
ORDINARY MEETING

OF

WELLINGTON REGION WASTE MANAGEMENT AND MINIMISATION PLAN JOINT COMMITTEE

AGENDA

Time: 09:15am
Date: Monday, 27 February 2017
Venue: Committee Room 1
Ground Floor, Council Offices
101 Wakefield Street
Wellington

MEMBERSHIP

Councillor McLeod	Upper Hutt City Council
Councillor Peterson	Masterton District Council
Councillor Pannett	Wellington City Council
Councillor Greathead	Carterton District Council
Councillor Craig	South Wairarapa District Council
Councillor Bridson	Hutt City Council
Councillor Elliot	Kapiti Coast District Council
Councillor Gaylor	Greater Wellington Regional Council
Councillor Ford	Porirua City Council



Have your say!

You can make a short presentation to the Councillors at this meeting. Please let us know by noon the working day before the meeting. You can do this either by phoning 803-8334, emailing public.participation@wcc.govt.nz or writing to Democratic Services, Wellington City Council, PO Box 2199, Wellington, giving your name, phone number and the issue you would like to talk about.

AREA OF FOCUS

Under the Waste Minimisation Act 2008 territorial authorities were required to develop a Waste Management and Minimisation Plan (WMMP) by 2012.

In 2011, 8 Councils in the greater Wellington region adopted the first regional WMMP. The Councils agreed that a Joint Committee should be established to oversee the implementation of the WMMP.

Quorum: 4 members

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1 Meeting Conduct

1.1 Apologies

The Chairperson invites notice from members of apologies, including apologies for lateness and early departure from the meeting, where leave of absence has not previously been granted.

1.2 Conflict of Interest Declarations

Members are reminded of the need to be vigilant to stand aside from decision making when a conflict arises between their role as a member and any private or other external interest they might have.

1.3 Confirmation of Minutes

The minutes of the meeting held on 25 December 2016 will be put to the Wellington Region Waste Management and Minimisation Plan Joint Committee for confirmation.

1.4 Public Participation

A maximum of 60 minutes is set aside for public participation at the commencement of any meeting of the Council or committee that is open to the public. Under Standing Order 3.23.3 a written, oral or electronic application to address the meeting setting forth the subject, is required to be lodged with the Chief Executive by 12.00 noon of the working day prior to the meeting concerned, and subsequently approved by the Chairperson.

1.5 Items not on the Agenda

The Chairperson will give notice of items not on the agenda as follows:

Matters Requiring Urgent Attention as Determined by Resolution of the Wellington Region Waste Management and Minimisation Plan Joint Committee.

1. The reason why the item is not on the agenda; and
2. The reason why discussion of the item cannot be delayed until a subsequent meeting.

Minor Matters relating to the General Business of the Wellington Region Waste Management and Minimisation Plan Joint Committee.

No resolution, decision, or recommendation may be made in respect of the item except to refer it to a subsequent meeting of the Wellington Region Waste Management and Minimisation Plan Joint Committee for further discussion.

2. General Business

ADOPTION OF THE DRAFT WASTE MANAGEMENT AND MINIMISATION PLAN (2017-2023) FOR PUBLIC CONSULTATION

Purpose

1. The Committee is asked to review pre-consultation feedback received on the draft Waste Management and Minimisation Plan (WMMP), and to agree to the proposed amendments to the draft WMMP.
2. The Committee is asked to support a revised public consultation process for the draft WMMP.
3. The Committee is asked to agree to the release the draft Waste Management and Minimisation Plan (WMMP) for public consultation, alongside the public notification of the associated Statement of Proposal for the WMMP.

Summary

4. This report documents the pre-consultation feedback received on the draft Waste Management and Minimisation Plan (WMMP). The report seeks the Joint Governance Committee to make decisions in response to this feedback, and to agree on the content of the draft WMMP to be adopted for public consultation.
5. This report also details the proposed WMMP consultation approach for the Joint Committee's consideration. It is noted that procedural aspects of this consultation approach differ to the approach discussed with the Joint Committee on the 28th November 2016. This report explains the reasons for this change, and asks the Joint Committee to support the revised process.

Recommendations

That the Wellington Region Waste Management and Minimisation Plan Joint Committee:

1. Receive the information.
2. Agree that the draft Wellington Region WMMP 2017-2023, together with the Wellington Region Waste Assessment (see Attachments 1 and 2 of this report), be released for public consultation.
3. Agree to the Statement of Proposal (see Attachment 3 of this report).
4. Agree to the revised consultation process as set out within this report.
5. Agree to refer the plan and the Statement of Proposal to stakeholder councils to initiate the special consultative procedure under section 83 of the Local Government Act 2002.

Background

6. Section 50 of the Waste Minimisation Act (2008) requires the council to review the existing 2011 WMMP. A new WMMP has been drafted following this review. A summary of the issues that have informed the development of the new draft WMMP is included in Attachment 4 of this report.
7. At its meeting 28th November 2017, the Joint Committee approved a preliminary draft Waste Management and Minimisation Plan (2017-2023), and associated Waste Assessment, for consultation with the stakeholder councils.
8. During this meeting, officers provided an overview of the proposed WMMP consultation process.
9. The Joint Committee recommended that territorial authorities within the region brief their councillors, senior officers and mana whenua iwi, to update them on the development of the plan.
10. A series of WMMP territorial authority workshops were held throughout December 2016 and January 2017. These workshops were considered an opportunity to update councillors on development of the draft WMMP.
11. Following these workshops, the WMMP Steering Group received several suggestions to amend the content of the draft WMMP prior to its release for public consultation.
12. Council staff also consulted with mana whenua iwi entities, Ngati Toa Rūnanga, and the Port Nicholson Block Settlement Trust. Iwi welcomed the opportunity to discuss the draft plan prior its completion as a draft document and were keen to remain engaged throughout the development of the plan. At the time of the discussion however, they did not seek any amendments to the content of the draft plan.
13. Following the November meeting, changes to the WMMP consultation approach have also been proposed. These changes are discussed below.

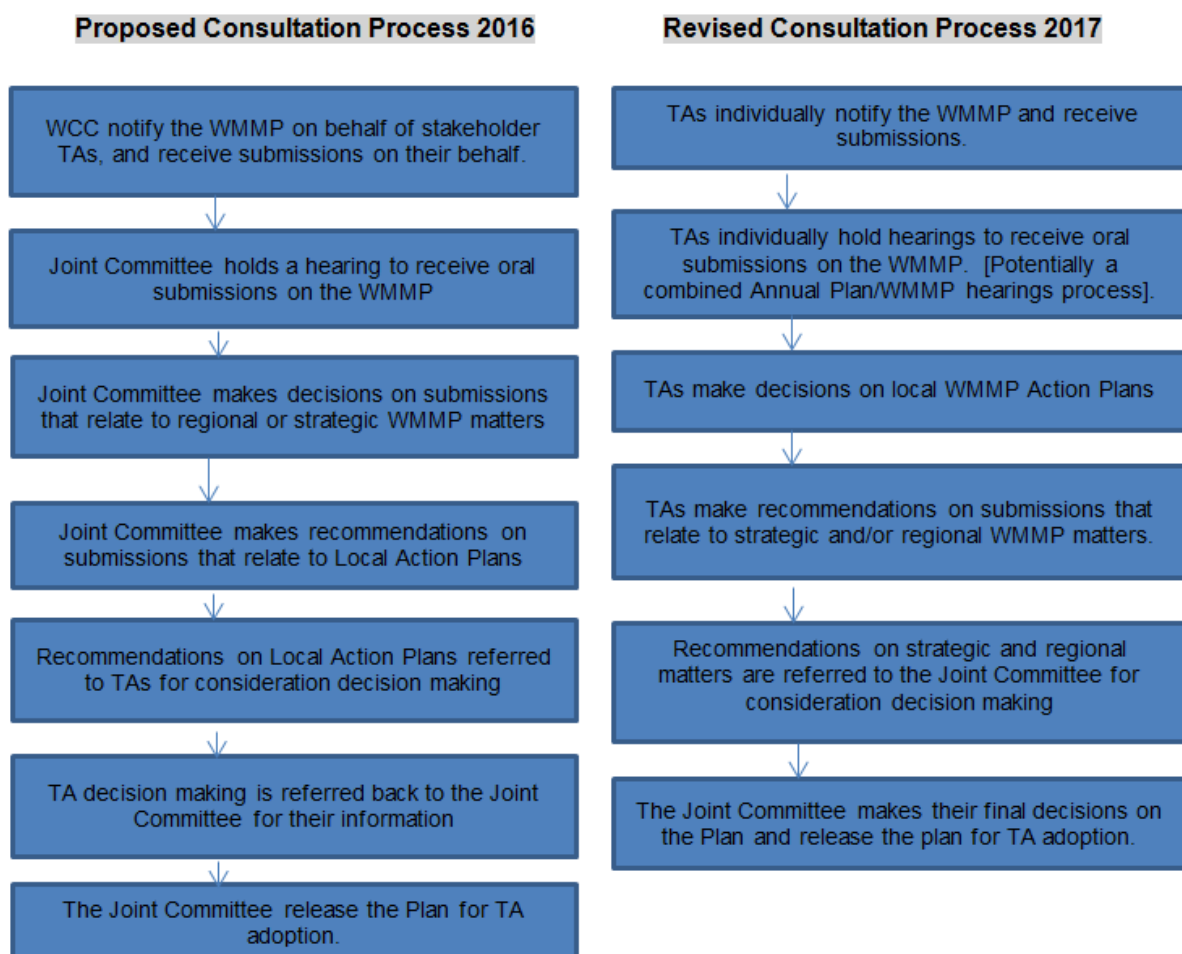
Discussion

Draft WMMP amendments following initial consultation

14. The WMMP workshops generated a range of feedback on the draft WMMP. Feedback on regional matters is contained in Attachment 5 for the Joint Committee's consideration.
15. In summary, the proposed amendments detailed in Attachment 5 do not alter the substantive content or scope of the draft WMMP. Instead, they consist of minor changes that have been proposed to improve the clarity of plan provisions for plan users.
16. A series of amendments have also been made to the Upper Hutt City Council (UHCC) Action Plan. As these are operational matters that fall outside the decision making remit of the Joint Committee, they have been directly incorporated into the draft UHCC Action Plan. They are, nevertheless, highlighted in track changes within the enclosed plan.
17. It is noted that this feedback has been collectively reviewed by the WMMP Steering Group, who have proposed a series of associated recommendations to the Joint Committee (see Attachment 5).

Consultation Process

18. WMMPs are subject to the requirements of the Local Government Act's (LGA) special consultative procedure, a requirement also set out in the Waste Minimisation Act 2008 Part 4, sections 44 and 50(3).
19. Steering Group Officers initially proposed to give effect to the Special Consultative Procedure, in part, through the adoption of a regional submissions and hearings process, which was proposed to be facilitated through the Joint WMMP Governance Committee. However this process has since been revised.
20. The revised process provides for more direct territorial authority decision making relating to operational matters, and allows councils to concurrently consider submissions on their Annual Plan alongside submissions received on the WMMP. This revised approach was proposed by Kapiti Coast District Council.
21. The revised process requires territorial authorities to forward on recommendations made on submissions relating to strategic and regional matters to the Joint Committee, for their consideration and decision making.
22. As illustrated within the following diagram, the consultation process proposed in 2016 required the Joint Committee to forward on their recommendations made on submissions on local WMMP action plans to territorial authorities, for their consideration and for associated decision making.



23. The revised approach also continues to align with the Special Consultative Procedure prescribed in section 83 of the Local Government Act (2002).
24. As it is proposed each territorial authority facilitate local public hearings to enable oral submissions on the WMMP. It is vital that Joint Governance Committee member attend their local territorial authority hearing, so that they can, in turn, speak to any relevant submission points within the Joint Committee decision making forum.

Next Actions

25. The Joint Committee are advised of the following key dates:

Dates	Activity
1 March [onwards]	TA's adopt the Draft WMMP 2017-2023 for public consultation (also notifying the Waste Assessment and Statement of Proposal).
10 March – 12 May	Public consultation alongside/within all eight TA's Draft Annual Plan processes.
Late May - early June	TA officers generate submission summary and recommendation reports (including on WMMP

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	local/regional matters).
3 May – 1 June	TA's Annual Plan oral hearings (can include WMMP submissions or a separate local level hearing process).
By 16 June	TA's decide if they wish to amend local action plans and/or make any recommendations for final amendments to regional action plan.
By 21 June	All WMMP submission summaries, decisions and TA's final local action plans forwarded to the Regional Waste Planner to feed into the regional deliberation process.
Date TBC – tentatively 10th July	Joint WMMP Governance Committee meets to consider all TA recommendations on regional action plan and amend the plan where necessary.
Date TBC – tentatively 31 July	Joint WMMP Governance Committee meets to finalise WMMP.
August 2017	All TA's to adopt the WMMP 2017 -2023 and revoke the old WMMP. Please note, the existing plan will remain in effect until the new plan is adopted.

Attachments

Attachment 1.	Draft Waste Management and Minimisation Plan	Page 13
Attachment 2.	Waste Assessment	Page 135
Attachment 3.	Statement of Proposal	Page 295
Attachment 4.	Proposed Amendments Following Territorial Authorities Consultation.	Page 298
Attachment 5.	Preconsultation Feedback Requests and Recommendations	Page 301

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Authoriser	David Chick, Chief City Planner

SUPPORTING INFORMATION

Engagement and Consultation

The special consultative procedure is statutorily required under the Waste Management Act 2008 and Local Government Act 2002 and will be complied with through conducting the public consultation which will include oral hearings.

Treaty of Waitangi considerations

Local Iwi have been notified of this process and will be collaborated with during the implementation of this Waste Management and Minimisation Plan (WMMP).

Financial implications

There are no financial implications of this report.

Policy and legislative implications

The Waste Minimisation Act 2002 requires local authorities to have a Waste Management and Minimisation Plan (WMMP). The regional WMMP must be reviewed by 30 June 2017.

Risks / legal

Not reviewing the WMMP is not a viable or legal option.

Climate Change impact and considerations

There are no climate change considerations of this report.

Communications Plan

A Regional Consultation Strategy has been developed to assist the consultation phase of the WMMP review, however this plan will require amendment subject to the recommendations made by the Joint Committee as an outcome of this report.

Health and Safety Impact considered

There are no health and safety considerations for this report.



**CONFIDENTIAL TO THE WELLINGTON REGION WMMP
JOINT GOVERNANCE COMMITTEE**

This document is a draft for information only and may be subject to further amendment following input from the Joint Governance Committee

4 November 2016

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Carterton District Council
Hutt City Council
Kāpiti Coast District Council
Masterton District Council
Porirua City Council
South Wairarapa District Council
Upper Hutt City Council
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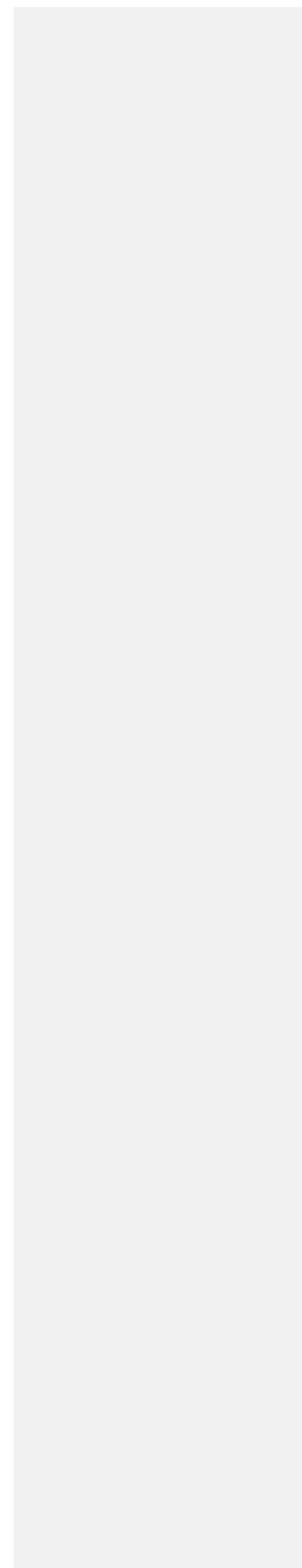
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Glossary of Terms

C&D Waste	Waste generated from the construction or demolition of a building including the preparation and/or clearance of the property or site. This excludes materials such as clay, soil and rock when those materials are associated with infrastructure such as road construction and maintenance, but includes building-related infrastructure.
Cleanfill	A cleanfill (properly referred to as a Class 4 landfill) is any disposal facility that accepts only cleanfill material. This is defined as material that, when buried, will have no adverse environmental effect on people or the environment.
Disposal	final deposit of waste into or onto land, or incineration
Diverted Material	Anything that is no longer required for its original purpose and, but for commercial or other waste minimisation activities, would be disposed of or discarded.
Domestic Waste	Waste from domestic activity in households.
ETS	Emissions Trading Scheme
Food waste	Any food scraps – from preparing meals, leftovers, scraps, tea bags, coffee grounds
Green waste	Waste largely from the garden – hedge clippings, tree/bush prunings, lawn clippings
Hazardous waste	Waste that can cause harm or damage, to people or the environment, like strong chemicals. Shouldn't go in to landfills.
ICI	Industrial, Commercial, Institutional
Landfill	Tip or dump. A disposal facility as defined in S.7 of the Waste Minimisation Act 2008, excluding incineration. Includes, by definition in the WMA, only those facilities that accept 'household waste'. Properly referred to as a Class 1 landfill
LGA	Local Government Act 2002
LTP	Long Term Plan
Managed Fill	A disposal site requiring a resource consent to accept well-defined types of non-household waste, e.g. low-level contaminated soils or industrial by-products, such as sewage by-products. Properly referred to as a Class 3 landfill.
MfE	Ministry for the Environment
MGB	Mobile garbage bin – wheelie bin.

MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
New Zealand Waste Strategy	A document produced by the Ministry for the Environment in 2010. Currently being reviewed.
NZWS	New Zealand Waste Strategy
Putrescible, garden, greenwaste	Plant based material and other bio-degradable material that can be recovered through composting, digestion or other similar processes.
Recovery	<ul style="list-style-type: none"> a) extraction of materials or energy from waste or diverted material for further use or processing; and b) includes making waste or diverted material into compost
Recycling	The reprocessing of waste or diverted material to produce new materials
Reduction	<ul style="list-style-type: none"> a) lessening waste generation, including by using products more efficiently or by redesigning products; and b) in relation to a product, lessening waste generation in relation to the product
Reuse	The further use of waste or diverted material in its existing form for the original purpose of the materials or products that constitute the waste or diverted material, or for a similar purpose
RRP	Resource Recovery Park
RTS	Refuse Transfer Station
Rubbish	Waste, that currently has little other management options other than disposal to landfill
Service Delivery Review	As defined by s17A of the LGA 2002. Councils are required to review the cost-effectiveness of current arrangements for meeting the needs of communities within its district or region for good-quality local infrastructure, local public services, and performance of regulatory functions. A review under subsection (1) must consider options for the governance, funding, and delivery of infrastructure, services, and regulatory functions.
TA	Territorial Authority (a city or district council)
Transfer Station	Where waste can be sorted for recycling or reprocessing, or is dumped and put in to larger trucks for transport to landfill
Treatment	<ul style="list-style-type: none"> a) means subjecting waste to any physical, biological, or chemical process to change its volume or character so that it may be disposed of with no or reduced adverse effect on the environment; but

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	b) does not include dilution of waste
WA	Waste Assessment as defined by s51 of the Waste Minimisation Act 2008. A Waste Assessment must be completed whenever a WMMP is reviewed
Waste	Means, according to the WMA: <ul style="list-style-type: none"> a) Anything disposed of or discarded, and b) Includes a type of waste that is defined by its composition or source (for example, organic waste, electronic waste, or construction and demolition waste); and c) To avoid doubt, includes any component or element of diverted material, if the component or element is disposed or discarded.
Waste Assessment	A document summarising the current situation of waste management in a locality, with facts and figures, and required under the Waste Minimisation Act.
Waste Hierarchy	A list of waste management options with decreasing priority – usually shown as ‘reduce, reuse, recycle, reprocess, treat, dispose’
WMA	Waste Minimisation Act (2008)
WMMP	A Waste Management and Minimisation Plan as defined by s43 of the Waste Minimisation Act 2008
WWTP	Wastewater treatment plant
Zero Waste	A philosophy for waste management, focusing on Council/community partnerships, local economic development, and viewing waste as a resource. Can also be a target (but not in this case).

Foreword

To be completed

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Acknowledgements

To be completed

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Executive Summary

The councils in the Wellington region have all worked together to produce this *Consultation Draft Joint Waste Management and Minimisation Plan*. The Plan sets out what we intend to do over the next ten years to make sure we manage our waste as best we can for the benefit of our communities, our local economies, and the environment.

The draft Plan proposes the regional vision of: “*Waste Free, Together*”, with the tagline: “*for people, environment, and economy*”

In preparing the draft Plan we have considered a range of data and information and taken account of our obligations under various pieces of legislation.

Some of the key information that has shaped our draft Plan includes the following:

- We have a statutory duty to not only ensure waste is managed effectively and efficiently, but also to minimise it.
- We are sending more waste to landfill than ever – although the total amount has not grown by much – we are clearly not reducing what we throw out.
- We can do a lot better at kerbside recycling. Not only are our recycling rates quite low, but they have been going down over time.
- Food and green waste represent the largest fractions of material being landfilled. This is potentially the biggest opportunity to throw less away.
- There is potential opportunity to work together more and jointly deliver best practice waste and recycling services.

To guide the process of developing this Plan the councils established the *Wellington Region WMMP Joint Governance Committee*. The Committee is made of elected members from each council, and is responsible for overseeing the development and implementation of the regional WMMP.

The Committee identified a headline draft regional target for minimising waste.

Our primary regional target is:

1. A reduction in the total quantity of waste sent to class 1 landfills from 600kg per person per annum to 400kg per person by 2026.

The primary regional target is supported by a number of other regional targets for different sources and types of waste that, if achieved, add up to deliver the overall regional target.

To set us on the path towards these targets the Committee also identified a set of regional actions that we intend to take. These actions include:

- Developing and implementing consistent solid waste bylaws – this will help councils set standards and gather data so they can plan and manage waste better.
- Working together to deliver more consistent and effective forms of regional communications and education around waste services and waste minimisation, so households and communities are inspired and supported to play their part.

- Facilitating local councils to determine, and, where feasible, to optimise collection services so that they maximise diversion and are cost effective to communities.
- Investigating and, if feasible, developing a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste.
- Collaborating with other local government organisations, NGOs and other key stakeholders on undertaking research, lobbying and actions on various waste management issues such as (but not limited to) product stewardship, electronic waste, tyres, plastic bags, etc.

To support these regional actions each council has also set out their plans for actions they will take locally to deliver on the vision, goals and objectives of the regional WMMP, while at the same time ensuring that they meet the needs and concerns of their own communities.

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Part A: Strategy

1.0 Introduction

This is a joint Waste Management and Minimisation Plan covering all of the territorial authorities in the Wellington Region and is prepared in accordance with the requirements of the Waste Minimisation Act 2008 ('the Act').

1.1 Purpose of the Plan

Managing waste and ensuring good outcomes for the community can be a complex task. We need to look after the environment, protect people's health, and make sure that this is done at an acceptable cost to the community. To achieve these outcomes it will require all parts of the community to work together.

Councils have a statutory role in managing waste. Councils are required to promote effective and efficient waste management and minimisation within their districts. A key part of doing this is to adopt a Waste Management and Minimisation Plan (WMMP).

This WMMP sets the priorities and strategic framework for managing waste in the region. Once the Plan is adopted, the actions will be carried forward by each of the councils into their Long Term and Annual Plans to ensure the resourcing is available to deliver the plans goals and objectives.

1.1.1 Why Work Together?

The councils in the Wellington Region have agreed that there will be a number of benefits in working together more closely on waste issues and have prepared a joint Waste Management and Minimisation Plan. The benefits of working together include:

- Potential efficiencies and cost savings from sharing collection services, including improved ability to optimise fleets, depot locations and collection rounds.
- Potential efficiencies and cost savings from sharing administration, communications and support services.
- Encouraging more competitive bids from contractors for supply of collection, transfer station operation, haulage and disposal services across the region.
- More consistent standards and service levels across the districts.
- The ability to implement more consistent regulations and data collection to improve planning and administration.

We believe our proposed approach to joint working will lead to higher quality and more efficient services for waste and recycling, including increased waste minimisation.

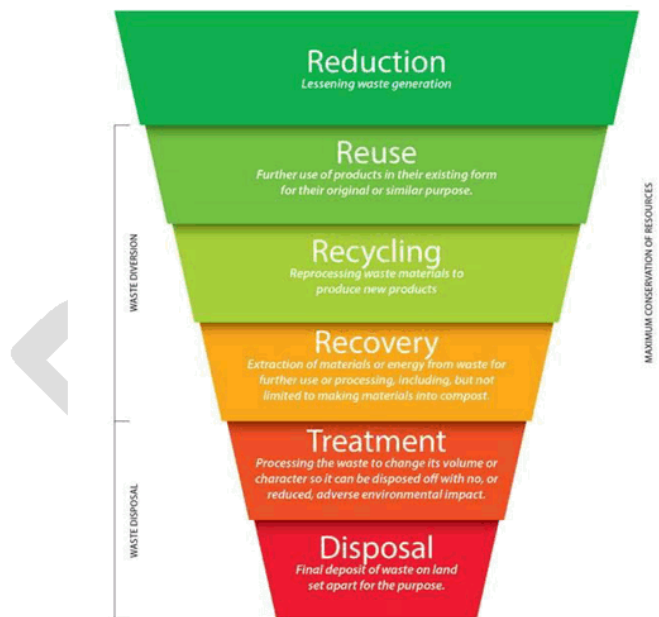
To give effect to working together, the councils established the Wellington Region WMMP Joint Governance Committee. The Committee is made of elected members from each council, and is responsible for overseeing the development and implementation of the Regional WMMP.

1.2 What Does the Plan Have to Contain?

The WMMP must meet requirements set out in the Waste Minimisation Act, including:

- Consider the 'Waste Hierarchy'.
- Ensure waste does not create a 'nuisance'.
- 'Have regard to' the New Zealand Waste Strategy and other key government policies.
- Consider the outcomes of the 'Waste Assessment' (this is a review of all information that we have about the current waste situation in Wellington, including rubbish from households and businesses).
- Follow the Special Consultative Procedure set out in the Local Government Act (2002).

Figure 1: The Waste Hierarchy



Source: <https://greenerneighbourhoods.net/resources/waste/>

1.3 Scope of the Plan

Our WMMP covers all solid waste and diverted material in the region, whether they are managed by councils or not. Liquid and gaseous wastes are not included except where they interact with solid waste systems. This includes hazardous wastes like chemicals and the outputs

from wastewater treatment plants. This does not necessarily mean that the councils are going to have direct involvement in the management of all waste – but there is a responsibility for the councils to at least consider the management of all waste in their districts, and to suggest areas where other groups, such as businesses or householders, could take action themselves.

1.4 Status and Review of the Plan

The WMMP is currently in a draft form and covers the period 2017 to 2023, but takes a ten year time horizon for planning purposes.

In line with the requirement of section 50 of the Act, this Plan will be reviewed at least every six years after its adoption. The Councils may elect to review any or all aspects of the Plan at any time prior to 2023, if they consider circumstances justify such a review.

1.5 Structure of this Document

This plan is in three parts

Part A: Strategy: This contains the core elements of the strategy including vision, goals, objectives, policies and targets. It essentially sets out what we are aiming to achieve, and the broad framework for working towards the vision.

Part B: Action Plans. The action plans set out the proposed specific actions that could be taken by the Councils to achieve the goals, objectives, and targets set out in Part A. There are two sets of Action Plans: Regional level actions and local actions. Regional actions identify where councils will work at a regional level or in collaboration. These regional actions provide a broad structure to deliver the Plan outcomes. Local actions provide more detail around specific actions each council will undertake to support the regional goals and objectives as well as meeting local needs.

Part C: Background Information. This part contains the background information that has informed the development of the WMMP. Most of this information is contained in the Waste Assessment, which is included in Part C.

2.0 What We Have Considered

In preparing this WMMP we have taken into account a wide range of considerations including the following:

- Information on the waste we generate and manage in our district.
- Projections of how our population and economy might change over time.
- Residents and ratepayer surveys and other resident feedback.
- The waste hierarchy.
- Public health.
- The potential costs and benefits of different options to manage our waste.

The detail of the above information is contained in the Waste Assessment (and other supporting documentation) which is presented in Part C.

We have also taken into account a large number of plans, policies and legislation and their requirements. These include the following:

- The Waste Minimisation Act (WMA) 2008.
- The Local Government Act (LGA) 2002.
- The Hazardous Substances and New Organisms (HSNO) Act 1996.
- The Resource Management Act (RMA) 1991.
- The Health Act 1956.
- The Health and Safety at Work Act 2015.
- Climate Change (Emission Trading) Amendment Act 2008.
- The New Zealand Waste Strategy (NZWS).
- Waste Assessments and Waste Management and Minimisation Planning: A Guide For Territorial Authorities (2015).
- Regional Policy Statement for the Wellington Region (2013).
- The constituent councils' Long Term Plans.

Further information on the above plans, policies and legislation and how they have been considered in the formulation on this plan is contained in the Waste Assessment.

3.0 The Waste Situation

3.1 The Wellington Region

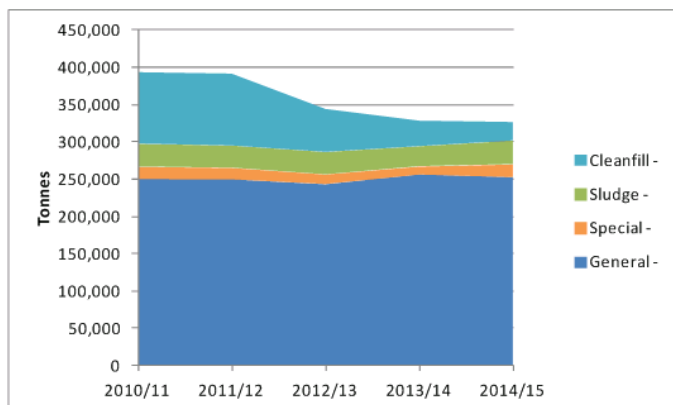
The Wellington Region poses some unique challenges when it comes to waste. There is a lot of diversity, with large metropolitan areas concentrated around Wellington City and the Hutt Valley through to the predominantly rural Wairarapa. The geography also generates clear distinctions, with the Rimutaka and Tararua Ranges creating a physical barrier between different parts of the region. This physical division of the region restricts, to some degree, the movement of people, and, particularly in the residential context, recovered materials and waste. There are also large numbers of workers coming into the city centres. For example, Wellington City has an inflow of around 70,000 workers every weekday from other cities/districts. The complexities of geography, people, and wastes create a wide range of challenges when planning more effective waste management and minimisation across the region.

This diversity is mirrored in the fact that most of the councils currently manage waste in different ways. For example, some councils provide waste and recycling collections (via council contracts) while others do not (households pay companies directly to collect their waste and/or recycling), some own landfills, and some take a more active role in promoting waste minimisation in the community.

Also of note is that the region is well served by landfills. There are three inside, and two outside, the region that we send our waste to. This means there is competition between these landfills for the supply of waste.

3.2 How Much Waste is There?

Figure 2: Waste to Class 1 Landfills by Year



The above chart shows the total amount of waste we have sent to landfill in the region each year. While the overall amount is going down, general waste, sludge and special wastes have increased slightly since 2012/13. The drop in total waste is actually just due to a drop in 'cleanfill' type material (dirt, rocks and other inert waste), going into class 1 facilities. While we do not have good data on this, it is likely that this material is simply going to other class 2-4 disposal

facilities (where it is cheaper to dispose of). It is estimated that there is in the order of 525,000 tonnes of material going to these types of facilities each year. In addition there is an estimated 37,000 tonnes of material disposed of on farms each year in the region.

These figures are summarised in the table below.

Table 1: Waste Disposed of to Land - 2015

Waste disposed of to land in Wellington region - 2015	Tonnes 2015	% of total	Tonnes/capita/annum
Levied waste to Class 1 landfills			
General	252,536	28.4%	0.508
Special	17,717	2.0%	0.036
Sludge	31,823	3.6%	0.064
Subtotal	302,076	34.0%	0.608
Non-levied waste to Class 1 landfills			
Cleanfill	24,942	2.8%	0.050
Farm waste disposed of on-site			
All waste	37,285	4.2%	0.075
Waste to Class 2-4 landfills			
All waste	525,000	59.0%	1.057
TOTAL	889,303	100.0%	1.790

3.3 Where Does it Come From?

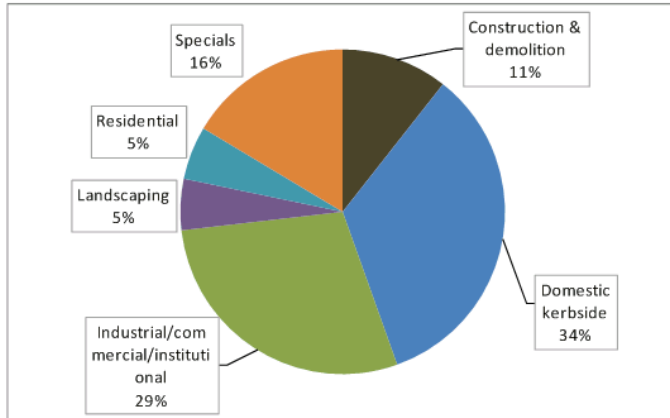
These next sections focus on the waste that goes to Class 1 landfills, which is material that potentially creates the most environmental harm (see the info box on the right).

The following chart shows the main activities that generate the waste that we send to class 1 landfill. The largest amount, about a third, comes from what households throw away in their kerbside collections. A similar amount comes from businesses and industry.

Class 1-4 Landfills?

Most of what we think of as rubbish goes to 'Class 1' landfills. These are well engineered facilities designed to minimise the impact of the waste on the environment. 'Class 2-4' landfills mostly just take inert material like soil and rock, from construction and roading projects. They aren't allowed to take any smelly or hazardous waste. Class 2 fills can take some construction waste like wood, plastic or glass, while Class 4 fills are essentially only allowed to take soil and rock etc.

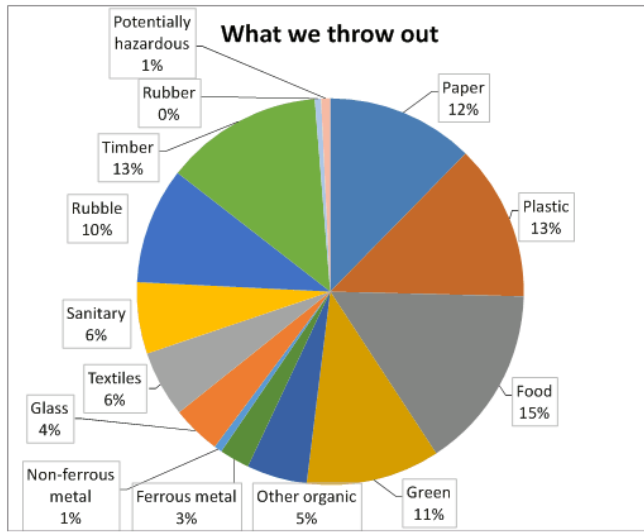
Figure 3: Activity Source of Waste to Class 1 Landfills



3.4 Composition of Waste to Class 1 Landfills

The following chart shows the types of materials we throw out. The biggest single amount is organic waste, which is food and garden waste from households and organisations. Most of this material could be recovered for composting. We also throw away lots of plastic, paper, metal, and glass which can be recycled.

Figure 4. General and Special Waste to Class 1 Landfill (excluding cleanfill)



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3.5 Diverted Material

Although we are throwing away about 300,000 tonnes of material into class 1 landfills each year, we are recovering nearly 200,000 tonnes each year as well. This is shown in the table below:

Figure 5: Material Recovered

Type of Recovery	Tonnes per Annum
Kerbside Recycling	26,375
Drop off Recycling	7,016
Commercial Recycling	116,781
Existing Organic Diversion	46,106
Total	196,278

The largest quantity of material recovered is from commercial recycling (59%) and most of this metal (52%), with paper and cardboard (7.6%) also significant. The organic waste diverted is mainly through rendering of meat processing by-products (13%) (to make things like tallow and blood and bone), and garden waste that is composted (10%).

3.6 Waste Minimisation Performance

3.6.1 Per Capita Comparisons

To determine how well we are doing in terms of waste minimisation it is useful to compare ourselves with other parts of New Zealand.

In terms of the total amount of waste per person that we send to class 1 landfill the Wellington region is mid-range nationally: about 600kg per person. The per-person total includes commercial sector waste.

