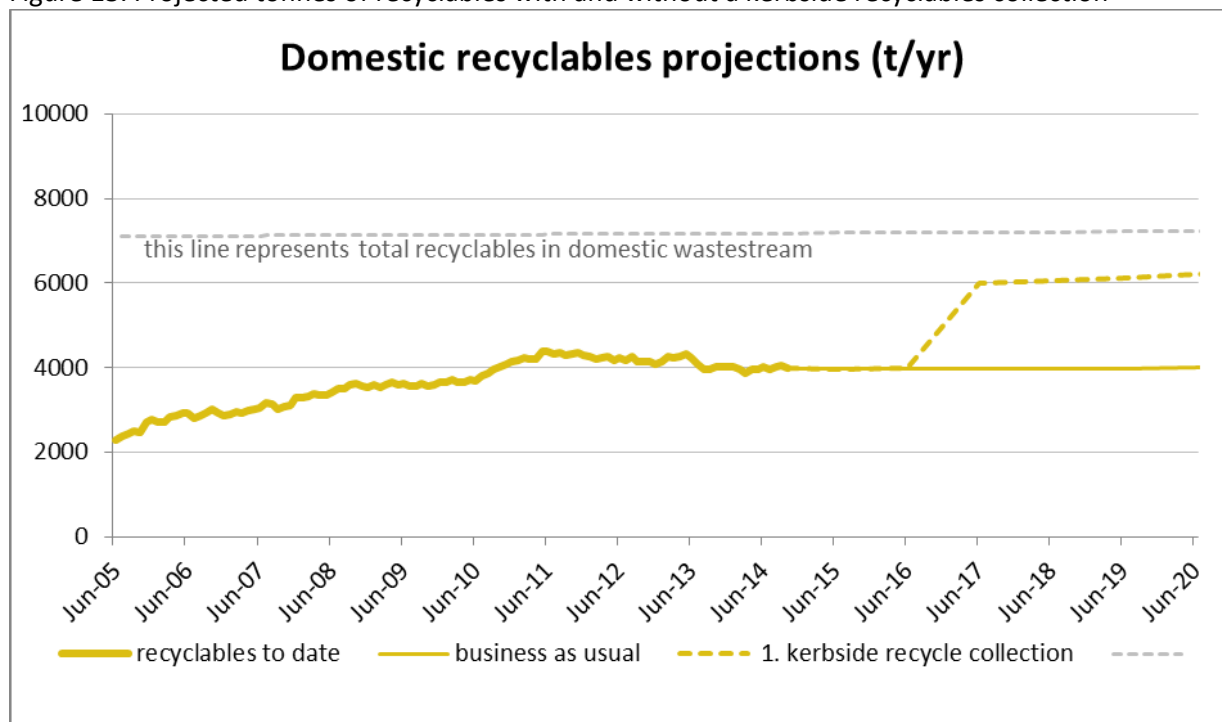


Figure 14. Projected tonnes of organic waste from a kerbside collection (excludes additional organic material that would be dropped off directly to a processing facility).

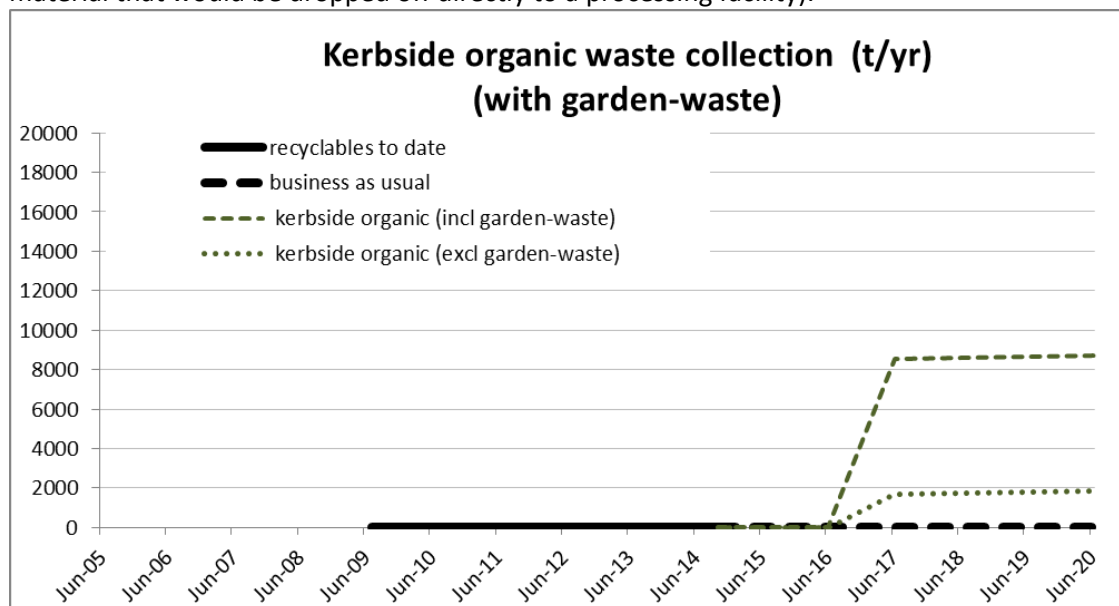


Figure 15. Projected tonnes of refuse with additional kerbside collections.