When we look at how much waste from households we send to class 1 landfill, we are less effective in terms of waste minimisation: about 200kg per person - which is at the high end of the national range for waste from households, and about twice what the City of Christchurch does where a comprehensive kerbside collection system has been in operation since 2009/10.

When it comes to household recycling, we recycle about 53kg per person regionally, but this has been steadily dropping over time – down from 59kg about 5 years ago. Unfortunately this does not compare well with other districts and cities – we are down among the lowest recyclers, while the more effective recyclers recover about twice as much as we do.

3.6.2 Diversion Potential

The table below shows what materials we are sending to landfill and that we could be more effective at diverting away from landfill.

Table 2: Diversion Potential of Levied Waste to Class 1 Landfills

Diversion potential of levied waste to Class 1 landfills from Wellington region		General waste and special waste - excludes cleanfill	
Primary category	Secondary category	% of total	Tonnes 2014/15
Paper	Recyclable	9.0%	27,316
Plastics	Recyclable	1.0%	2,925
Putrescibles	Kitchen/food	13.2%	39,934
Putrescibles	Greenwaste	9.2%	27,921
Ferrous metals	All	2.1%	6,202
Non-ferrous metals	All	0.5%	1,626
Glass	Recyclable	2.9%	8,647
Textiles	Clothing/textile	1.2%	3,768
Rubble	Cleanfill	1.9%	5,712
Rubble	Plasterboard	1.5%	4,516
Timber	Untreated/ unpainted	1.9%	5,660
Potentially hazardous	Sewage sludge	10.5%	31,823
TOTAL DIVERTABLE		55.0%	166,050

Over 50% of our waste could, theoretically at least, be diverted from landfill disposal. The largest divertable component is kitchen/food waste. The second largest divertable component is sewage sludge, which comprises 10.5% of the total, while paper (9%) and greenwaste (9.2%) also make up notable fractions.

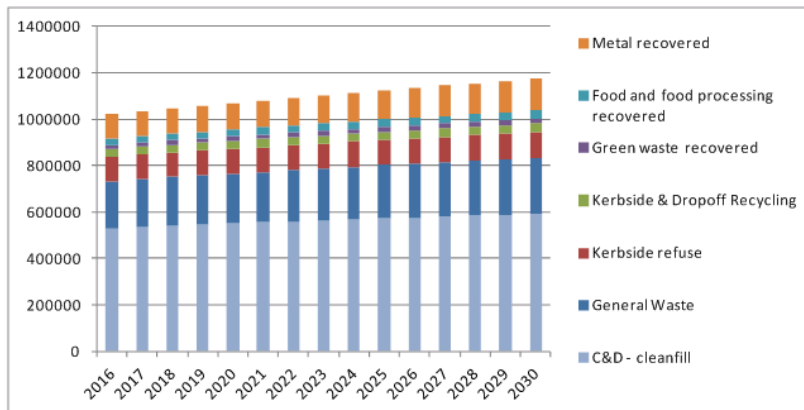
3.6.3 Kerbside Market Share

It has become more obvious in recent times is that, in districts where councils continue to have user pays rubbish bag collections services in place, bag collection services are experiencing low and declining market share. Across the region it is estimated around one third of households use the council bag services and that these households put out only 17% of the weight of material collected. Householders are often instead choosing to opt for private wheeled bin based services that offer a choice of capacity and frequency. This issue raises the question of whether current council service provision is meeting the needs of the majority of the community.

3.6.4 Projections of Future Demand

Total waste and recovered material quantities in Wellington region are estimated to grow slowly over the next ten years in line with population and economic growth. For the purposes of projecting total waste quantities, it has been assumed that kerbside refuse, greenwaste, and all recyclables will grow in line with population. The Stats NZ 'med' population projection has been used for estimating kerbside recycling and refuse. It is assumed that other waste to landfill (mainly industrial/commercial/institutional waste and drop-off materials) and C & D waste will grow at a similar rate as GDP, with an assumed growth rate of 2% per annum.

Figure 6: Mid-Level Projection - No Significant Change in Systems or Drivers



3.7 Key Issues

The Waste Assessment looked across all aspects of waste management in the region, (including some of the data presented in this section), and identified the main areas where we could improve our effectiveness and efficiency in managing and minimising waste. In no specific order these were:

1. **Data.** There is room for improvement in the quality and management of data. Accessible, reliable, consistent data enables better decision making.
2. **Waste to Landfill.** In recent years the quantity of waste we send to landfill has started to increase.
3. **Cleanfills.** There is a lack of good information about the number of cleanfills and the tonnages and types of materials they accept.
4. **Council Kerbside Refuse Market Share.** Councils' share of the refuse market is declining. This issue raises the question of whether current service provision is meeting the needs and what the options are to address this.
5. **Recycling Levels.** Wellington region's recycling performance is below average by national standards.
6. **Recycling Trends.** The proportion of material recycled has been declining over time.
7. **Biosolids Management.** This material can create potential issues in landfill management. Diverting this material to beneficial use should be investigated.

8. **Organic Waste.** There is a low rate of diversion of organics. Food and green waste represent the largest fractions of material being landfilled. This is potentially the biggest opportunity to improve diversion.
9. **Management.** Councils operate a range of different funding and management models. The range of approaches is a barrier to greater collaboration, as each council has different imperatives.
10. **Shared Services and Joint working.** There is likely to be unrealised potential for greater joint working in Council service delivery (e.g. more consistent approach to kerbside services).

Addressing these issues is a key focus of the WMMP.

4.0 Vision, Goals Objectives and Targets

4.1 Vision

In consideration of the findings of the Waste Assessment, the Wellington Region WMMP Joint Governance Committee developed a vision for addressing waste issues:

The vision is: *“Waste Free, Together”*
With the tagline: *“for people, environment, and economy”*

4.2 Goals and Objectives

The vision will be realised through the achievement of a set of supporting goals and objectives. The goals and objectives are as follows:

Goal: Waste Free

Objective: To reduce the total quantity of waste to landfill, with an emphasis on wastes that create the most human and environmental harm.

Objective: To provide environmental, social, economic and cultural benefits by increasing the amount of waste diverted from landfill via reuse, recovery and/or recycling.

Objective: To investigate the use of available recovery and treatment technologies and service methodologies and apply these where appropriate.

Objective: To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities.

Objective: To align data collection and reporting systems where possible across the districts, region and nationally.

Goal: Working Together

Objective: To investigate and where appropriate develop partnerships, joint working and co-operation across the private and community sectors as well territorial and regional councils, including shared services.

Objective: To engage the community and provide information, education and resources to support community actions.

Objective: To use Council influence to advocate for increased or mandatory producer responsibility.

Objective: To work with local businesses and organisations to actively promote waste reduction at a local level.

Goal: Benefit our communities

Objective: To work with service providers to identify efficiencies while maintaining or improving service levels.

Objective: To consider both short and long term cost impacts of all actions across the community including economic costs and benefits.

Objective: Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making.

Objective: To consider the public health impacts of all waste management options and seek to choose options which effectively protect human health.

4.3 Targets

The following regional waste minimisation targets are proposed. These targets are informed by preliminary modelling that was done when the plan was being prepared. The modelling calculated the how much we think could be diverted from landfill through a range of recycling and minimisation initiatives across the Region. The pursuit of these targets will be up to each council, and therefore, whether they are achieved will largely depend on the initiatives and resources that are put towards it by each council.

Our primary regional target is:

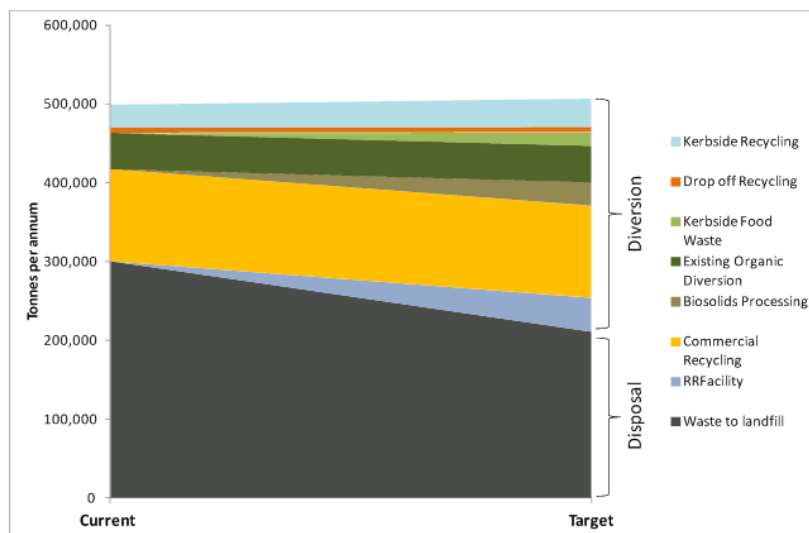
1. A reduction in the total quantity of waste sent to class 1 landfills from 600kg per person per annum to 400kg per person by 2026.

In order to meet this primary target we will need to make progress in a number of areas. To measure how well we are doing in these areas we have set a number of secondary and tertiary targets:

2. A decrease in kerbside household waste to landfill from approximately 200kg per person per annum to 143kg per person per annum by 2026. Progress towards this target will be delivered by achieving the following:
 - a) Recycling an extra 13.5 kg per person per annum of household waste by 2026.
 - b) Diversion of 34.5kg per person of food waste from landfill per annum by 2026.
 - c) A reduction of household waste generated of 9kg per person per annum.
3. A decrease in the total quantity of general waste (excluding kerbside & biosolids) from approximately 335kg per person to 250kg per person per annum by 2026.
4. A reduction in the quantity of sewage sludge (biosolids) sent to landfill from approximately 64 kg per person per annum to 4kg per person per annum by 2026.

The chart below shows the effect we expect meeting our targets will have on the quantities of waste sent to landfill and recovered:

Figure 7: Impact of Targets on How Waste is Managed



The chart above illustrates that a range of waste streams can be targeted to increase diversion and reduce the amount of waste to landfill. It is important to recognise however, that councils have a range of statutory duties, such as the need to deliver local public services in way that is most cost-effective for households and businesses in accordance with the Local Government Act 2002 (s10(b)). They also need to give effect to other legislation, such as the Waste Minimisation Act, which encourages waste minimisation and decreased waste disposal (s3, 2008). As such, councils have a range of factors to consider when deciding how they will achieve effective and efficient forms of waste management and minimisation within their district. Because of this, over the six year life of this Plan, lots of different dynamic social, cultural, economic and environmental factors will continue to shape and inform each council's waste management and minimisation actions - which will, in turn, affect how effective each Council is in meeting the waste minimisation targets.

5.0 Proposed Methods for Achieving Effective and Efficient Waste Management and Minimisation

5.1 Councils' Intended Role

The Councils' intend to oversee, facilitate and manage a range of programmes and interventions to achieve effective and efficient waste management and minimisation within the Wellington region. The Councils will do this through their respective internal structures responsible for waste management. They will be individually responsible for a range of contracts, facilities and programmes to provide waste management and minimisation services to the residents and ratepayers of the region. In addition the councils in the Wellington region will continue to work together to deliver the vision goals and objectives set out in this plan.

5.2 Proposed Methods

The key methods that are proposed and the issues that they will address are shown in the table below:

	Method	Issues Addressed
A	Determine and where feasible commit to implementing a range of optimised kerbside systems that maximise diversion and are cost-effective to communities.	Council Kerbside Refuse Market Share. Low Recycling Levels. Declining Recycling. Organic Waste. Shared Services.
B	Investigate and if feasible develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste.	Low Recycling Levels. Declining Recycling. Organic Waste Joint Working.
C	Collaborate on options to use biosolids beneficially.	Biosolids Management. Joint Working? Management?
D	Deliver enhanced regional engagement, communications, and education.	Low Recycling Levels. Declining Recycling.
E	Collaborate on and lobby for waste minimisation policies and strategies,	Low Recycling Levels.

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	for example product stewardship.	Declining Recycling.
F	Fund regional resources for the implementation of the Waste Management and Minimisation Plan, for example, human resources and research.	Management. Joint Working.
G	Implement and oversee monitoring and enforcement of the regional bylaw.	Cleanfills. Data. Council Kerbside Refuse Market Share.
H	Implement National Waste Data Framework and utilise the Framework to increase strategic information.	Data.
I	Identify specific aspirational targets in the Waste Management and Minimisation Plan for each council and the region, specifying reduction, reuse, recycling, and diversion of waste actions.	Low Recycling Levels. Declining Recycling. Organic Waste.

It is noted that where a method refers to 'subject to a feasibility', it means that feasibility should be signalled through cost benefit investigation and indicated through public consultation based on that cost benefit analysis. Specific initiatives relating to these methods would therefore be approved for funding under subsequent Annual Plan/Long Term Plan processes.

Further details on how these methods will be implemented are provided in the Action Plans in Part B.

6.0 Funding the Plan

Section 43 of the Waste Minimisation Act requires that the Councils include information about how the implementation of this Plan will be funded, as well as information about any grants made and expenditure of waste levy funds.

6.1 Funding Regional Actions

While most of the actions in this plan will be delivered by each council at a local level there are a range of actions that could take place at a regional level. These include:

- Development of a regional bylaw or a suite of regionally consistent local bylaws.
- Consolidation and analysis of data.
- Delivery of regional education programmes.
- Research into the operational implications of proposed actions such as a Resource Recovery Network, and development of regional organic waste processing capacity.
- Monitoring, reporting, and coordination of regional efforts including the development of future Waste Assessments and WMMPs.

Oversight of regional level actions will be provided by the WMMP Joint Governance Committee, with implementation through the Regional Officer Steering Group when agreed and when funding is approved.

To support the Committee a Regional WMMP Planner role has been established. Each Council will have the opportunity provide ongoing funding to support the Regional Planner role through their Annual and Long Term Plans. To fund regional research and initiatives councils will allocate a portion of their budgets. This may be funded from rates, waste levy funding, user charges, or other sources as determined by each council.

6.2 Funding Local Actions

There are a range of options available to the Wellington region councils to fund the activities set out in this plan. These include:

- Uniform Annual General Charge (UAGC) - a charge that is paid by all ratepayers.
- User Charges - includes charges for user-pays collections as well as transfer station gate fees.¹
- Targeted rates - a charge applied to those properties receiving a particular council service.
- Waste levy funding - The Government redistributes funds from the \$10 per tonne waste levy to local authorities on a per capita basis. By law 50% of the money collected through the levy must be returned to councils. This money must be applied to waste minimisation activities.

¹ Most councils in the region own transfer stations and or landfills and are able to set the fees at these facilities and can derive income from these activities. In accordance with s46 (2) of the Act, the Councils can charge fees for a facility that are higher or lower than required to recover the costs to provide the service, providing the incentives or disincentives will promote waste minimisation.

- Waste Minimisation Fund - Most of the remaining 50% of the levy money collected is redistributed to specific projects approved by the Ministry for the Environment. Anyone can apply to the WMF for funding for projects.
- Sale of recovered materials - The sale of recovered materials can be used to help offset the cost of some initiatives.
- Private sector funding - The private sector may undertake to fund/supply certain waste minimisation activities, for example in order to look to generate income from the sale of recovered materials etc. Council may look to work with private sector service providers where this will assist in achieving the WMMP goals

Funding considerations take into account a number factors including:

- Prioritising harmful wastes.
- Waste minimisation and reduction of residual waste to landfill.
- Full-cost pricing - 'polluter pays'.
- Public good vs. private good component of a particular service.
- 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.
- Protection of public health.
- Affordability.
- Cost effectiveness.
- The reasonably foreseeable needs of future generations.

The potential sources of funding for each of the actions are noted in the tables in Part B of the WMMP. Budgets to deliver the activities set out in this plan will be carefully developed through the Annual Plan and Long Term Plan processes undertaken by each Council. The approach taken will be to implement as many of the activities as possible while controlling costs and, where possible, taking advantage of cost savings and efficiencies. While the situation will vary for each council, overall a proportion of the increased levels of waste minimisation as set out in this WMMP could be achieved through setting appropriate user charges, promoting more efficient forms of service delivery through regional collaboration, and by targeting the application of waste levy money.

6.3 Waste Minimisation Levy Funding Expenditure

The WMA requires that all waste levy funding received by the Councils must be spent on matters to promote waste minimisation and in accordance with their WMMP. Waste levy funds can be spent on ongoing waste minimisation services, new services, or an expansion of existing services. The funding can be used on education and communication, services, policy research and reporting, to provide grants, to support contract costs, or as infrastructure capital.

The councils will receive, based on population, a share of national waste levy funds from the Ministry for the Environment. It is estimated that at the current rate of \$10 per tonne the councils' total share of waste levy funding in the Wellington region will be approximately \$1.4 million per annum. In addition, each council may make an application for contestable waste levy funds from the Waste Minimisation Fund, either separately, with other Councils, or with another party.

The Councils intend to use their waste levy funds for a range of waste minimisation activities and services as set out in the Action Plans.

6.4 Grants

Councils have the ability under the WMA (s47) to make grants and advances of money to any person, organisation or group for the purposes of promoting or achieving waste management and minimisation, as long as this is authorised by the WMMP. This section makes provision for each Council to make such grants under s47 of the WMA 2008, where the activities to be funded align with and further the objectives of this WMMP.

In making grants related to waste management and minimisation, each Council will use its own existing grants policy framework.

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7.0 Monitoring Evaluating and Reporting Progress

7.1 Regional Monitoring and Reporting

The Wellington Region WMMP Joint Governance Committee has been established to oversee the development and implementation of the Joint WMMP. The Joint Committee consists of elected representatives from each constituent council.

The Joint Committee is scheduled to meet quarterly, or more frequently as required to review progress and make decisions in respect to the WMMP and its implementation (where such matters are non-operational). As the Joint Committee does not have delegations in respect of budgets, where such actions are operation and have financial implications, they are referred to each TA for decisions at the appropriate level.

The Joint Committee is supported by officers from each TA, as well as a Regional Planner.

This WMMP contains eight high level regional actions with timeframes (refer to Part B), as well as a set of waste minimisation targets (refer section 4.34.3).

Each of these actions and targets will be reported against in terms of progress to the Joint Committee at a minimum of six monthly intervals.

Two of the actions - the development of a regional solid waste bylaw and implementation of the National Waste Data Framework will contribute to the development of a set of standard indicators for reporting purposes.

A range of indicative metrics for each of the regional actions are presented in the table below. Context appropriate metrics will be developed and agreed as part of their implementation by each territorial authority.