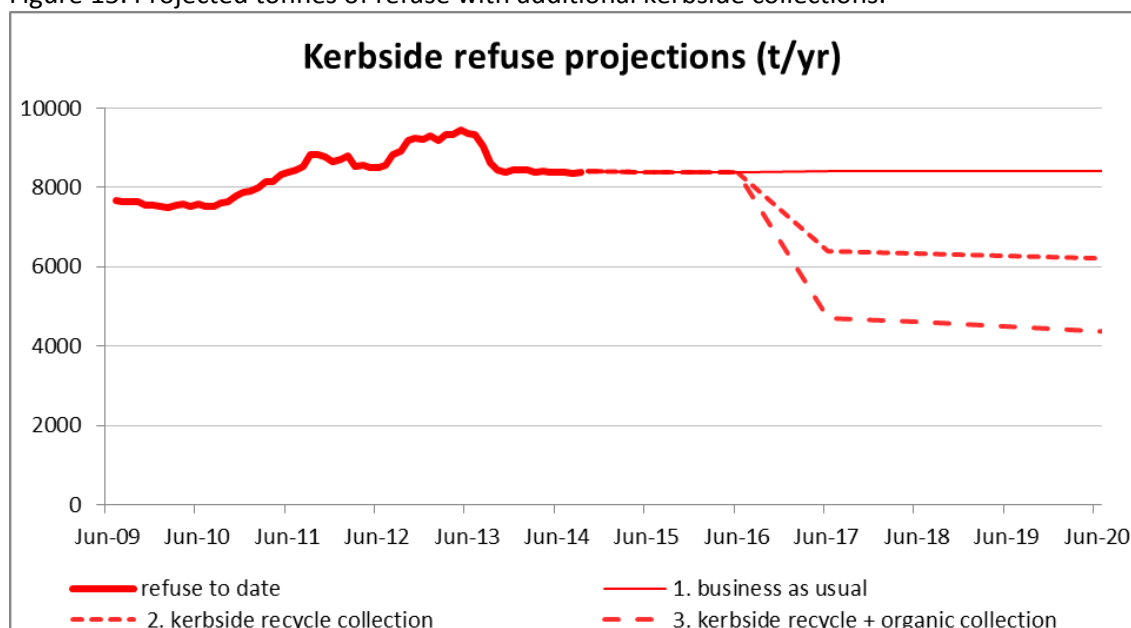
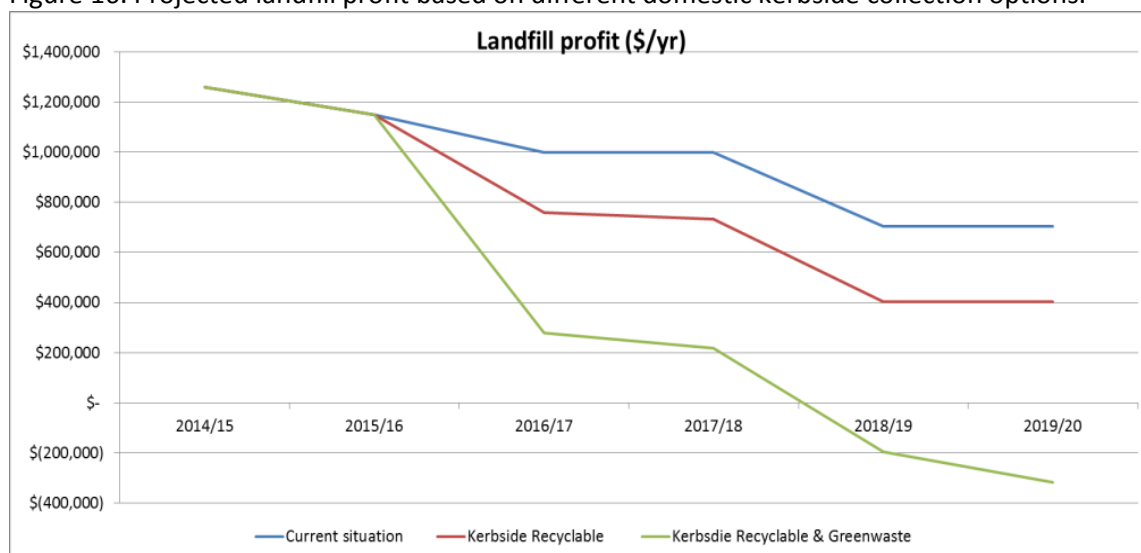


Figure 16. Projected landfill profit based on different domestic kerbside collection options.



### Non-financial comparison of kerbside collection options

All options ensure that public health is adequately protected by providing kerbside collection services that allow for the safe disposal of waste. While the options will vary in their effectiveness, all options promote effective and efficient waste minimisation by providing kerbside collection service for recyclables and/or drop-off facilities for materials for recycling.

The options are evaluated in relation to a proposed suite of guiding principles and objectives (Table 5).

Option 5 aligns most strongly with the non-financial criteria because it reduce the amount of organic material being disposed of to landfill (which decreases leachate and gaseous emissions), and increases the portion that is being beneficially reused.

Option 4 aligns reasonably well, as the provision of a kerbside recycling services priorities recycling over disposal at the household which is further encourages recycling and resource recovery, and reduces the dispersion of recyclables which will allow for the future incorporation of processing technologies.

Table 5. The extent that the kerbside collection options align with the guiding principles and objectives.

|   | Collection Options                |                                     |                                    |   |   |                                  |
|---|-----------------------------------|-------------------------------------|------------------------------------|---|---|----------------------------------|
|   | 1. Business as usual - paper bags | 2. Business as usual - plastic bags | 3. Kerbside wheelie bin for refuse | 4. Kerbside wheelie bin for refuse and recyclables (glass separate) | 5. Kerbside wheelie bin for refuse, recyclables (glass separate), organic waste | 6. Council not involved in waste |
| <b>Guiding principles</b>   |                                   |                                     |                                    |   |   |                                  |
| 1. Addresses all legislative requirements   | ✓                                 | ✓                                   | ✓                                  | ✓   | ✓   | ✓                                |
| 2. Aligns with the NZ Waste Strategy  | ✓                                 | ✓                                   | ✓                                  | ✓   | ✓   |                                  |
| 3. Aligns with the Rotorua 2030 vision  |                                   |                                     | ✓                                  | ✓   | ✓   |                                  |
| 4. Recognises principles of kaitiakitanga and sustainability  |                                   |                                     |                                    | ✓   | ✓   |                                  |
| 5. Prioritises actions based on waste hierarchy   | ✓                                 | ✓                                   | ✓                                  | ✓   | ✓   |                                  |
| 6. Allows for integration of technology/recycling and recovery processes  | ✓                                 | ✓                                   | ✓                                  | ✓   | ✓   | ✓                                |
| 7. Acknowledges that while behaviour change is required to minimise waste, convenience influences behaviour                                     |                                   |                                     |                                    | ✓   | ✓   |                                  |
| <b>Objectives</b>   |                                   |                                     |                                    |   |   |                                  |
| 1. Cost effective and efficient solution while minimising waste and the impact of waste, maximising resource recovery                           |                                   |                                     |                                    | ✓   | ✓   |                                  |
| 2. Increase influence over the waste stream to maximise benefits and minimise negative impacts (act as service delivery manager where possible) |                                   |                                     |                                    | ✓   | ✓   |                                  |
| 3. Actively promote resource recovery   | ✓                                 | ✓                                   | ✓                                  | ✓   | ✓   |                                  |
| 4. Achieve efficiencies in waste and resource recovery services   |                                   |                                     |                                    | ✓   | ✓   |                                  |
| 5. Increase organic waste diversion from landfill   |                                   |                                     |                                    |   | ✓   |                                  |
| 6. Reduce the carbon footprint of the waste stream  |                                   |                                     |                                    | ✓   | ✓   |                                  |
| 7. Prioritise on-selling within NZ  | ✓                                 | ✓                                   | ✓                                  | ✓   | ✓   |                                  |
| 8. Promote producer responsibility for waste through advocacy   |                                   |                                     |                                    |   |   |                                  |
| 9. Maximise local economic development opportunities  | ✓                                 | ✓                                   | ✓                                  | ✓   | ✓   |                                  |
| 10. Reduce litter and illegal dumping and related costs   |                                   |                                     |                                    | ✓   | ✓   |                                  |

✓ = Strongly aligns with the guiding principle/objectives

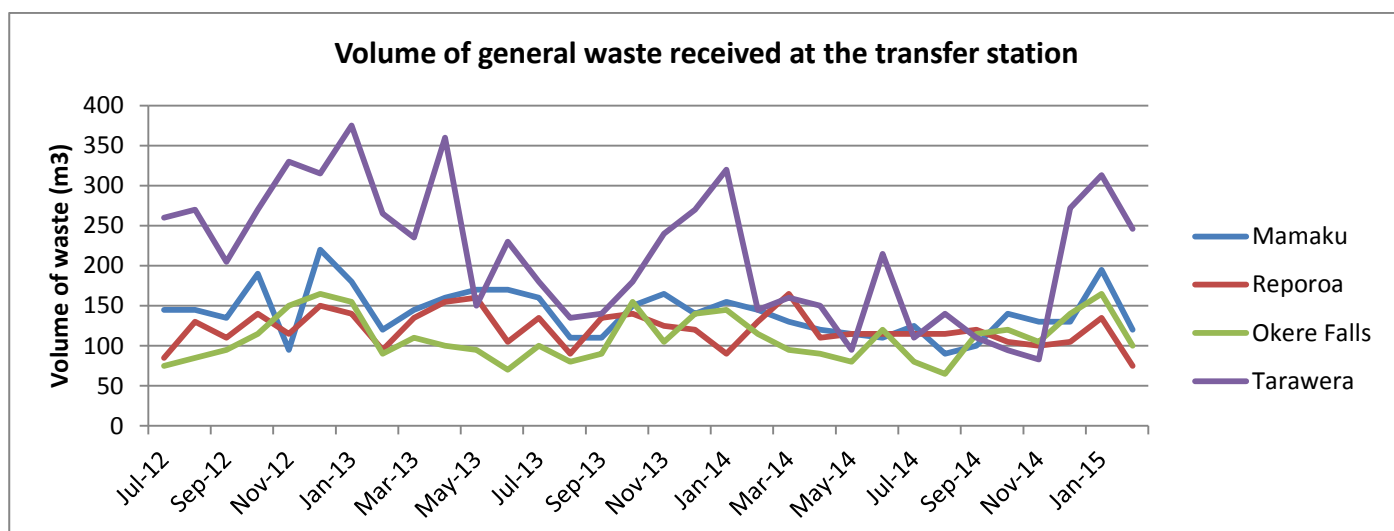
✓ = Aligns or partially aligns with the guiding principle/objectives however may involve risk.