Reference & Title	Indicative Metrics
R.R.1: Implement regional bylaw	Standard bylaw adopted by TAs Number of operators licensed Number of bylaw infringements identified. Number of enforcement actions taken
R.D.1: Implement Waste Data Framework	Framework adopted by TAs TAs supplying data in accordance with Framework Data completeness
R.CM.1: Regional communication coordination and delivery	Number of regional programmes undertaken Number of households reached Awareness of communications messages
R.C.1: Optimise collection systems	Number of TAs with optimised systems in place Quantity of material recycled per capita Quantity of household waste per capita Quantity of organics diverted per capita
R.IN.1 Resource Recovery Network	Number of sites that have been redeveloped in line with the Resource Recovery Network concept Quantity of each waste/recycling/recovery stream Number of users at each site Proportion of material separated for recycling/recovery

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R.IN.2 Beneficial use of Biosolids	Quantity of biosolids diverted to beneficial use Proportion of biosolids diverted to beneficial use
R.LM.1: Resourcing for regional actions	Level of funding available for regional actions
R.LM.2: Collaborate and lobby	Submissions presented Action taken by central govt to fully implement key parts of the WMA (e.g. Product Stewardship, Rate of Waste Disposal Levy etc.)

What do we mean by an ‘Optimised System’?

An optimised system is one where the different elements are designed to work well together and support the desired outcomes. In general an optimised system will have the following characteristics:

- Provide high recycling capacity and maximise material quality
- Target organics, especially food
- Constrain capacity for rubbish
- Maximise participation
- Reduce cost to households

When we think about optimising our systems councils also need to think about our other obligations - such as under Section 17A of the Local Government Act 2002. This requires us to review how cost effective the ways of providing services and infrastructure (like roads and sewerage systems) are. To do this properly councils have to consider different aspects like governance, funding, regulation, and methods of service delivery.

Part B: Action Plans

8.0 Introduction

The following Action Plans set out how the Wellington Councils intend to work towards the vision, goals, and objectives outlined in Part A of the WMMP.

The Action Plans aim to set out clear practical initiatives that the councils will implement, either jointly or on their own. According to Ministry for the Environment guidance a WMMP can be updated without triggering the need for a formal review, as long as the changes are not significant² and do not alter the direction and intent of the WMMP.

8.1 Considerations

It should be noted that before the actions outlined in the plans can be carried out, their feasibility will need to be established and they will need to be achievable within the councils' budgets. It is a requirement to state how the actions in the WMMP are to be funded, but the guidance recognises that it is beyond the scope of the WMMP to cost each of the initiatives in detail.

It is also worth stating that in carrying out our role, one of the key (but not exclusive) avenues for action will be through the contracting out of waste services. This means that the delivery of the actions set out here will depend in large part on their inclusion in a contracting arrangement.

It is anticipated that joint working and joint procurement of waste services may lead to some efficiencies and that this will allow us to do more within our budgets. However exactly what services are delivered will ultimately depend on the outcomes of the procurement process. It will be up to each of the councils to determine whether they want to enter into shared service/joint procurement arrangements with any of the other councils

There are two sets of Action Plans set out in this section:

1. **Regional Actions:** This covers joint actions the councils will take. These actions support the shared service and independent actions.
2. **Local Actions:** This covers services that each council will manage on their own

² A council's Significance and Engagement Policy is also relevant to consideration here.

9.0 Regional Action Plan

This section sets out the actions that the councils in the region will collectively undertake or support to deliver on the vision, goals and objectives of this WMMP. The following actions will contribute to the primary target, being a reduction in the total quantity of waste sent to class 1 landfills from 600kg per person per annum, to 400kg per person by 2026.

9.1 Summary of Regional Actions

Action	What it Will Do
Develop and implement a regional bylaw, or a suite of regionally consistent bylaws.	This will help councils set standards and gather data so they can plan and manage waste better.
Implement Waste Data Framework.	Consistent, high quality data will help us track our progress.
Regional communication coordination and delivery.	More consistent regional communications and education around waste services and waste minimisation will help households and communities to be inspired and supported so they can play their part.
Optimise collection systems.	We will work to improve collections so that they maximise diversion and are cost effective to communities.
Resource Recovery Network.	This will make sure we have the facilities to divert more material like construction and demolition waste, food and/or biosolids, and other organic waste.
Beneficial use of biosolids.	This is a large waste stream that, if we divert it, will make a big contribution to our regional targets.
Shared governance and service delivery	There is potential to join together to deliver higher levels of service more efficiently.
Resourcing for regional actions.	This will make sure we have the means to deliver on what we set out in the Plan.
Collaborate and lobby.	We can work with other local government organisations, NGOs and other key stakeholders on undertaking research, lobbying and actions on various waste management issues such as (but not limited to) product stewardship, electronic waste, tyres, plastic bags, etc.

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9.2 Regional Regulation

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and contribution to Regional Targets
R.R.1: Develop and implement a regional bylaw	Develop <i>investigate and if feasible develop</i> , implement and oversee monitoring and enforcement of the regional bylaw	Pending development of Regional Solid Waste Bylaw	Licensing fees and General Rate	<p><i>Objective:</i> To reduce the total quantity of waste to landfill, with an emphasis on wastes that create the most harm.</p> <p><i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities</p> <p>Hierarchy level: All Levels</p>	Supports initiatives that make direct contribution to targets

Rationale: Each of the territorial authorities within the region currently has its own bylaw and these do not align in many instances. A single regional bylaw will lessen the burden of compliance on waste operators and potentially provide the Councils with much-improved waste data. A regional solid waste bylaw is planned but this will require resourcing and application at the local level. Action under this heading will give effect to the regional bylaw in our district.

9.3 Regional Data

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and contribution to Regional Targets
R.D.1: Implement Waste Data Framework	Implement National Waste Data Framework and utilise the Framework to increase strategic information	2017	General Rate, Waste Levy Funding	<p><i>Objective:</i> To align data collection and reporting systems where possible across the districts, region and nationally.</p> <p>Hierarchy level: All Levels</p>	Supports initiatives that make direct contribution to targets

Rationale: Each of the territorial authorities within the region has agreed to collect and manage data in line with the National Waste Data Framework. Action under this heading will give effect to the National Waste Data Framework in our district.

9.4 Regional Communications Engagement

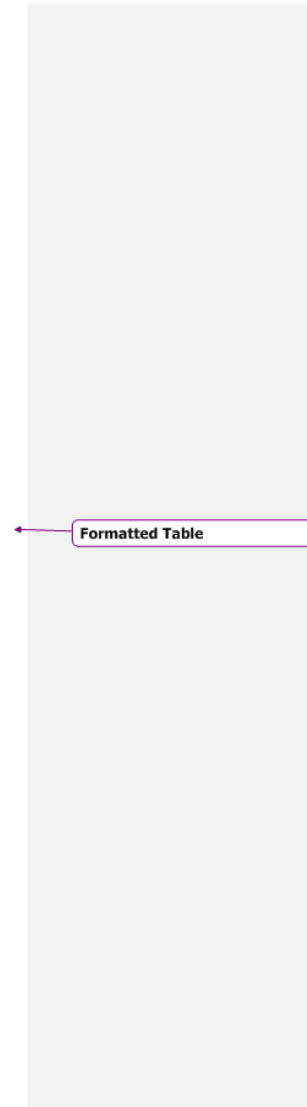
Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and contribution to Regional Actions and Targets
R.CM.1: Regional communication Coordination and delivery	Deliver enhanced regional engagement, communications, and education	Ongoing	Waste Levy Targeted rate General Rate	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	A fully implemented Regional communication programme is estimated to reduce waste to landfill in the order of 4,500 tonnes

Rationale: In addition to reviewing the Regional Waste Education Strategy, Councils will continue to support local education initiatives that have a positive impact.

9.5 Regional Collections

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and contribution to Regional Actions and Targets
R.C.1: Optimise collection systems	Facilitate local councils to determine and where feasible, implement optimised kerbside systems that maximise diversion and are cost-effective to communities	2019	Targeted Rate General rate User Charges	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling	If all TAs introduce fully optimised collection systems including targeting household food waste this would divert approximately 24,000 tonnes per annum from landfill

Rationale: Territorial authorities within the region are committed to implementing an optimised kerbside system that maximises diversion and that is cost-effective for our community.



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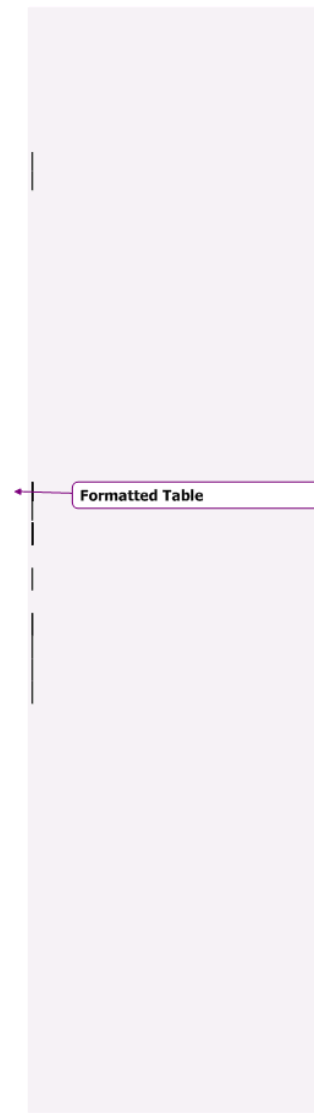
9.6 Regional Infrastructure

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and contribution to Regional Actions and Targets
R.IN.1 Resource Recovery Network	Investigate and if feasible, develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste	2020	General Rate Targeted Rate User Charges Waste Levy	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Reuse, Recycling	A fully implemented Resource recovery network would divert an estimated 40,000 tonnes per annum from disposal – primarily garden waste and construction and demolition waste

Rationale: Territorial authorities within the region are committed to investigating, and where feasible, developing facilities that can form part of a region-wide resource recovery network. This initiative looks to develop our local transfer stations in line with regional standards to increase the quantity of materials that can be economically recovered for beneficial use.

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and contribution to Regional Actions and Targets
R.IN.2 Beneficial use of Biosolids	Collaborate on options to use biosolids beneficially	2020	General Rate Targeted Rate User Charges Waste Levy	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Recovery	Processing of biosolids for beneficial use would divert approximately 30,000 tonnes from landfill across the region

Rationale: There are currently around 30,000 tonnes of biosolids sent to landfill that could be processed and used in beneficial applications. Biosolids can lead to the generation of odours and leachate at landfills, which must be managed.



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9.7 Regional Leadership & Management

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and contribution to Regional Actions and Targets
R.LM.1: Shared Governance and Service Delivery	Promote, investigate and, where appropriate <u>and cost-effective</u> , support the establishment of shared governance and service delivery arrangements, where such arrangements have the potential to enhance the efficiency of waste management and minimisation initiatives within the Region.	Ongoing	Waste Levy General Rate Targeted Rate	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level Hierarchy level: All Levels	Supports initiatives that have the potential to make a direct contribution to targets

Rationale: As local authorities consider any significant change to service levels they are required to review the cost-effectiveness of current arrangements for meeting the community needs. Section 17A of the Local Government Act 2002 stipulates that such a review must factor in the potential establishment of shared governance, funding and service delivery arrangements.

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and contribution to Regional Actions and Targets
R.LM.2: Resourcing for regional actions	Fund regional resources for the implementation of the Waste Management and Minimisation Plan, for example, human resources and research, funding the formulation of the next WMMP, or investing in shared infrastructure or initiatives.	Ongoing	Waste Levy General Rate Targeted Rate	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level Hierarchy level: All Levels	Supports initiatives that make direct contribution to targets

Rationale: Implementing the plan at the regional level will require resourcing for coordination, commissioning of research, and joint projects. This action is to help ensure that sufficient resourcing is available throughout the lifetime of the plan to enable the actions to be completed on time and for the goals, and objectives to be met.

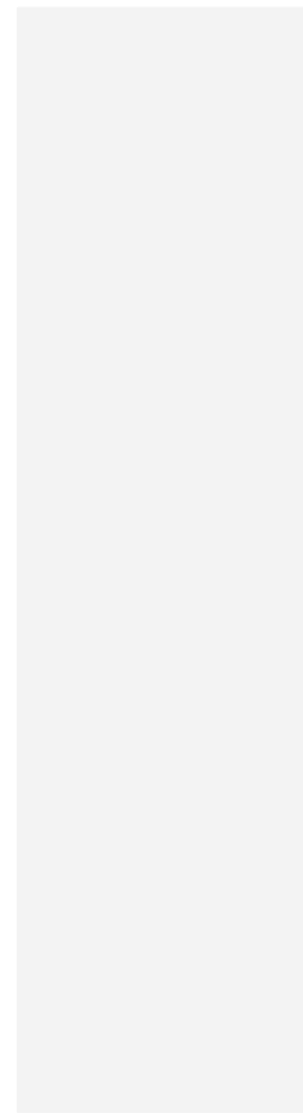
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Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and contribution to Regional Actions and Targets
R.LM.3: Collaborate and lobby	<u>The Councils will work collaboratively with local government organisations, non-government organisations and other key stakeholders to undertake research and actions to advance solutions to waste management issues such as, but not limited to e-waste, plastic bags, and the need for a container deposit system. The Councils will collaborate with other local government organisations, NGOs and other key stakeholders on undertaking research, lobbying and actions on various waste management issues such as (but not limited to) product stewardship, e-waste, tyres, plastic bags, container deposit systems etc.</u>	Ongoing	Waste Levy General Rate Targeted Rate	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level Hierarchy level: All Levels	Supports initiatives that make direct contribution to targets
R.LM.4: Lobby	<u>The Councils of the region will work together to lobby for product stewardship for possible priority products such as, but not limited to e-waste, tyres and plastic bags.</u>	Ongoing	Waste Levy General Rate Targeted Rate	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level Hierarchy level: All Levels	Supports initiatives that make direct contribution to targets

Rationale: Territorial authorities within the region have no direct control over waste produced by businesses and other organisations. We will look to work with local groups and businesses and promote initiatives that assist in enhancing economic development through reducing and recovering waste.





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10.0 Local Action Plans

This section sets out the actions that the councils in the region will undertake individually to deliver on the vision, goals and objectives of the regional WMMP, while ensuring that they meet the needs and concerns of their own communities.

10.1 Hutt City Council

The following actions have been identified to ensure Hutt City provides for the needs of its residents and contributes to the delivery of the regional WMMP objectives. Most of the actions are ones that have already been identified in the HCC Sustainability Plan. The Sustainability Plan references (where applicable) are provided in brackets at the end of each action title.

10.1.1 Hutt City Regulation

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
R.1: Implement regional bylaw	Ensure systems and resources are in place for implementing, monitoring and enforcing the Regional Solid Waste Bylaw once it becomes active	Pending development of Regional Solid Waste Bylaw	Licensing fees and General Rate	<i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities Hierarchy level: All Levels	<i>Action G:</i> Implement and oversee monitoring and enforcement of the revised regional bylaw
R.2: Actively enforce, control and reduce littering and illegal dumping. (WPCC1)	Ensure systems and resources are in place for actively enforce, control and reduce littering and illegal dumping.	Ongoing	Licensing fees and General Rate	<i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities	<i>Action G:</i> Implement and oversee monitoring and enforcement of the revised regional bylaw

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				Hierarchy level: All Levels	
R.1: Waste minimisation plans are required as part of Council building projects - Work Instruction to be approved by Council's Senior Leadership Team. (WPC1)	Council will seek to reduce waste to landfill from building projects by requiring waste minimisation plans for each project which seek to minimise waste to landfill.	Ongoing	Licensing fees and General Rate	<p><i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities</p> <p>Hierarchy level: All Levels</p>	<i>Action G:</i> Implement and oversee monitoring and enforcement of the revised regional bylaw

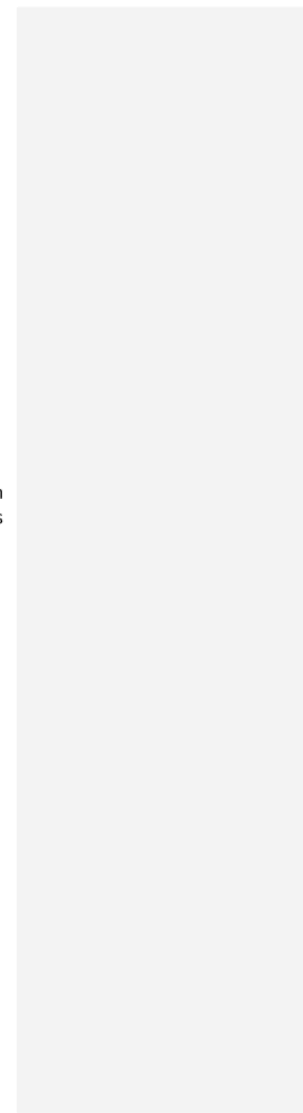
Rationale: Each of the Councils in the region currently has its own bylaw and these do not align in many instances. A single regional bylaw will lessen the burden of compliance on waste operators and potentially provide the Councils with much-improved waste data. A regional solid waste bylaw is planned but this will require resourcing and application at the local level. Action under this heading will give effect to the regional bylaw in our district.

10.1.2 Hutt City Data

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
D.1: Implement Waste Data Framework	Collect and manage data in accordance with the National Waste Data Framework	2017	General Rate	<p><i>Objective:</i> To align data collection and reporting systems where possible across the districts, region and nationally.</p> <p>Hierarchy level: All Levels</p>	<i>Action H:</i> Implement National Waste Data Framework and utilise the Framework to increase strategic information
D.2: Improve public reporting on	Work with City Infrastructure Manager and contractors who manage the landfill and	In place by 2022	Waste Levy	<p><i>Objective:</i> To align data collection and reporting systems where possible across the districts,</p>	<i>Action H:</i> Implement National Waste Data Framework and utilise the Framework to increase

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landfill environmental performance, e.g. leachate capture, air quality, methane capture and waste diversion. (WDC1)	methane gas plant to capture the required information. Capture information on waste diversion. The captured information would then be simplified and made available to the public via Council's website.			region and nationally. Hierarchy level: All Levels	strategic information
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Rationale: Better data and reporting will help us better manage what we do so we can formulate appropriate responses. TAs in the region have agreed to collect and manage data in line with the National Waste Data Framework. Action under this heading will give effect to the National Waste Data Framework in our district.

10.1.3 Hutt City **CommunicationsEngagement**

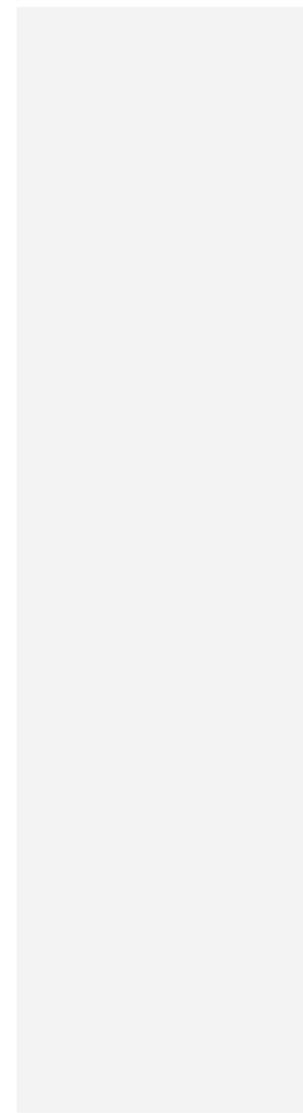
Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
CM.1: Wellington Regional Waste Education Strategy is implemented, and regional cooperation is strengthened. (WPE3)	Ensure systems and resources are in place for implementing the Regional Waste Education Strategy.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.2: Support schools to access the EnviroSchools	Continue to provide funding for the EnviroSchools programme to local schools that agree to participate	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education

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programme. (WPT3)				actions Hierarchy level: All Levels	
CM.3: Improve reporting on where recyclables are sent, how recycled, and improve collection of data on weight and type of recyclables. (WDE2)	Capture information on where recyclables are sent, and how recycled. The captured information would then be simplified and made available to the public via Council's website. The next Council contract to collect and recycle from the kerbside and recycling stations should be amended to include a requirement for improved reporting.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.4: Council monitors and reports on its carbon emissions and encourages businesses and organisations to do likewise. (WEE1)	Information on Council carbon emissions is collected, and reported on via its website and other means. Council investigates and then implements its carbon emissions reduction programme.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.5: Provide incentives and information for people to access compostable	This is now incorporated within the Regional Waste Education Strategy. Council will make resources available each year to achieve this.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education

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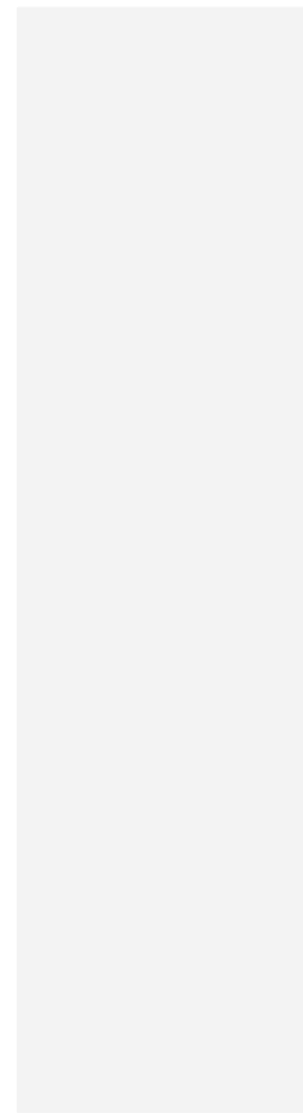
disposable nappies solution, and Sustainable Parenting workshops. (WPC3)				Hierarchy level: All Levels	
CM.6: Support and promote waste minimisation certifications for businesses. (WPT5)	Council will provide officer advice and support, and consider requests for funding support from businesses to achieve waste minimisation certifications.	Ongoing	Waste Levy	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.7: Deliver a comprehensive waste minimisation programme to include education, information, incentives, and community engagement. (WPT4)	Ensure systems and resources are in place to deliver a comprehensive waste minimisation programme.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.8: Deliver annual business sustainability presentations / workshops and engage with	Council will run and help to run sustainability presentations and workshops for businesses, with particular reference to working with the Chamber of Commerce and the Sustainable Business	Ongoing	Waste Levy	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education

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local businesses to reduce waste production. (WPE1)	Network.				
CM.9: Encourage and support household composting. (WDE1)	Household composting avoids creation of methane and transport emissions. We will endeavour to encourage and support home composting whenever possible.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.10: Increase kerbside recycling tonnages per capita. (WDC6)	Large quantities of recyclable packaging continue to be taken to landfill, instead of being recycled. If we can reverse this trend we should be able to increase recycling tonnages per capita.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: Recycling	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.11: Undertake community recycling awareness programmes. (WDT5)	Council will promote recycling awareness with the aim of increasing recycling rates across the city.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: Recycling	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.12: Promote and encourage	Council will promote and encourage construction and demolition waste reduction,	Ongoing	Waste Levy	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education

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construction and demolition waste reduction, reuse, and recycling. (WDT6)	reuse, and recycling wherever possible.			at a local level Hierarchy level: Reduction, Reuse, Recycling	
CM.13: Continue World of Waste Bus Tours. (WPT6)	World of waste bus tour give school children and opportunity to visit the landfill, sewage planet, and Earthlink recycling premises. This teaches children about the importance of minimising waste to reduce environmental effects. Council will continue to support and promote this useful waste education activity.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.14: Support and promote reusable nappy programme. (WPT2)	Nappies have a huge impact on the amount of waste going to landfill and use large amounts of plastic. By encouraging the use of reusable nappies Council endeavours to reduce the negative environmental impact of disposable nappies.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: Reduction, Reuse	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.15: Support and deliver food waste prevention programmes	Food waste can be usefully turned into compost for growing food, and means that communities can become more resilient, and reduce	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education

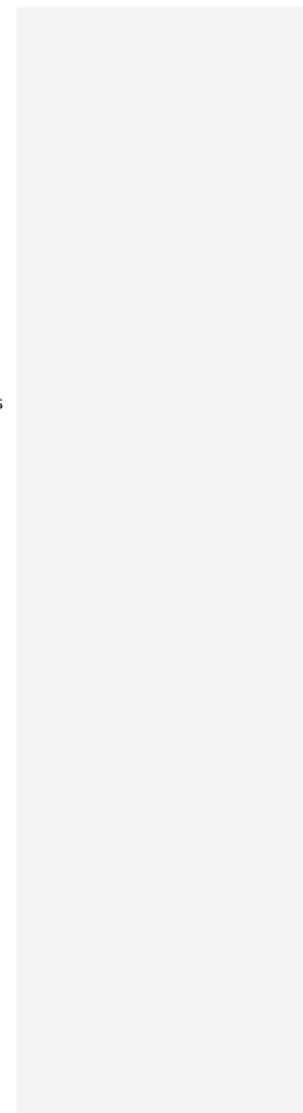
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focused on minimising food waste. (WPT1)	waste to landfill. Council will therefore support food waste prevention programmes.			Hierarchy level: Reduction, Recovery	
CM.16: Support marae and iwi groups to minimise waste	Support iwi and marae to promote and undertake waste minimisation by the provision of information, services and events. For example (but not limited to), support for the Para Kore programme	From 2017 onwards	Waste Levy	Objective To engage the community and provide information, education and resources to support community actions. Hierarchy level: All Levels.	Actions B & D Targets 1 & 2

Rationale: In addition to work undertaken as part of the Regional Waste Education Strategy, Council will continue to support local education initiatives that have a positive waste minimisation impact.

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10.1.4 Hutt City Collections

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
C.1: Investigate options and costs of a two-stream recycling collection (HCCC1)	Investigate options and costs of introducing a two-stream recycling service and potentially include these as the preferred level of service when re-tendering collection services.	2019	Targeted Rate	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Recycling	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities Additional 1,000 tonnes per annum of recyclables
C.2: Investigate use of wheelie bins for kerbside recycling. (WDE4)	Ensure resources are in place to investigate this problem, and to identify cost effective and best practice solutions.	2019	Waste Levy	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Recycling	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities
C.3: Investigate methods to prevent recycling from being put in Council rubbish bags. (WDC5)	Ensure resources are in place to investigate this problem, identify solutions, and put solutions into place to prevent this.	Ongoing	Waste Levy	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Recycling	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities
C.4: Provide city-wide weekly refuse and recycling collection	Council will continue to provide a weekly refuse and recycling collection service plus recycling stations, funded by a targeted rate.	Ongoing	Waste Levy Targeted Rate	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i>	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities

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service plus recycling stations. (WDT3)	Council will remain in the refuse bag market for the foreseeable future, and will undertake periodic reviews of the service to see if it can be improved.			Hierarchy level: Recycling	
C.5: Investigate methods and implement procedures to prevent e-waste from going to landfill. (WPCT4)	Ensure resources are in place to investigate this problem, identify solutions, and put solutions into place to prevent this.	2022	Waste Levy	<i>Objective: To reduce the total quantity of waste to landfill, with an emphasis on wastes that create the most harm.</i> Hierarchy level: Reuse, Recycling, Treatment	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities
C.6: Continue to offer and promote free e-waste collection service for Hutt City residents. (WPCT3)	Continue contract with a provider to collect and recycle e waste for free for Lower Hutt residents.	Ongoing	Waste Levy Targeted Rate	<i>Objective: To reduce the total quantity of waste to landfill, with an emphasis on wastes that create the most harm.</i> Hierarchy level: Reuse, Recycling, Treatment	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities
C.7: Maintain annual or biennial Hazmobile collection day. (WPCT1)	Maintain Hazmobile to ensure that the environment is protected from hazardous materials.	Ongoing	Waste Levy Targeted Rate	<i>Objective: To reduce the total quantity of waste to landfill, with an emphasis on wastes that create the most harm.</i> Hierarchy level: Reuse, Recycling, Treatment	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities
C.8: Review	Review Hazmobile to ensure	2022	Waste	<i>Objective: To reduce the total</i>	<i>Action A:</i> Determine and commit

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effectiveness, scope and location of Hazmobile (hazardous waste) collection day. (WPCT2)	that costs are minimised, and cease collection of items that can be safely disposed of elsewhere at reasonable cost.		Levy Targeted Rate	quantity of waste to landfill, with an emphasis on wastes that create the most harm. Hierarchy level: Reuse, Recycling, Treatment	to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities
C.9: Council provides a comprehensive network of litter bins across the city, and also provides street cleaning and park and reserves maintenance services. These services are supported by a litter waste bylaw and Council enforcement.	Ensure systems and resources are in place to ensure that parks and public places are kept free from litter and that litter bins are made available to dispose of litter.	Ongoing	Targeted Rate	Objective: Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making Objective: To consider the public health impacts of all waste management options and seek to choose options which effectively protect human health Hierarchy level: Disposal	No direct regional actions

Rationale: Council is committed to implementing an optimised kerbside system that maximises diversion and that is cost-effective for our community. The above actions will see us progress towards that optimised system, by considering how our services can be improved on an ongoing basis.

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10.1.5 Hutt City Infrastructure

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
IN.1: Improve signage and layout for recycling bays at landfill. (WDC2)	Design and erect new signage at landfill which better indicates where to put recyclables.	2019	Waste Levy	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Recycling	<i>Action B. Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste</i>
IN.2: Investigate and, where feasible, implement measures to prevent recyclables from being put into the landfill. (WDC3)	Ensure resources are in place to investigate this problem, identify solutions, and put solutions into place to prevent this.	Ongoing	Waste Levy	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Recycling	<i>Action B. Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste</i>
IN.3: Investigate the establishment of a free to use recycling waste facility and shop before the landfill gates, implement if	Investigate options, develop a business case, and implement if found to be economically viable.	2022	Waste Levy	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Recycling	<i>Action B. Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste</i>

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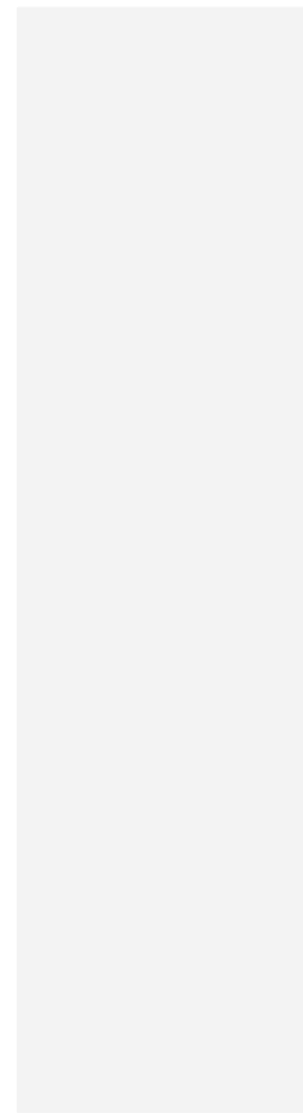
found to be economically viable. (WDE3)					
IN.4: Review effectiveness, number, and positions of community recycling stations. Implement agreed changes (if any). (WDT1)	A review will be undertaken of fitness for purpose, optimum locations, types of recyclables accepted, branding and signage, usage, any nuisance issues, and any other relevant issues. Changes will be implemented based upon findings from the review.	2022	Waste Levy	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Recycling	<i>Action B. Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste</i>
IN.5: Manage community recycling stations to reduce illegal dumping. (WDT7)	Undertake a programme to work with the contractors managing community recycling stations to investigate and implement measures to reduce illegal dumping.	Ongoing	Waste Levy	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Recycling	<i>Action B. Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste</i>
IN.6: Maintain public place recycling bins service and increase or relocate bins where appropriate. (WDT2)	Council will continue to provide public place recycling bins and seek to increase recycling collected from them, and improve the existing service where feasible and cost effective.	Ongoing	Waste Levy General Rates	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: Recycling	<i>Action B. Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste</i>
IN.7: Maintain or improve	Council will ensure that methane is effectively	Ongoing	General Rates	<i>Objective: Consider the environmental impact of all options</i>	<i>No directly related regional actions</i>

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methane capture rate at Silverstream Landfill (based on available resource). (WEC1)	captured from landfill as efficiently as possible.		User Charges	<i>and ensure that the overall environmental impact is taken into account in decision making</i> Hierarchy level: Disposal	
IN.8: Silverstream Landfill - Council will continuously look at ways to improve the service levels and operations at its landfill (s) where efficient in an effort to reduce harm.	Operations at the landfill will continuously look at ways to improve the service levels and operations.	Ongoing	General Rates User Charges	<i>Objective: Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making</i> Hierarchy level: Disposal	<i>No directly related regional actions</i>
IN.9: Aftercare of Closed Landfills	Council will continue to monitor and manage closed landfill to ensure relevant environmental and safety standards are met.	Ongoing	General Rates User Charges	<i>Objective: Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making</i> Hierarchy level: Disposal	<i>No directly related regional actions</i>
IN.10: Recycling and Hazardous waste facilities at the landfill transfer	Council currently has a recycling centre at Silverstream landfill and a collection point for waste oil, batteries, LPG bottles and paint. Council will look to improve its hazardous waste	2022	Waste Levy General Rates User	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> <i>Objective: Consider the environmental impact of all options</i>	<i>No directly related regional actions</i>

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station.	and recycling facilities and processes at the landfill wherever possible.		Charges	<i>and ensure that the overall environmental impact is taken into account in decision making</i>	
				Hierarchy level: Recycling, Treatment	
IN.11: Increase waste diversion at landfill and increase collection and diversion of reusable and recyclable items. (WDES)	The current system in place to divert of waste at the landfill works well, but could be improved if cars were stopped and asked if they would consider recycling waste. Council will look to put such a system in place to increase the quantity and quality of waste diversion.	2022	Waste Levy User Charges	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. account in decision making</i>	<i>Action B. Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste</i>
				Hierarchy level: Reuse, Recycling, Recovery	

Rationale: Council is committed to investigating, and where feasible, developing facilities that can form part of a region-wide resource recovery network. These initiatives look to develop our local transfer stations and landfill in line with regional standards to increase the quantity of materials that can be economically recovered for beneficial use, while ensuring we protect the environment.

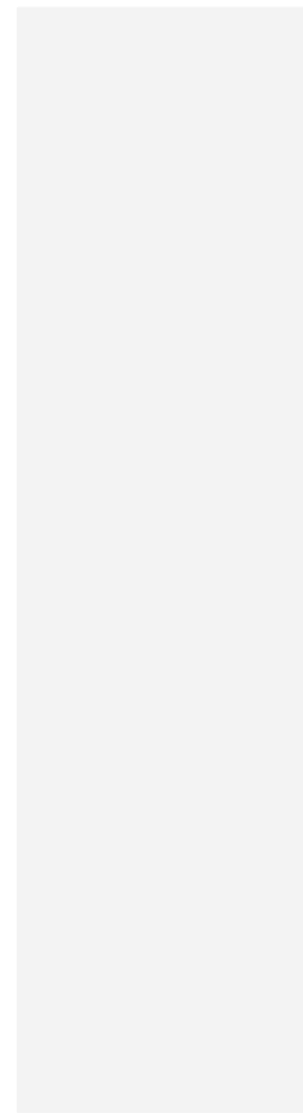
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10.1.6 Hutt City Leadership & Management

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
LM.1: Regional Waste Minimisation Plan is efficiently implemented, and deliverables strengthened. (WPE2)	Ensure efficient governance systems and adequate resources are in place for implementing, the Regional Waste Minimisation Plan.	Waste Levy		<i>Objective: To investigate and where appropriate develop partnership, joint working and co-operation across the private and community sectors as well territorial and regional councils, including shared services</i> Hierarchy level: All Levels	<i>Action F: Fund regional resources for the implementation of the Waste Management and Minimisation Plan, for example, human resources and research</i>
LM.2: Maintain and renew contract with Earthlink to assist with waste diversion at landfill and around Lower Hutt. (WDC4)	The waste diversion contract with Earthlink at landfill has the lowest dollar to kg of waste diverted ratio of all the projects we undertake on waste minimisation. It is therefore vital for this to be maintained and strengthened going forward.	User Charges Waste Levy		<i>Objective: To investigate and where appropriate develop partnership, joint working and co-operation across the private and community sectors as well territorial and regional councils, including shared services</i> <i>Objective: To work with service providers to identify efficiencies while maintaining or improving service levels</i> Hierarchy level: Reuse, Recycling, Recovery	<i>Action B: Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste</i>
LM.3: Develop and implement event recycling Policy/Work Instruction.	Council will implement an event recycling work instruction aimed at recycling all recyclable waste from Council events.	Waste Levy		<i>Objective: To use Council influence to advocate for increased or mandatory producer responsibility</i> Hierarchy level: Reduction, Reuse,	<i>Action E: Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship</i>