## Options for transfer stations

There are four transfer stations that are operated by the Council. These transfer stations are located at Okere Falls, Reporoa, Tarawera and Mamaku and allow for the disposal on general waste with a facility to drop off selected recyclable materials. The transfer stations usually operate only on Wednesday and Sunday afternoons with only Okere Falls and Tarawera that differ slightly.

In the current 2014/15 financial year, the forecast is for the transfer stations to cost approximately \$450,000 to operate and maintain. Gate fees are based on the current landfill gate fees. The revenue from cash and coupon sales will account for revenue of approximately \$35,000.

Figure 17. The volume of waste received at each of the rural transfer stations.



An annual volume of 7,200m<sup>3</sup> of loose general waste is collected from the transfer stations (Figure 17). This equates to approximately 720 tonnes of waste at a very high cost of \$620 per tonne.

### Options

1. Continue to operate the transfer stations to the same level of service, which will costing ratepayers just under M\$0.5 and provide no incentive to reduce waste.
2. Consult with the communities on reducing the operational costs through reduced days, hours, and increasing the fees to cover costs. This would increase the gate fees, and reduce the cost to general ratepayers.
3. Close the transfer station(s). This would reduce the cost to ratepayers. The transfer stations are the only means of disposing of waste and recycling materials for many rural residents. Therefore this option would only be feasible if the kerbside collection was extended to include the majority of households. Unless a kerbside collection for recyclables was included, the recyclables currently being collected at transfer stations could be disposed of.
4. Increase the level of service by extending operating days and hours. This would increase the cost to either ratepayers or users, depending on the charging policy.
5. Consult with communities on options that allow the communities to operate the transfer stations in ways that meet their needs, on a user-pays basis.

### Options for additional waste minimisation

There are many opportunities for waste minimisation activities. Table 6 shows actions that Council either is, has been, or would consider being involved in. The effectiveness and cost-benefit would need to be evaluated on a case by case basis. The table shows how the actions minimise waste.



Table 6. Waste minimisation actions for consideration, the objectives and waste minimisation outcomes