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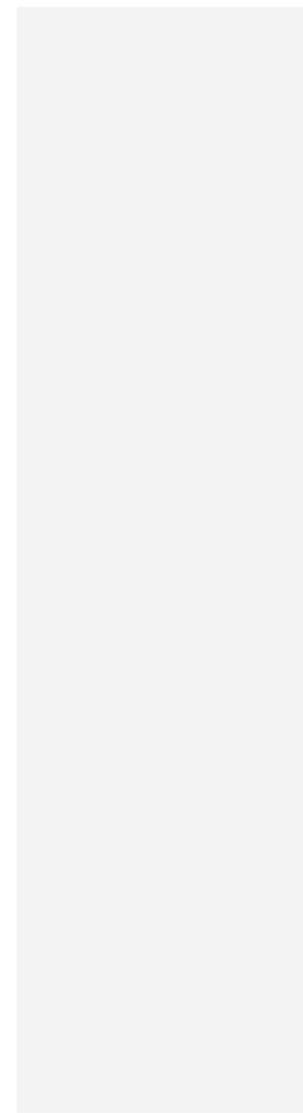
(WDT4)			Recycling, Recovery	
LM.4: Reduce amount of waste going to landfill through increased landfill diversion, and working with businesses to encourage recycling and use of recyclable materials. (WET1)	Council will pay for free waste audits for local businesses and work with local businesses to assist them to recycle and divert waste.	Waste Levy	<i>Objective: To work with local businesses and organisations to actively promote waste reduction at a local level</i> Hierarchy level: Reduction, Reuse, Recycling, Recovery	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
LM.5: Consider the use of recovered materials in Council building contracts. (WPC6)	Use of recovered materials can reduce lifecycle carbon emissions and reduce waste to landfill. Council will consider the use of recovered materials and use these where they comply with relevant safety standards, and are close to cost competitive with new materials.	Waste Levy	<i>Objective: To work with local businesses and organisations to actively promote waste reduction at a local level</i> Hierarchy level: Reduction, Reuse, Recycling, Recovery	<i>Action E: Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship</i>
LM.6: Council purchases sustainable non-toxic, recycled and/or recyclable	Virgin materials often have higher carbon emission footprints than recycled or recyclable materials. Non-toxic materials have a lower impact on the environment. Council will endeavour to use	Waste Levy	<i>Objective: To work with local businesses and organisations to actively promote waste reduction at a local level</i> Hierarchy level: Reduction, Reuse, Recycling, Recovery	<i>Action E: Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship</i>

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products when economically viable (WPC2)	such materials where economically viable.			
LM.7: Decrease waste to landfill as a percentage of regional GDP. (WPC5)	Council will endeavour to reduce waste to landfill relative to GDP, in order to lower the costs and environmental impacts of building new landfills, and as a means to reduce its carbon emissions.	Waste Levy	<i>Objective: Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making</i> Hierarchy level: All Levels	<i>Action H: Implement National Waste Data Framework and utilise the Framework to increase strategic information</i>
LM.8: Strengthen and support Bike Tech initiatives. (WPT7)	Bike Tech diverts old bikes from landfill and teaches youth how to repair bicycles.	Waste Levy	<i>Objective: To work with local businesses and organisations to actively promote waste reduction at a local level</i> Hierarchy level: Reduction, Reuse, Recycling, Recovery	<i>Action E: Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship</i>
LM.9: Maintain external contract to offer free waste audits and solutions for local businesses (WPE4)	Businesses produce a lot of waste that can be potentially diverted from landfill. Free waste audits encourage and incentivise businesses to reduce waste and divert more waste. Council will therefore continue to offer free waste audits for local businesses.	Waste Levy	<i>Objective: To work with local businesses and organisations to actively promote waste reduction at a local level</i> Hierarchy level: Reduction, Reuse, Recycling, Recovery	<i>Action E: Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship</i>
LM.10: Council works with local businesses to identify, reduce, and	Council will encourage and promote the usage of low or non-contaminating materials such as zinc roofing, and high fat food waste.	Waste Levy	<i>Objective: To work with local businesses and organisations to actively promote waste reduction at a local level</i> Hierarchy level: All Levels	<i>Action E: Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship</i>

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phase out contaminating materials. (WPCE2)				
LM.11 Resourcing waste management & minimisation initiatives	Council will continue to provide sufficient resource to achieve actions within the plan, which are agreed to by Council.	Waste Levy General and Targeted Rates User Charges	<i>Objective: To consider both short and long term cost impacts of all actions across the community including economic costs and benefits</i>	<i>Action F: Fund regional resources for the implementation of the Waste Management and Minimisation Plan, for example, human resources and research</i>
LM.12: Effluent Waste	Council operates one waste water treatment plant for the purpose of treating waste water. Council will work with Hutt Valley Water Services Ltd to look for beneficial re-use options.. This service is supported by Council's assessment of Water and Sanitary Services and a Trade Waste Bylaw which Council enforces. Council will investigate methods to avoid taking sewage effluent waste to landfill, and find alternative methods to dispose of such waste which don't pollute the environment and where the methods used are cost effective.	Waste Levy	<i>Objective: To investigate the use of available recovery and treatment technologies and service methodologies and apply these where appropriate</i> Hierarchy level: Recovery	<i>Action C: Collaborate on options to use biosolids beneficially</i>

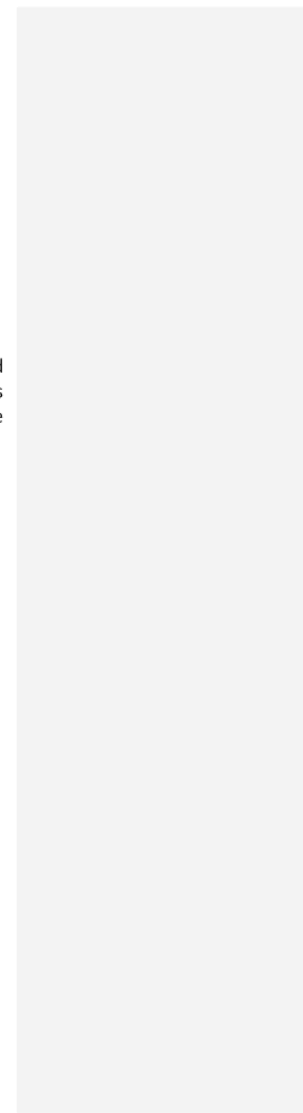
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LM.13: Internal Waste Minimisations	Council will continuously look for opportunities to reduce waste coming from its facilities. All successful opportunities will be used to promote to other local organisations and encourage them to use learning's to minimise their own waste.	Waste Levy	<i>Objective: To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</i> Hierarchy level: All Levels	<i>Action E: Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship</i>
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Rationale: Council will seek to lead the way on waste minimisation by providing an example in its own operations and working with businesses and local organisations to promote waste minimisation. Commercial waste makes up and estimated 35% of the waste produced in our district. Council has no direct control over waste produced by businesses and other organisations. We will look to work with local groups and businesses and promote initiatives that assist in enhancing economic development through reducing and recovering waste.

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10.2 Kapiti Coast District Council

10.2.1 Kapiti Coast Regulation

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
R.1: Licensing under the current Solid Waste Bylaw	Issue and review licenses for waste collectors and operators in the district, gather and manage data supplied by licensees, monitor performance/compliance.	On-going	Licensing fees, General Rate, Waste Levy	<i>Objectives 4, 12&13</i> Hierarchy level: Recycling, Recovery, Disposal	<i>Action G & H:</i> The Solid Waste Bylaw may be superseded by a Regional Bylaw, in which case the current licensing system may need to be adapted.
R.2: Review and adapt licensing system to comply with Regional Solid Waste Bylaw	Implement and oversee monitoring and enforcement of Regional Solid Waste Bylaw once it becomes active.	Pending development of Regional Solid Waste Bylaw	Licensing fees, General Rate, Waste Levy	<i>Objectives 4</i> Pending development of Regional Solid Waste Bylaw Hierarchy level: Recycling, Recovery, Disposal	<i>Action G:</i> Pending development of Regional Solid Waste Bylaw

Rationale: Kāpiti Coast District Council currently has a licensing system for waste collectors and operators in place, the purpose of which is to collect data on waste and recovered material volumes and movements, and have a mechanism to ensure private sector operators provide a specified level of service. Each of the Councils in the region currently has its own bylaw and these do not align in many instances. A single regional bylaw will lessen the burden of compliance on waste operators and potentially provide the Council's with much-improved waste data. A regional solid waste bylaw is planned but this will require resourcing and application at the local level. Action under this heading will give effect to the regional bylaw in our district.

10.2.2 Kapiti Coast Data

Reference & Title	Description	New or existing action	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
D.1: Collect and manage data in accordance with the National Waste	This includes working with licensed waste collectors and operators to improve the quality and comprehensiveness of data reported to Council, as well as	Existing	On-going	General Rate, Waste Levy, Licence fees	<i>Objective 4:</i> To align data collection and reporting systems where possible across the districts, region and nationally. Hierarchy level: All Levels	<i>Action H</i>

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Data Framework	conducting SWAP surveys and other measures to improve data availability and management.					
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Rationale: TAs in the region have agreed to collect and manage data in line with the National Waste Data Framework. Kāpiti Coast District Council has already been collecting data in accordance with the framework through reporting requirements for licensed collectors and operators, as well as regular SWAP surveys. Action under this heading will ensure we continue to align our data collection and management with the National Waste Data Framework.

10.2.3 Kapiti Coast Engagement Communications

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
CM.1: Provide educational support to educational institutions on waste minimisation	This includes delivery of the Zero Waste Education Programme, support and funding for programmes like EnviroSchools and Paper4Trees, provision of educational resources (for example litterless lunches brochure), and other educational support and resources.	On-going	Waste Levy, General Rates	<i>Objective 7:</i> To support learning of waste minimisation principles and practices at schools, ECEs, and other educational institutions. Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education Targets 1 & 2 Up to 5 tonnes by 2026
CM.2: Assist educational institutions with waste minimisation projects	Provide advice and assistance with waste minimisation infrastructure and projects such as conducting waste audits, setting up recycling systems, composting or worm farms, and further projects.	On-going	Waste Levy General rate	<i>Objective 7:</i> To support educational institutions with implementing hands-on waste reduction measures. Hierarchy level: All Levels	<i>Actions D & I</i> Targets 1 & 2 Up to 5 tonnes by 2026
CM.3: Support residents to minimise waste through	Support residents to undertake waste minimisation through the provision of information and education via the Council website, social	On-going	Waste Levy	<i>Objective 7:</i> To encourage residents to reduce, reuse, recycle and increase awareness of options and services available in the districts.	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education Targets 1 & 2

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education and information	media, newspapers, brochures and posters, talks, stalls at local events, workshops, and via other channels as appropriate.			Hierarchy level: All Levels	Up to 50 tonnes by 2026
CM.4: Support community projects and events	Support community lead projects and events that promote and undertake waste minimisation, such as the Greener Neighbourhoods programme, community workshops, waste minimisation at events, clean-up events and others, through promotion, partnerships and funding	On-going	Waste Levy, General Rates	<i>Objective 7:</i> To engage the community and provide information, education and resources to support community actions. Hierarchy level: All Levels.	<i>Actions B & D</i> Targets 1 & 2 Up to 50 tonnes by 2026
CM.5: Targeted educational campaigns and projects	This includes the support and implementation of targeted educational projects and campaigns with links to regional and national projects and campaigns, such as Love Food Hate Waste, Green Parenting Workshops, Seaweed, Plastic Free July and others, or targeting specific materials such as e-waste, chemicals, batteries, food waste etc.	On-going	Waste Levy General rates Targeted rates	<i>Objective 7 & 1:</i> To engage the community and provide information, education and resources to support community actions. Hierarchy level: All Levels.	<i>Actions B & D</i> Targets 1 & 2 The regional potential diversion for Waste Free Parenting is 315 tonnes Kāpiti's share of that is 32 tonnes Love Food Hate Waste regional target is 2,400 tonnes by 2018, Kāpiti's share of that is 240 tonnes Up to 50 tonnes from other targeted campaigns by 2026
CM.6: Optimise regional communications	Work collaboratively with the WMMP partner councils on waste related communications.	On-going	Waste Levy General rates	<i>Objective 7</i>	<i>Action D</i>

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CM.7: Work with local businesses to achieve waste minimisation	Work with local businesses and organisations to achieve waste minimisation.	From 2017 onwards	Waste Levy General rates Targeted rates	<i>Objectives 8 & 9:</i> Encourage, educate and support the business community to minimise waste.	<i>Actions B & D</i> Up to 20 tonnes by 2026
CM.8: Support marae and iwi groups to minimise waste	Support iwi and marae to promote and undertake waste minimisation by the provision of information, services and events. For example (but not limited to), support for the Para Kore programme	From 2017 onwards	Waste Levy General rates Targeted rates	<i>Objective 7:</i> To engage the community and provide information, education and resources to support community actions. Hierarchy level: All Levels.	<i>Actions B & D</i> Targets 1 & 2 Para Kore target for the region is 30 tonnes from 20 Marae. Kāpiti's target is 3 tonnes from two Marae

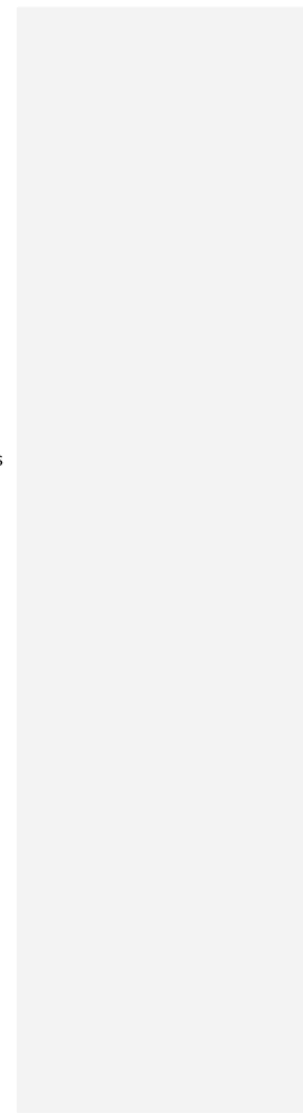
Rationale: In addition to work undertaken as part of the Regional Waste Education Strategy, Council will continue to support local education initiatives that have a positive impact.

10.2.4 Kapiti Coast Collections

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
C.1: Review kerbside collections and investigate improvement options	Review the effectiveness of the kerbside collection systems in terms of diversion targets, cost, customer satisfaction and street amenity, and investigate improvement options. This may include changes to the bylaw, licensing conditions and delivery methods, involve exploring the benefits of shared services, and potentially result in extending access to recycling collections beyond current collection	On-going	Waste levy Targeted Rate, General Rate	<i>Objective 2:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling	<i>Action A</i> Target 2 Up to 470 tonnes of recycling by 2026 Up to 1,920 tonnes of food waste by 2026

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areas.				
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Rationale: Council is committed to implementing an optimised kerbside system that maximises diversion and that is cost-effective for our community.

10.2.5 Kapiti Coast Infrastructure

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
IN.1: Enhance waste diversion from transfer stations	Work with operators of transfer stations to increase recovery and diversion of divertible and/or hazardous materials. Establish new, and review existing contracts/lease agreements to increase diversion. This may also include upgrades of physical infrastructure or funding support to enable recovery of specific materials.	On-going	Waste levy Targeted Rate, General Rates User charges	<i>Objective 2 & 10:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: All Levels	<i>Actions B & I</i> <i>Up to 150 tonnes by 2026</i>
IN.2: Greenwaste Recovery and recycling	Recover and recycle greenwaste recovered from transfer stations in the district. Recycling by composting or similar.	On-going	User charges, General rates Waste levy	<i>Objective 2:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.	<i>Actions B & I</i> <i>Up to 100 tonnes by 2026</i>
IN. 3: Explore establishment of additional diversion facilities	This may include supporting the establishment of facilities to divert and recover waste streams such as C&D waste or other waste streams for which facilities are currently not available in the district.	TBA	User charges, General rates Waste levy	<i>Objectives 2, 3 and potentially 6</i>	<i>Action B</i> <i>Targets 1 & 3</i> <i>Up to 1,000 tonnes by 2026</i>
IN.4: Provide clean Public Places	This includes the provision of public litterbins, regular street cleaning, and the removal of illegally dumped waste from public land.	On-going	General Rates Targeted rates	<i>Objective 12&13:</i> To provide safe, clean and hygienic public places. <i>Objective 2:</i> To increase diversion of waste that is currently disposed	<i>Action G</i>

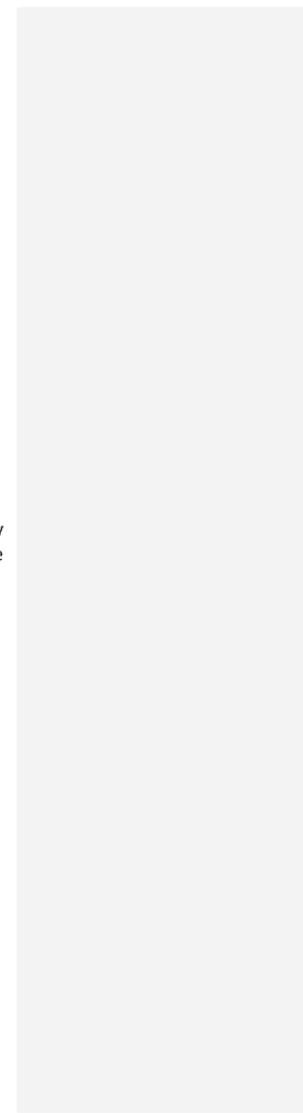
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	Investigate public place recycling infrastructure.		Waste Levy	of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling, Disposal	
IN.5: Effluent Waste	Council will explore options to reduce the volume of waste to landfill and to lessen the hazardous components of waste from its waste water treatment plants.	On-going	General Rates, Targeted rates Waste Levy	<i>Objective 2:</i> To increase diversion of waste that is currently disposed of to landfill for reuse. Hierarchy level: Reuse	<i>Action C</i> <i>Up to 1,467 tonnes by 2026</i>
IN.6: Aftercare of Closed Landfills	Council will monitor and manage closed landfill to ensure relevant environmental and safety standards are met.	On-going	General Rates	<i>Objectives 12&13:</i> To ensure landfill comply with environmental standards Hierarchy level: Disposal	

Rationale: Council is committed to investigating, and where feasible, developing facilities that can form part of a region-wide resource recovery network. This initiative looks to develop our local transfer stations in line with regional standards to increase the quantity of materials that can be economically recovered for beneficial use.

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10.2.6 Kapiti Coast Leadership & Management

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
LM.1: Contestable Waste Reduction Grants	Waste levy funds are made available annually as grants for waste minimisation projects, as detailed in the relevant Council Policy. Funding is through contestable processes such as for Community Projects and Business & Innovation	On-going	Waste Levy	<i>Objectives 3, 7 & 9:</i> To facilitate community action in waste minimisation projects, and enable economic development through innovative projects that reduce waste to landfill. Reduction, reuse, recycling, recovery	<i>D and I</i>
LM.2: Waste Minimisation Staff	Employ staff to implement the goals and actions of the RWMMP at the local and regional level.	On-going	Waste Levy, General Rate	<i>Objective:</i> Provide human resources to implement the actions of the RWMMP. Hierarchy level: All Levels	<i>Actions A, B, C, D E, F, G, H, & I</i>
LM.3: Internal Waste Minimisation	Continue to seek opportunities to reduce waste generated at Council facilities. Use learning's to encourage other organisations to minimise their waste.	On-going	Waste Levy, General Rate	<i>Objective:</i> To lead by example and practice what we preach. To be able to give advice based on hands-on experience. Hierarchy level: All Levels.	<i>Action I</i>
LM.4: Embed waste minimisation into Council activities	Explore opportunities to embed waste minimisation principles into relevant council activities. This could include procurement, regulatory processes, infrastructure projects and other activity areas.	On-going	Waste Levy, General Rate	<i>Objective:</i> To lead by example and practice what we preach. To be able to give advice based on hands-on experience. Hierarchy level: All Levels.	<i>Action I</i>
LM.5: Explore benefits of shared services	E.g. organics collection, expansion of kai to compost, etc.	On-going	Waste Levy, General	<i>Objectives 2&6</i>	<i>Action A, B</i>

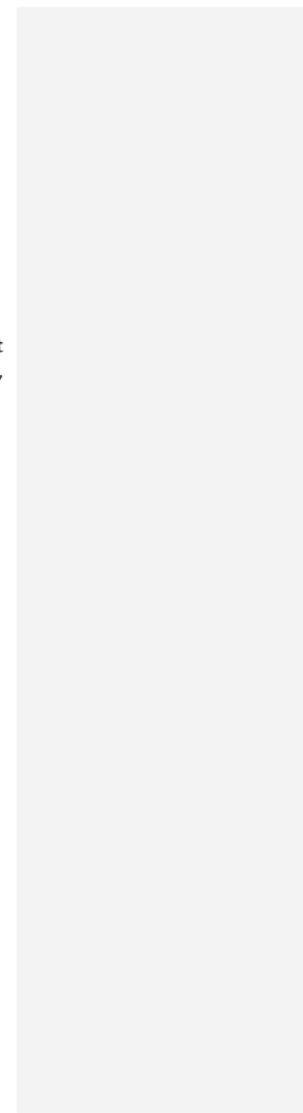
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LM.6: Explore & actively encourage additional waste diversion initiatives	This may include the support of community or business led resource recovery operations and initiatives that increase diversion and create additional benefits such as employment and economic development.	On-going	Rate Waste Levy, General Rate, User Charges	<i>Objectives 1, 2, 3, 6</i>	<i>Action B, I</i>
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Rationale: Council is committed to showing leadership by continually improving its own practices to achieve waste minimisation, ensuring sufficient human and financial resources are available to implement the regional and local actions as set out in this plan, and enabling other organisation, businesses and the broader community to become leaders in waste minimisation, e.g. through the provision of grants and other support mechanisms.

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10.3 Porirua City Council

10.3.1 Porirua City Regulation

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
R.1: Implement regionally consistent bylaw	Ensure systems and resources are in place for updating our Solid Waste Bylaw in line with the model Regional Solid Waste Bylaw and implementing, monitoring and enforcing its provisions once it becomes active	Pending development of Regional Solid Waste Bylaw	Fees and rates. Waste levy where applicable	<i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities Hierarchy level: All Levels	<i>Action G:</i> Implement and oversee monitoring and enforcement of the revised regional bylaw

Rationale: We will use bylaws to help ensure that households, businesses and operators make use of waste and recycling systems correctly, don't cause nuisance, and operate in a way that is consistent with the WMMP. This may include for example, but not be limited to, licensing of operators and facilities, specification of approved containers, and the setting of times and places for different types of collections.

10.3.2 Porirua City Data

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
D.1: Implement Waste Data Framework	Collect and manage data, ideally in accordance with the National Waste Data Framework. This could include working with licensed waste collectors and operators to improve the quality and	Ongoing	Fees and rates. Waste levy where applicable	<i>Objective:</i> Improve and align data collection and reporting systems where possible across the districts, region and nationally. Hierarchy level: All Levels	<i>Action H:</i> Implement National Waste Data Framework and utilise the Framework to increase strategic information

	comprehensiveness of data reported to Council, as well as conducting SWAP surveys and other measures to improve data availability and management.				
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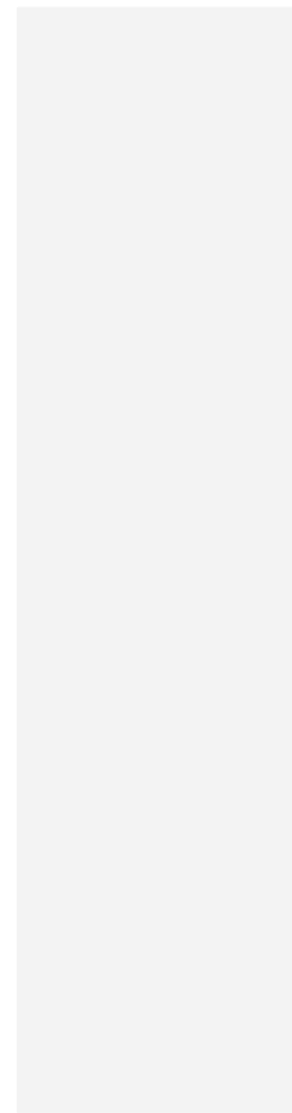
Rationale: Although a significant amount of waste data is currently collected regionally, it is not always consistent or comparable between Councils in the region.

10.3.3 Porirua City Engagement Communications

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
CM.1: Enviroschools programme	Continue to provide funding for the Enviroschools programme to engage with local schools	Ongoing	Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions Hierarchy level: All Levels	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
CM.2: Resource Recovery Education Programme	Explore the scope of future options for an education programme at Trash Palace or elsewhere and implement a programme which meets the needs of the community and Council	Ongoing	Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions <i>Objective:</i> to provide an educational and inspirational opportunity for schools and the wider community that will translate into positive waste	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>

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Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
				minimisation behaviour (PCC) Hierarchy level: All Levels	
CM.3: School organic waste programme	Continue to provide support to schools and early learning centres to address organic waste, for example, through the provision of programmes such as the Compost Classroom Programme	Ongoing	Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions <i>Objective:</i> to engage the schools on the issue of organic waste and provide information, education and resources to support action (PCC) Hierarchy level: All Levels	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
CM.4: Supporting educational institutions to promote and undertake waste minimisation	Provide advice and assistance with waste minimisation infrastructure and projects for schools, tertiary institutes and early learning centres such as conducting waste audits, setting up recycling systems, composting or worm farming and other projects	On-going	Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions Hierarchy level: All Levels	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
CM.5: Supporting residents to	Support residents to promote and undertake waste minimisation by the provision of information, services and	On-going	Fees and rates. Waste levy where	<i>Objective:</i> To engage the community and provide information, education and	<i>Action D: Deliver enhanced regional engagement, communications, and</i>

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Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
promote and undertake waste minimisation	events e.g. Waste Free Parenting workshops, events at the public libraries and other community venues, brochures, advertising and other channels as appropriate		applicable	resources to support actions Hierarchy level: All Levels	<i>education</i>
CM.6: Supporting community-based and other organisations and groups to promote and undertake waste minimisation	Support organisations and groups to promote and undertake waste minimisation, e.g., working with local marae and the Para Kore programme, supporting not-for-profit resource recovery operations and groups,	Ongoing	Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions Hierarchy level: All Levels	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
CM.7: Waste minimisation grants	Scope waste minimisation grants as a means of supporting waste minimisation activities.	On-going	Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions Hierarchy level: Re-use	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
CM.8: Promoting and supporting waste minimisation at events and	Promoting and supporting waste minimisation at events and festivals e.g. Festival of the Elements, Creekefest, Grand Traverse, school galas, community events and council-	On-going	Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>

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Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
festivals	led events			Hierarchy level: All levels	
CM.9: Love Food Hate Waste NZ Campaign	Continue to support the Love Food Hate Waste campaign	On-going	Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions <i>Objective:</i> to engage the community to promote positive behaviour change (PCC) Hierarchy level: Reduction	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
CM.10: Targeted educational campaigns and projects	This includes the support, delivery and implementation of targeted educational projects and campaigns, potentially with links to regional and national projects and campaigns, such as, Sustainable Parenting Workshops, Biketec programme, Seaweeek, Plastic Free July, Recycling Week and others. Target specific materials such as e-waste, chemicals, batteries, metals and other products	On-going	Fees and rates. Waste levy where applicable		<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
CM.11: Support the reduction and	Support the reduction and diversion of organic waste	On-going	Fees and rates. Waste levy where	<i>Objective:</i> To engage the community and provide information, education and	<i>Action D: Deliver enhanced regional engagement, communications, and</i>

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Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
diversion of organic waste			applicable	resources to support actions Hierarchy level: All Levels	<i>education</i>
CM.12: Work with local business to achieve waste minimisation	Provide waste minimisation information to businesses and support them to implement waste minimisation measures	On-going	Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions Hierarchy level: All Levels	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
CM.13	Support waste and recycling services and facilities with appropriate information to encourage participation and correct use.	Ongoing	Rates and waste levy	<i>Objective:</i> To engage the community and provide information, education and resources to support actions Hierarchy level: All Levels	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
CM.14: Optimise regional communications	Work collaboratively with the WMMP partner councils on waste related communications. For example (but not limited to) creation of a regional recycling directory	Ongoing	Rates and Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	Action RCM1 Deliver enhanced regional engagement, communications, and education

Rationale: In addition to work undertaken as part of the Regional Waste Education Strategy, Council will continue to support local education initiatives that have a positive impact.

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10.3.4 Porirua City Collections

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
C.1: Implement improvements to recycling collection	Investigate and implement improvements to the recycling service that increase the effectiveness and efficiency of the service, improve accessibility for users and reduce litter	Ongoing	Fees and rates. Waste levy where applicable	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities
C.2: Implement improvements to rubbish collection	Investigate and, where feasible, implement improvements to rubbish collection services that increase the effectiveness and efficiency of the service, improve accessibility for users and reduce litter	Ongoing	Fees and rates. Waste levy where applicable	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reduction, Residual disposal	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities
C.3: Support the reduction and diversion of organic waste	Support the sustainable reduction and diversion of organic waste by supporting collection initiatives		Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions Hierarchy level: All levels	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities
C.4: Work with local business to achieve waste	Assist businesses and support them to implement sustainable waste minimisation measures		Fees and rates. Waste levy where applicable	<i>Objective:</i> To engage the community and provide information, education and resources to support actions	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities

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Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
minimisation				Hierarchy level: All levels	
C.5: Public place recycling	Support sustainable diversion of waste by supporting collection, or other, initiatives in public places		Fees and rates. Waste levy where applicable	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for Hierarchy level: Reuse, recovery or recycling. Hierarchy level: Recycling	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities

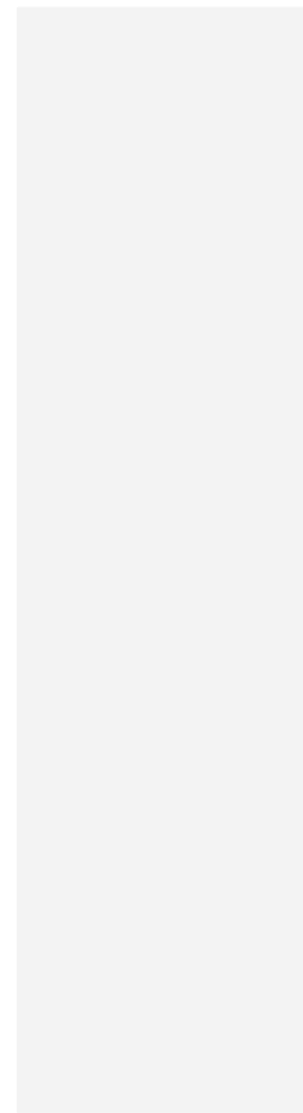
Rationale: PCC offers households a user pays bag service for rubbish and a rates funded crate based recycling service. The planned actions will look to improve the performance of the collection services we provide so as to divert more material from landfill while controlling costs to households.

10.3.5 Porirua City Infrastructure

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
IN.1: Develop Local Resource Recovery Centres	Investigate and, where feasible design and implement new, or upgraded, facilities to enable more effective diversion from landfill, for example: <ul style="list-style-type: none"> • Drop-off of reusable/recyclable items • Repair workshop for reusable items • Retail store for reusable / recycled / upcycled items • Drop-off and dismantling area for bulky recyclable 		Fees and rates. Waste levy where applicable	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Hierarchy level: Reuse, Recycling, Recovery	<i>Action B:</i> Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste

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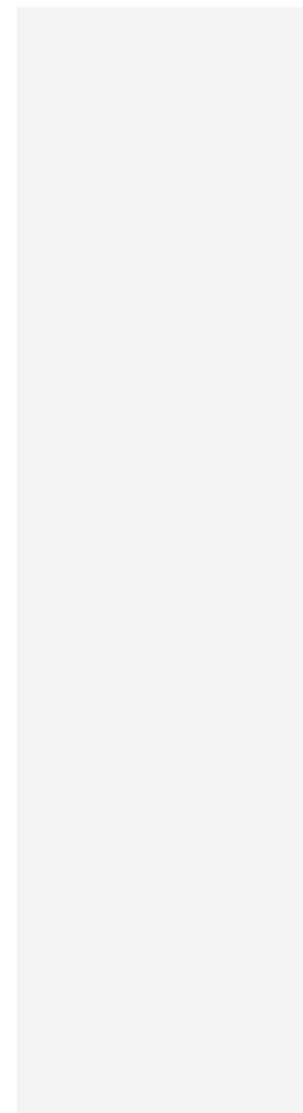


Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
	<p>materials</p> <ul style="list-style-type: none"> Drop-off area and sales yard for construction and demolition materials 				
IN.2: Support the reduction and diversion of organic waste	Support the sustainable reduction and diversion of organic waste at landfills and transfer stations, and the sustainable beneficial reuse of recovered organic materials	On-going	Fees and rates. Waste levy where applicable	<p><i>Objective:</i> To engage the community and provide information, education and resources to support actions</p> <p>Hierarchy level: All levels</p>	<i>Actions B and C:</i>
IN.3: Work with local business to achieve waste minimisation	Assist businesses and support them to implement sustainable waste minimisation measures		Fees and rates. Waste levy where applicable	<p><i>Objective:</i> To engage the community and provide information, education and resources to support actions</p> <p>Hierarchy level: All Levels</p>	<i>Actions B and E:</i>
IN.4: Landfill gas beneficial use	Investigate and implement landfill gas beneficial use where this is environmentally and financially sustainable		Fees and rates. Waste levy where applicable	Hierarchy level: Recovery	<i>Actions B and C:</i>
IN.5: Biosolids	Collaborate with Wellington Water and other stakeholders to investigate options that would divert biosolids from	2020	Fees and rates. Waste levy where	<p><i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</p>	Supports Regional Action RIN2

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Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
	Landfill.		applicable	2 Hierarchy level: Hierarchy level: Reuse, Recycling, resource recovery	

Rationale: PCC owns its own landfill and transfer station and operates Trash Palace for the recovery of reusable materials. The planned actions look to continue to develop and enhance our waste management assets to support positive environmental and community outcomes.



10.3.6 Porirua City Leadership & Management

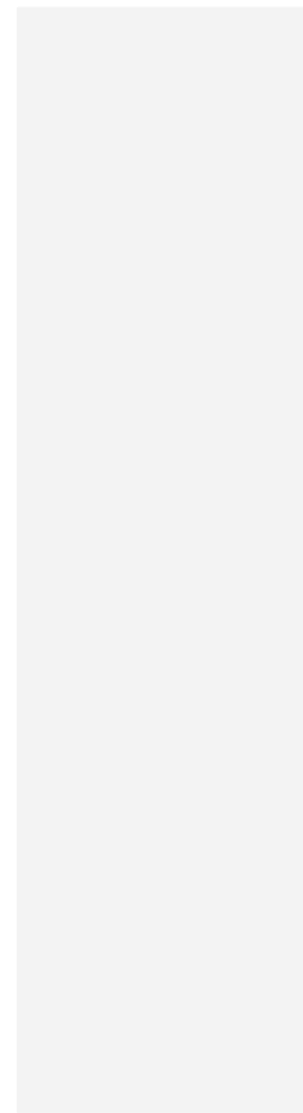
Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
LM.1: Internal waste minimisation	Continually look for opportunities to minimise waste from Council facilities, and implement appropriate actions where feasible. Use learnings from internal waste minimisation successes to encourage other local organisations to minimise their waste.	Ongoing	Fees and rates. Waste levy where applicable	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level <i>Objective:</i> To lead by example and practice what we preach. To be able to give advice based on hands-on experience Hierarchy level: All Levels	<i>Action E:</i> Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship
LM.2: Professional development and subscriptions	To ensure Council can provide leadership, it will have appropriate memberships (e.g. WasteMinz and Wellington Waste Forum) and undertake relevant professional development and networking opportunities (e.g. Wasteminz conference).	Ongoing	Fees and rates. Waste levy where applicable	<i>Objective:</i> To work with and support local and national waste organisations to actively promote waste reduction. <i>Objective:</i> To develop staff so they can effectively work to manage and minimise waste. Hierarchy level: All Levels	<i>Action E:</i> Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship
LM.3: Collaborate	Work with local businesses and other groups to	Ongoing	Fees and rates.	<i>Objective:</i> To work with local businesses and organisations to	<i>Action E:</i> Collaborate on and lobby for waste minimisation

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Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
with private sector and community.	investigate opportunities to enhance economic development through waste minimisation		Waste levy where applicable	actively promote waste reduction at a local level Hierarchy level: All Levels	policies and strategies, for example product stewardship
LM.4: Waste Minimisation Staff	Employ staff to implement the goals and actions of the WMMP at the local and regional level	On-going	Fees and rates. Waste levy where applicable	<i>Objective:</i> Provide human resources to implement the actions of the WMMP. Hierarchy level: All Levels	<i>Action F:</i> Fund regional resources
LM5: Shared Services	As appropriate, investigate shared service options for potential regional, sub regional and super regional scaled waste management and minimisation initiatives.	Ongoing	Fees and rates. Waste levy where applicable	<i>Objective:</i> To consider both short and long term impacts of all options across the community including economic costs and benefits <i>Objective:</i> Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making	Supports initiatives that make direct contribution to targets
LM6: Advocacy and lobbying	Continue to advocate and lobby for progressive waste management and minimisation policy (government and other relevant stakeholders) and action (all stakeholders).	Ongoing	Fees and rates. Waste levy where applicable		Action RLM2: Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship

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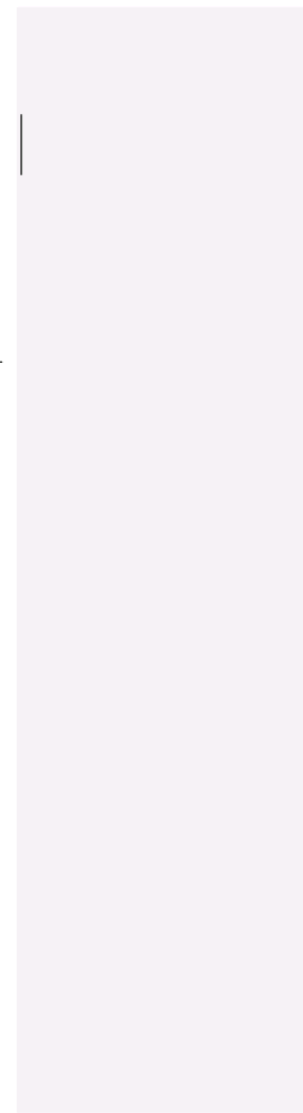
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Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
IN.2: Landfill pricing	Investigate and implement landfill pricing strategies that promote waste minimisation and environmentally, socially and financially sustainable landfill operations		Fees and rates. Waste levy where applicable	<i>Objective:</i> Sustainable landfill operations	<i>Action E:</i> Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship

Rationale: Council will provide leadership in this area by carrying out internal waste minimisation and ensuring staff are well-informed and well-connected. Council will use its position in the community and its resources to promote efficient and effective waste management and minimisation.