| Discretionary Waste Minimisation Activities  | Objective   | Reduce | Reuse | Recycle | Recovery | Treatment | Disposal |
|--|---|--------|-------|---------|----------|-----------|----------|
| <b>Education programme</b>   | To educate students and the community about ways to reduce waste and how to be more sustainable.  | ✓      | ✓     | ✓       |          |           |          |
| <b>Waste audits of businesses, schools etc.</b>  | To help and identify ways to reduce costs by reducing the amount of waste being produced.   | ✓      | ✓     | ✓       |          |           |          |
| <b>Reduce plastic water bottle waste</b>   | Install drinking water fountains that allow for the refilling of drinks bottles, or not using bottles.  | ✓      | ✓     |         |          |           |          |
| <b>Promote and support community gardens.</b>  | To help the community to become more resilient, to share skills, and less reliant on purchased food and the associated waste.   | ✓      |       |         |          |           |          |
| <b>Advocate sustainable packaging.</b>   | Work with central government and businesses to promote more sustainable packaging methods   | ✓      |       | ✓       |          |           |          |
| <b>Support the provision a second hand shop</b>  | Support the co-location of re-use and recycling businesses that includes second hand goods.   |        | ✓     |         |          |           |          |
| <b>Promote and educate the public on reusing items</b>   | Support/enable community repair/re-use/recycle, eg electronics, electrical equipment, testing equipment, carpentry, upholstery  |        | ✓     | ✓       | ✓        |           |          |
| <b>Consider the Council working towards ISO 14001 or 9001 accreditation</b>  | Promote sustainability of the council. Where can resource efficiency be improved?   | ✓      | ✓     | ✓       |          |           |          |
| <b>Investigate options and change bylaw to allow for additional kerbside collection services.</b>  | Allow for collect refuse and recyclables safely and efficiently from rural areas and from gated communities, flats, units, apartments, retirement villages etc  |        |       | ✓       |          |           |          |
| <b>Ensure infrastructure for recycling is provided</b>   | To make sure that everyone in Rotorua has access to a facility where they can recycle   |        |       | ✓       |          |           |          |
| <b>Encourage and provide education about waste separation of C&amp;D waste</b>   | Work with the construction industry to help promote recycling of the material and diversion of the waste away from disposal. Encourage the use of waste management plans.                               |        |       | ✓       |          |           |          |
| <b>Investigate providing recycling bins in the CBD, reserves and other areas of high use</b>   | To reduce the amount of litter being disposed of to landfill from council provided litter bins (public areas, high-use). Also to reduce the amount of littering of drinks bottles and glass.            |        |       | ✓       |          |           |          |
| <b>Encourage recycling and sustainability at events</b>  | Assist in events reducing the amount of waste being produced and/or diverted to landfill. Encourage the use of waste management plans.  |        |       | ✓       |          |           |          |
| <b>Lobby government for product stewardship</b>  | Encourage government to introduce product stewardship for products e.g. drink bottles and e-waste.  |        |       | ✓       |          |           |          |
| <b>Ensure infrastructure is provided for the effective recovery and processing of organic waste.</b>   | Ensure that residents have access to a facility that recycles greenwaste. Work with industry to identify opportunities to recover and process food waste.   |        |       | ✓       | ✓        |           |          |
| <b>Ensure infrastructure is provided for C&amp;D recovery.</b>   | Ensure that residents have access to a facility that can recycle/process concrete, asphalt etc.   |        |       | ✓       | ✓        |           |          |
| <b>Ensure infrastructure is provided for whiteware and e-waste recovery.</b>   | Ensure that residents have access to a facility that processes whiteware and e-waste for recycling and/or recovery.   |        |       | ✓       | ✓        |           |          |
| <b>Work with businesses and other Councils to investigate further recycling/recovery opportunities</b>   | Work with the industry to see what opportunities there are to maximise the amount of waste diverted from landfill.  |        |       | ✓       | ✓        |           |          |
| <b>Facilitate, procure and provide services that maximise opportunities around destruction of solids and the recovery of materials, value or resources (including energy) from waste</b> | Continue to investigate technologies such as Terax™ or anaerobic digestion to maximise the benefit of waste. Ensure flexibility in contracts to take opportunities when they are identified and viable. |        |       |         | ✓        |           |          |
| <b>Investigate and implement options for treated timber recovery</b>   | Work with industry to identify and facilitate in the provision of a service that can recover treated timber as a fuel (e.g. torrefaction).  |        |       |         | ✓        |           |          |
| <b>Ensure infrastructure is provided to allow for the effective recovery of bio-solids.</b>  | Investigate recovery methods for bio-solids e.g. Terax™, vermicomposting, anaerobic digestion   |        |       |         | ✓        |           |          |
| <b>Support the collection and recovery of tyres.</b>   | Investigate recovery methods for tyres e.g. pyrolysis   |        |       |         | ✓        |           |          |
| <b>Reduce the potential for environmental harm caused by hazardous waste</b>   | Ensure there are services that can provide for the safe collection and disposal of hazardous waste  |        |       |         |          | ✓         |          |

## Cost of the waste services with different collection and disposal options

The cost of the kerbside collection and landfill options (excluding GST) are shown in Table 7, where:

- The collection costs are indicative costs received from a private operator and reflect efficiencies of scale
- The current market rates have been used for the cost of recycling of recyclables, processing of organic waste, and for the disposal of residual waste
- The volumes of materials are based on the waste projections provided in this report for with-without a kerbside collection for recyclables and organic waste.
- Options 1-3 include the current cost of operating the transfer stations, and options 4-5 assume no transfer station costs - reduced requirement associated with the provision of an alternative for recyclables
- Options 4-6 assume reduced costs for the operation of recycling/drop-off facility
- Option 5 assumes the organic waste collection is only provided to the urban area and the targeted rate for the urban area would reflect this cost
- Option 6 assumes that Council would continue to provide for some recycling services, litter bins in CBD, public places, parks, events on Council property; illegal dumping; other waste minimisation activities, and does not include the cost to the household of a commercial operator providing any kerbside collection services, and at a minimum licenced operators would be required to provide a refuse collection

Table 7. Table of options and costs.

| OPTIONS TABLE   | Option 1<br>Refuse –<br>paper bag<br>weekly | Option 2<br>Refuse –<br>plastic bag<br>weekly | Option 3<br>Refuse –<br>MGB*<br>Fortnightly | Option 4a<br>Refuse &<br>recyclables<br>fortnightly | Option 4b<br>Refuse &<br>recyclables<br>weekly | Option 5<br>Refuse<br>recyclables<br>& organic | Option 6<br>Baseline<br>services<br>only** |
|---|---|---|---|---|--|--|--|
| <i>Recycling services, litter, waste minimisation</i> | ✓   | ✓   | ✓   | ✓   | ✓  | ✓  | ✓  |
| <i>Refuse collection</i>                              | Paper bag weekly                            | Plastic bag weekly                            | 240 L MGB weekly                            | 140L MGB fortnightly                                | 140 L MGB weekly                               | 140 L MGB fortnightly                          | User pays (> \$100)                        |
| <i>Recyclables collection</i>                         | User pays                                   | User pays                                     | User pays                                   | 240 L MGB + 60L crate for glass fortnightly         | 240 L MGB + 60L crate for glass fortnightly    | 240 L MGB + 60L crate for glass fortnightly    | User pays                                  |
| <i>Food-waste collection &amp; processing</i>         | -   | -   | -   | -   | -  | 240 L MGB fortnightly                          | -  |
| <i>Greenwaste collection &amp; composting</i>         | User pays                                   | User pays                                     | User pays                                   | User pays   | User pays                                      | User pays                                      | User pays                                  |
| <i>Other services</i>                                 | User pays                                   | User pays                                     | User pays                                   | User pays   | User pays                                      | User pays                                      | User pays                                  |
| <i>Business as usual</i>                              | \$226                                       | \$216   | \$200                                       | \$196   | \$213  | \$275  | \$134                                      |
| <i>Close landfill</i>                                 | \$297                                       | \$287   | \$271                                       | \$266   | \$283  | \$345  | \$204                                      |
| <i>Partnership</i>                                    | \$273                                       | \$263   | \$247                                       | <b>\$242</b>  | \$259  | \$321  | \$180                                      |

\*MGB = Mobile Garbage Bin = Wheelie bin

\*\* Baseline services include: recycling depot and associated activities depending on contract; litter bins in CBD, public places, parks, events on Council property; illegal dumping; other waste minimisation activities, and does not include the cost to the household of a commercial operator providing the kerbside refuse collection service, or any other services

## Current funding

### Rates

Targeted rates currently cover the kerbside refuse collection and general rates cover the remaining costs that are not funded through gate fees and user pays. Council will propose a funding mechanism in the Plan.

### Levy

Waste disposal facilities pay a levy to MfE based on the amount of waste disposed. Half of levy revenue is allocated to territorial authorities on a population basis. Rotorua receives around \$200,000 per year (Table 8) and it must be spent on promoting or achieving waste minimisation in accordance with their waste management and minimisation plans. The waste levy has been funding research into the Terax™ process.

Table 8. Levy funding received to date to June each year.

| 2010       | 2011       | 2012       | 2013       | 2014       |
|------------|------------|------------|------------|------------|
| \$ 102,040 | \$ 202,039 | \$ 194,618 | \$ 197,379 | \$ 209,400 |

## Current monitoring and data

Council has been collecting data from council-owned facilities and Council-contracted services on the quantity of diverted materials, and the quantity of waste disposed of to the Atiamuri landfill. Council does not have access to waste data from private companies, and this has affected the completeness of the Waste Assessment. Where data is estimated or not available it is noted in this report.

Where private operators manage facilities and collection services under contract, data can be required as a key performance indicator of the contract. Waste bylaws can ask for private companies providing collection services to domestic households to be licensed, and licenses can require the provision of this data to Council. These mechanisms can be considered in the next Plan and bylaw review.

The Solid Waste Analysis Protocol (SWAP) can be used as a tool to measure the waste quantity and composition at the kerbside or the landfill periodically, and is recommended prior to the next review of the Plan.

## Provision of service and Councils intended role

Unless the preferred option is for Council not to be involved in waste, Council intends to provide for waste-related services within its sphere of influence (which is the domestic waste sector) by entering into contractual arrangements with the lowest cost experienced reliable low-risk commercial providers (including Rotorua Contracting). Contracts for the provision of services would incorporate conditions with the following aims:

- To improve integration and efficiency, to prevent dispersion of materials.
- to retain access to some of the waste materials to allow for additional processing if financially viable (that might otherwise be processed off-shore or do not currently have an environmentally sound process that provides an economically viable financial return), to allow for the additional processing of these materials locally if feasible,

The kerbside collection of domestic refuse is currently carried out by Rotorua Contracting, part of Council. Refuse is collected in paper bags at considerable expense to ratepayers, with considerable health and safety risks. Any change will align with the end-of-life of the current fleet in 30 June 2016.

The contract to operate the landfill expires in 30 June 2016. Unless the preferred option is to close the landfill, Council will extend the cells over 2015-16 to provide for future capacity.

The contract to operate the recycle centre expires in 30 June 2016. Council intends to continue to provide for recycling services to the extend level provided for in the preferred options, with some detail, including the location, depending on community feedback and the final contractual arrangement.

### Summary of number of injuries sustained by council refuse collection staff from 2011 - 14

| Number of injuries | Activity type               | %   |
|--------------------|-----------------------------|-----|
| 18                 | Picking up bags             | 38  |
| 8                  | Delivering bags             | 17  |
| 5                  | Cut from sharp object       | 11  |
| 4                  | Emptying drum/ bin          | 9   |
| 4                  | Stepping off/ back on truck | 9   |
| 1                  | Fell off truck              | 2   |
| 1                  | Illegal dumping clean up    | 2   |
| 2                  | Unloading                   | 4   |
| 4                  | Other                       | 9   |
| 47                 |                             | 100 |

81%

Of injuries involved rubbish bags/ rubbish bag trucks

## Comments received from the pop-up shop (summer 2014/15) in regards to waste in Rotorua

|  |
|--|
| I love the use of Maori art work around the city would like to see recycled pieces transformed onto the streets  |
| Fordland's needs free kai station  |
| more rubbish bins  |
| free weekly pick-ups of recycling  |
| curb side recycling  |
| need a recycling system that is picked up weekly for Rotoma as well  |
| Supplied recycling bins by Council. Christchurch do this well, weekly collection (general waste, organic waste, plastic and paper)   |
| Reduce rubbish flowing from the city into the lakes by building collection devices near Utuhina stream mouth etc.  |
| need recycling system that is picked up weekly for Rotoma as well  |
| Mount Ngongotaha viewing platform. Security camera to catch illegal dumping of rubbish. More rubbish bins.   |
| kerbside recycling Rotorua is the first town out of Auckland Hamilton raglan with no recycling   |
| Re-cycling Bins for rural areas eg Ngakuru happy to empty but good if supplied will get more people recycling  |
| kerbside recycling   |
| recycle more often   |
| Council sponsored bottle and/or aluminium cans refund scheme   |
| have rubbish & recycle bins at redwood centre  |
| inorganic rubbish collection yearly please   |
| no more rubbish bags need coloured bins recycling, waste and greens  |
| no rubbish bags rubbish wheelie bins   |
| Do away with rubbish bags  |
| recycling pick up from driveways want bins   |
| non organic collection twice year  |
| Rotorua needs recycle bins plastic & cans  |
| non organic rubbish can we have this either collected at gate annually or make an area at the recycle station (love the recycle station)   |
| create local industry from recycling collections   |
| rubbish bins & recycle bins at Polytechnic bus stop  |
| kerbside recycling   |
| kerbside recycling please  |
| kerbside recycling   |
| kerbside recycling - it's ridiculous you don't have it!  |
| If we can't have kerbside recycling what about a pick-up service aimed at pensioners and people without cars (lots of pensioners in Fenton Park RDC pensioner flats)   |
| kerbside recycling   |
| kerbside recycling   |
| kerbside recycling save our landfill & reduce reuse recycle  |
| would like to see kerbside recycling up in Fenton Park we are pensioners and don't have a car  |
| recycle bins in the city   |
| kerbside recycling   |
| kerbside recycling at Okere Falls and just before the forest   |
| encourage everyone to compost & recycle food   |
| More Rubbish bins at Mt Ngongotaha   |
| erect rubbish bins at bus stop outside Waiariki Poly. Thank you  |
| recycle bins for household rubbish plastic tin green. Green collected fortnightly  |
| curbside recycling   |
| recycling all throughout city, more rubbish bins   |
| more rubbish bins for streets in & around central city   |
| kerbside recycling   |
| Non organic trash palace as in Porirua as a start for a local idea -( trash to treasure recycling).  |
| CBD non-organic collection in the city for businesses. Centrally placed bin every 1/4 - initiative in Holland that works really well   |
| kerbside recycling   |
| plastic rubbish bags instead of paper they don't spill rubbish   |
| some way to destroy confidential documents i.e. incinerator @ recycle centre   |
| recycle bins night market  |
| community gardens for vegetables etc. greenhouses too  |
| wire cage for rubbish bins at Rotoiti near rugby club  |
| as part of the site where transfer station is - An arts recycle centre be set up would support the creativity strategy and give community children artists access to materials which would otherwise be dumped see ARC in Palmerston North keen to discuss |

|   |
|---|
| further   |
| curb side recycling   |
| council can you please provide recycle bins & rubbish bins at the lake mouth at Utuhina & Ngongotaha  |
| more community gardens, poverty is an issue we all need to address. Gardens provide food for our whanau   |
| more community gardens  |
| We'd love to get more locals growing organic food for locals. We'd love to have a council supported venue in Ngongotaha   |
| please provide our kids with a water fountain or drinking water at Park Road Skate Park   |
| water fountain you can play in, water has different colour & you can drink the water too. (ie one drinking fountain)  |
| more water fountains at the redwoods especially on the tracks   |
| more water features including a water urn like Buick Street Petone  |
| water fountains all around the CBD would be lovely  |
| who can help clean up the Utuhina stream as there is a lot of rubbish there?  |
| please can the tyres and other rubbish be collected from the lakefront near the Scout Club?   |
| Clean up Puarenga Stream supports the new working group   |
| daily cleaning of litter at the Lake Front particularly in the water. Removal of tyre bottles plastics etc  |
| litter clean-up along SH leading into Rotorua, daily  |
| visitor to the city: loved us but can we please keep an eye on lake front rubbish in water – "shame as it is such a beautiful place"  |
| cleaning roadside coming into CBD. Lots of takeaway food bags. Create an initiative to clubs to take ownership. Give them a small funding to assist with civic duty. Provide elderly with rubbish sticks with the claw to pick up rubbish lots would love to help |
| remove rubbish & litter around lake front   |
| Verge maintenance of main routes . Could the contractors be locals? Recommend rubbish cleaned before mowing as it makes such a mess. Entrance to Tamaki Tours and Taupo are a pleasure to see!  |
| Walking tracks, biking tracks need more maintenance to upkeep and maintain track and litter   |
| more water fountains in town  |
| problem dumping rubbish, garden waste etc among bush opposite Fryer Road (lake reserve) Make lake access unsuitable for vehicles? Fake CCTV camera and a "no camping sign".   |
| more drinking fountains   |
| drinking fountains at Puarenga park   |
| rather than discharge disposing waster from waste water plant use r.o. technology to produce palatable water for domestic/industrial/agriculture re use   |
| to have dog bins located in , perhaps by bus stops as there are none when walking our dogs  |

# Making your submission is easy

There is a defined process to ensure submitters' views and suggestions are appropriately considered, researched and presented to the mayor and councillors for their consideration:

- Submissions received by council
- Submission acknowledged and hearing time confirmed (if requested)
- After submissions close, staff compile and analyse submissions
- Submitters speak to mayor and councillors at hearing (if requested)
- Staff consider all submission information and prepare recommendations for elected members
- Councillors consider all submissions and recommendations and make decisions
- Submitters advised of final decisions in writing



#### Online submission

Go to [rotorualakescouncil.nz](http://rotorualakescouncil.nz) and complete an online submission form



#### Email submission

Email your submission to [info@rotorualc.nz](mailto:info@rotorualc.nz)  
Enter 'Waste Strategy submission' in the subject line



#### Written submission

Post or deliver it to Rotorua Lakes Council  
Title – Waste Strategy Submission



*Rotorua Lakes Council is also accepting feedback on its Long-term Plan 2015-25 via Facebook. Comments and suggestions will be considered, discussed and form part of decision-making. However receipt of feedback provided via social media cannot be acknowledged, and those commenting via social media will not be able to speak at the hearings or receive letters advising of decisions. If you wish to make a formal submission please use the submission processes above (ie online, written or by email).*



The last day for  
submissions is  
2 June 2015

**ROTORUA**  
LAKES COUNCIL

### **Appendix 3:**

### **District Health Board Review**



Toi Te Ora – Public Health Service  
PO Box 2120  
TAURANGA  
[www.ttophs.govt.nz](http://www.ttophs.govt.nz)



30 September 2016

Rotorua Lakes Council  
Private Bag 3029  
Rotorua Mail Centre  
ROTORUA 3046

### **Comment to Waste Management and Minimisation Plan – Rotorua's Waste Strategy**

I appreciate this opportunity to provide comment on the Final Draft Waste Strategy.

Medical Officers of Health have a responsibility through their designated positions for reducing conditions within their local community which are likely to cause disease or be injurious to health. My comments seek to assist Council in promoting a healthy and safe environment for their community now and into the future.

Waste management is important for the health of the public. If not disposed of properly, waste can present a health hazard through physical injury, chemical poisoning, exposure to infectious material and encouraging pests such as vermin, flies and mosquitoes. Waste can also block stormwater systems, contaminate land and water and create odours.

Waste services and infrastructure should be provided in ways which do not increase the risk to health, are affordable and are accessible to everyone.

In June 2015 I submitted to the draft waste strategy commending Council on some positive steps but also suggesting improvements to Council's overall approach to waste services and infrastructure. I am therefore very pleased to see Council has progressed with their intentions to change recycling and collection services, as well reviewing whether Atiamuri Landfill can be a viable facility for the region.

#### ***Vision, goals and objectives***

I support Council's goals and objectives underpinning the vision to enable and empower residents to minimise, recycle and recover their waste. Goal 1 focuses on the improving the health and safety risks to the public and workers in the workplace. It is suggested that Council gives regard to community health by ensuring that waste management and minimisation practices are *'carried out in a manner which do not increase the health risk or pose a nuisance to the public'*.

#### ***Council's intended role***

Reassessing Council's role in terms of the costs and benefits to the community is commended. Good waste services benefit everyone and with Council's increased involvement in such an important sanitary service, public health will be better protected.



### *District-Specific Issues*

This section summarises waste recycling and collection issues for the district which were identified in the waste assessment. It is suggested that the current information gaps be noted here as these are an issue that needs to be addressed.

### *Methods for achieving effective and efficient waste management and minimisation*

I am pleased to see that Council will continue to collect rubbish on a weekly basis which will reduce the opportunity for nuisance situations to arise.

I note it is Council's intention to temporarily transport waste out of the district once the transfer station is established to enable a comprehensive landfill study to determine the landfills future. I would like to be kept informed of the outcome of the study and provide public health input when Council considers its options.

### *Discussion/Major Changes and Part B - Action Plan*

I support the actions to be taken as part of this waste management and minimisation plan.

I specifically support the changes to the recycling centre which will enable accurate waste information to be obtained. I am particularly pleased to see further mechanisms in the WMWM plan to address current monitoring and data gaps identified in the 2015 assessment. Actions such as increasing collection services to all residents will reduce this gap. I would like to see however the action plan to document mechanisms which Council will consider to improve information on the types and quantities of waste collected by private companies. It is fundamental to safeguarding public health that Council is able to assess 'all' of the waste generated and disposed in or outside the district.

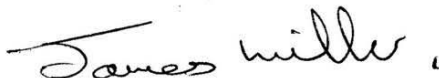
I am supportive of the intended research for collection options implementation for organics in the future. I would like to see this activity begin sooner with a more specific completion date within this plan period.

### *Funding Gap and Standardisation of Targeted Waste Levy*

Toi Te Ora – Public Health Service mentioned in a submission to Council's 2015 Long Term Plan that core community works and services have district wide benefits which are a 'public good'. Sanitary services such as waste management should be funded by the entire community because the whole community benefits. Therefore the investment should be shared equitably by the whole community.

I wish to thank Council for seeking Medical Officer of Health comment on the final draft. Please contact Annaka Davis, Health Protection Officer in the first instance if you wish to discuss any matter raised.

Yours sincerely



Dr James Miller  
Medical Officer of Health