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10.4 Upper Hutt City Council

Upper Hutt City Council will work toward the regional targets by supporting and implementing the local actions set out below. Upper Hutt City Council will seek to improve its contribution to the regional targets year upon year. Some actions rely on investigations to take place to determine whether or not they are feasible and cost-effective for the Upper Hutt community.

10.4.1 Upper Hutt City Regulation

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
R.1: Investigate and if appropriate implement a regionally consistent bylaw	Ensure if appropriate , ensure systems and resources are in place for updating or replacing our Solid Waste Bylaw in a manner that is consistent with the model Regional Solid Waste Bylaw and implementing, monitoring and enforcing its provisions once it becomes active .	Pending development of Regional Solid Waste Bylaw	Waste Levy Licensing fees and General rate (if required)	<i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities Hierarchy level: All levels	<i>Action G:</i> Implement and oversee monitoring and enforcement of the revised regional bylaw.

Rationale: We will use bylaws to help ensure that households, businesses and operators make use of waste and recycling systems correctly, don't cause nuisance, and operate in a way that is consistent with the WMMP. This may include for example, but not be limited to, licensing of operators and facilities, specification of approved containers, and the setting of times and places for different types of collections.

10.4.2 Upper Hutt City Data

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
D.1: Implement Waste Data Framework	Collect and manage data in accordance with the National Waste Data Framework. This includes working with waste collectors and operators to improve the quality and comprehensiveness of data reported to Council, as well as	2017	Waste Levy	<i>Objective:</i> To align data collection and reporting systems where possible across the districts, region and nationally. Hierarchy level: All levels	<i>Action H:</i> Implement National Waste Data Framework and utilise the Framework to increase strategic information.

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	conducting SWAP surveys and other measures to improve data availability and management.				
D.2: Waste audit specific to industry	Assist local businesses in reducing their waste to landfill through subsidising waste audits.	Ongoing	Waste Levy	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level. Hierarchy level: All levels	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.

Rationale: TAs in the region have agreed to collect and manage data in line with the National Waste Data Framework. Action under this heading will give effect to the National Waste Data Framework in our district.

10.4.3 Upper Hutt City Communications Engagement

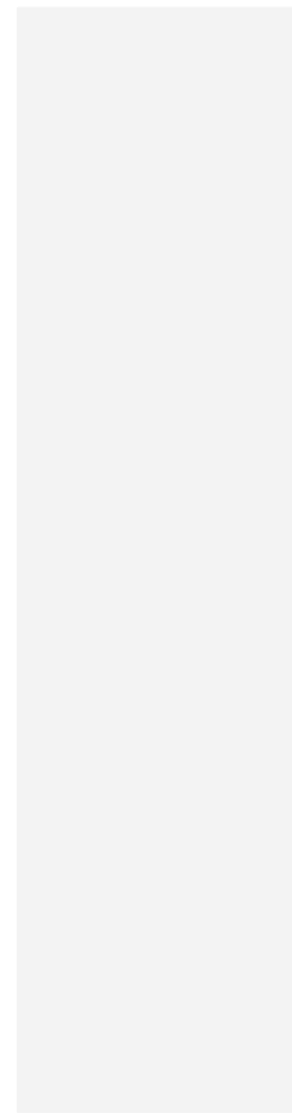
Reference & Title	Description	Timeframe	Funding	Strategic Goals & Hierarchy Position	Method and Targets
CM.1: Enviro-schools programme is supported	<u>Encourage local schools to take part in the Enviro-schools programme and continue to provide funding to the schools that agree to take part. Continue to provide funding for the Enviro-schools programme to local schools that agree to participate.</u>	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.2: Kerb side recycling and education marketing campaign	Develop and implement a marketing and education campaign to increase the number of households using kerbside recycling	Ongoing	Waste Levy	<i>Objective:</i> To reduce the total quantity of waste to landfill, with an emphasis on wastes that create the most harm Hierarchy level: Reduction	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education

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CM.3: Zero Waste and Community Gardens Fund	Provide support to schools, early learning centres and community gardens to reduce waste, for example, through the provision of compost bins.	Ongoing	Waste Levy	<p><i>Objective:</i> To engage the community and provide information, education and resources to support actions</p> <p><i>Objective: to engage the schools on the issue of waste and provide information, education and resources to support action</i></p> <p>Hierarchy level: All levels</p>	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.4: Supporting community-based and other organisations and groups to promote and undertake waste minimisation	Support organisations and groups to promote and undertake waste minimisation, for example Love Food Hate Waste, Green Parenting workshops, Marae, Charity groups, Schools and Sports organisations.	Ongoing	Waste Levy	<p><i>Objective:</i> To engage the community and provide information, education and resources to support actions</p> <p>Hierarchy level: All levels</p>	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education
CM.5: Promoting and supporting waste minimisation at events and festivals	Promoting and supporting waste minimisation at events and festivals e.g. March Madness, school galas, community events and council-led events	On-going	Waste Levy	<p><i>Objective:</i> To engage the community and provide information, education and resources to support actions</p> <p>Hierarchy level: All levels</p>	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education

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CM.6: Support waste and recycling services and facilities	Support waste and recycling services and facilities through the provision of appropriate information to encourage participation and correct use.	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support actions Hierarchy level: All levels	<i>Action D: Deliver enhanced regional engagement, communications, and education</i>
CM.7: Optimise regional communications	Work collaboratively with the WMMP partner councils on waste related communications. For example (but not limited to), creation of a regional recycling directory	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All levels	<i>Action D Deliver enhanced regional engagement, communications, and education</i>
CM.8: Support marae and iwi groups to minimise waste	Support iwi and marae to promote and undertake waste minimisation by the provision of information, services and events. For example (but not limited to), support the Para Kore programme.	From 2017 onwards	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions. Hierarchy level: All levels	<i>Action D: Deliver enhanced regional engagement, communications, and education.</i>

Rationale: In addition to work undertaken as part of the Regional Waste Education Strategy, Council will continue to support local education initiatives that have a positive impact.

10.4.4 Upper Hutt City Collections

Reference & Title	Description	Timeframe	Funding	Strategic Goals & Hierarchy Position	Method and Targets
C.1: Support private sector operators	Support private sector waste minimisation operators (e.g. nappy recycling and green waste collection)	Ongoing	Waste Levy	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level	<i>Action E:</i> Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship

				Hierarchy level: All Levels	
C.2: Review kerbside collections and investigate improvement options Undertake a waste assessment	<u>Complete a city-wide waste assessment to assess rates of recycling and diversion of waste from landfill. Use this information to investigate options for improvement. Review the effectiveness of the kerbside collection systems in terms of diversion and cost effectiveness for the community and investigate improvement options. This may include changes to the bylaw and licensing conditions, as well extending access to recycling collections beyond current collection areas.</u>	2021	Waste levy, General Rate	<i>Objective 2:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities

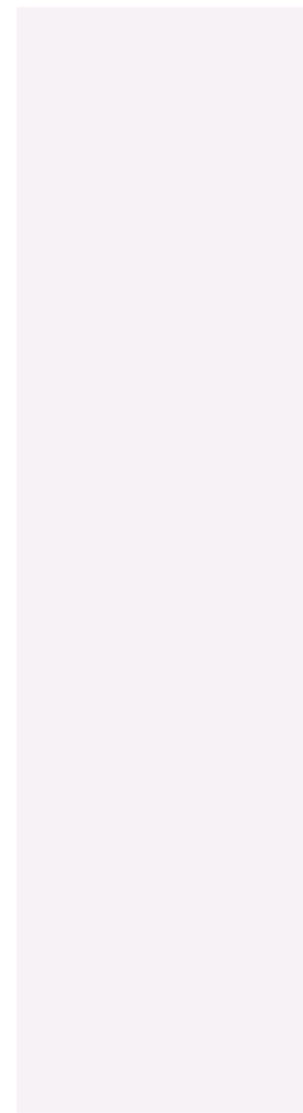
Rationale: Council is committed to implementing an optimised kerbside system that maximises diversion and that is cost-effective for our community.

10.4.5 Upper Hutt City Infrastructure

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
IN.1: Investigate developing a drop-off recovery centre at Silverstream Landfill, with Hutt City	<u>In conjunction with Hutt City Council,</u> investigate whether an opportunity exists to develop a resource recovery centre at the Silverstream Landfill that contributes to the region-wide resource recovery network.	Considered as part of the region-wide resource recovery network investigation	General Rate <u>Waste Levy</u>	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reuse, Recycling	<i>Action B:</i> Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste

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IN.2: Ongoing maintenance of the city recycling drop-off station point(s) (if Park St trial station is successful)	Support and maintain the recycling drop-off point that was funded as part of the 2016-17 Annual Plan. <u>An assessment to determine its success will be made at the end of the trial period. Any ongoing commitment by Council will be made at that stage, and any others depending on its success.</u>	Ongoing	Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: All levels	Action B: Investigate and develop a region-wide resource recovery network.
IN.3: Provide yearly hazardous waste disposal drop-off day	Council to provide a hazardous waste collection day once a year	Annually	Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: All Levels	Action B: Investigate and develop a region-wide resource recovery network.

Rationale: Council is committed to investigating, and where feasible, developing facilities that can form part of a region-wide resource recovery network. This initiative looks to develop our local transfer stations in line with regional standards to increase the quantity of materials that can be economically recovered for beneficial use.

10.4.6 Upper Hutt City Leadership & Management

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
LM.1: Collaborate with private sector and community.	Work with local groups <u>and businesses</u> to investigate opportunities to enhance economic development through waste minimisation	Ongoing	Waste Levy	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level Hierarchy level: All Levels	<i>Action E:</i> Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship.
LM.2:	Council will	Ongoing	Waste	<i>Objective</i> To engage the	<i>Action E:</i> Collaborate on and

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Internal waste minimisation	continuously look for opportunities to reduce waste coming from its facilities. All successful opportunities will be used to promote to other local organisations and encourage them to use learnings to minimise their own waste.		Levy	community and provide information, education and resources to support community actions To work with local businesses and organisations to actively promote waste reduction at a local level.	lobby for waste minimisation policies and strategies, for example product stewardship. <i>Action D:</i> Deliver enhanced regional engagement, communications and education.
LM.3: Professional development and subscriptions	To ensure Council can provide leadership, they will have appropriate memberships (e.g., WasteMinz and Wellington Waste Forum) and undertake relevant professional development and networking opportunities (e.g. Wasteminz conference).	Ongoing	Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions.	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.
LM.4: Shared Services	As appropriate, investigate shared service options for potential sub regional and super regional scaled	Ongoing	Rates, Waste Levy	<i>Objective:</i> To consider both short and long term cost impacts of all actions across the community including economic costs and benefits	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities. <i>Action B:</i> Investigate and develop

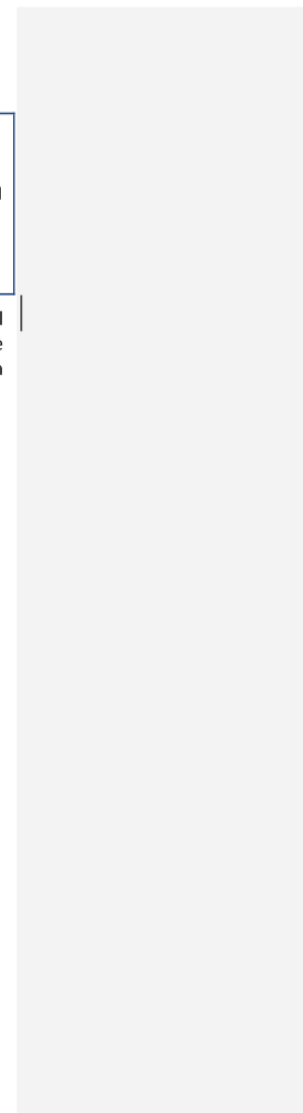
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	waste management and minimisation initiatives.			<i>Objective:</i> Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making	a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste.
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Rationale: Council will ~~lead the way in our waste minimisation practices and~~ work to facilitate and encourage local businesses, community and central government to establish measures that meet the visions goals and objectives of the WMMP. Commercial waste makes up an estimated 35% of the waste produced in our district. Council has no direct control over waste produced by businesses and other organisations. We will look to work with local groups and businesses and promote initiatives that assist in enhancing economic development through reducing and recovering waste.

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10.5 Wairarapa Joint Plan

Masterton, Carterton and South Wairarapa District Councils have an existing sub-regional joint Waste Management Plan (Waste Management Wairarapa). The Councils are not proposing any new actions other than those outlined in the Regional Action Plan.

10.5.1 Wairarapa Regulation

Reference and Title	Description	Timeframe	Funding Options	Strategic Goals and Hierarchy Position	Method and Targets
R.1: Implement regionally consistent bylaw	Ensure systems and resources are in place for updating our Solid Waste Bylaw in line with the model. Regional Solid Waste Bylaw and implementing, monitoring and enforcing its provisions once it becomes active.	Pending development of Regional Solid Waste Bylaw	Fees and rates. Waste Levy where applicable.	<i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities. Hierarchy level: All Levels	<i>Action G:</i> Implement and oversee monitoring and enforcement of the revised regional bylaw.
R.2: New buildings recycling facilities	Require new multi-unit residential and commercial buildings to include space for appropriate recycling facilities.	Completed – included in district plan, ongoing monitoring	Rates and Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost effective to communities.
R.3: Future recycling facility provisions	Address recycling facilities within the building and subdivision consent process	Completed – included in district plan, ongoing monitoring	Rates and Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost effective to communities.

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				Hierarchy level: Recycling	
R.4: Safe collection and storage of hazardous wastes	Continue to include guidelines for safe collection, storage and disposal (where appropriate) of hazardous and difficult wastes, including hazardous household wastes in landfills and transfer station management plans.	On-going – Part of waste minimisation role	User pays	<p><i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities.</p> <p>Hierarchy level: Treatment and disposal</p>	<i>Action B:</i> Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids and other organic waste.

Rationale: We will use bylaws and the district plan to help ensure that households, businesses and operators make use of water and recycling systems correctly, don't cause nuisance and operate in a way that is consistent with the WMMP. This may include for example, but not be limited to, licensing of operators and facilities, specification of approved containers and the setting of times and places for different types of collections.

10.5.2 Wairarapa Data

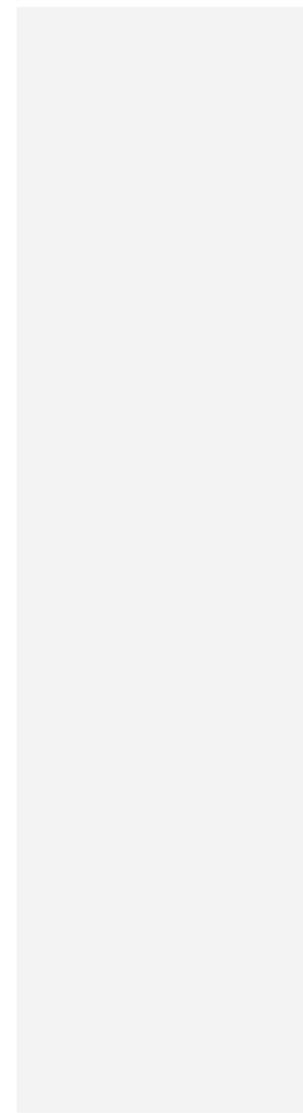
Reference and Title	Description	Timeframe	Funding Options	Strategic Goals and Hierarchy Position	Method and Targets
D.1: Implement Waste Data Framework	Collect and manage data, ideally in accordance with the National Waste Data Framework. This includes working with licensed waste collectors and operators to improve the quality and comprehensiveness of data reported to Council as well as conducting	Ongoing	Fees and rates. Waste Levy where applicable	<i>Objective:</i> Improve and align data collection and reporting systems where possible across the districts, region and nationally.	<i>Action H:</i> Implement National Waste Data Framework and utilise the Framework to increase strategic information.

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	SWAP surveys and other measures to improve data availability and management.				Hierarchy level: All levels
D.2: Reduce construction & demolition waste	Reduce the quantity of construction, demolition waste and cleanfill to landfill	Co-ordinate with regional actions	Rates and Waste Levy	<i>Objective:</i> To establish a Wairarapa measurement programme to quantify the amount of construction, demolition waste and cleanfill to landfill in order to reduce this amount.	<i>Action H:</i> Implement National Waste Data Framework and utilise the Framework to increase strategic information.
				Hierarchy level: Reduction	
D.3: Material diverted to recycling	Record the amount of material diverted to recycling each year.	Completed – On-going annual report	Rates and Waste Levy	<i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities.	<i>Action H:</i> Implement National Waste Data Framework and utilise the Framework to increase strategic information.
				Hierarchy level: Recycling	
D.4: Collection of hazardous chemicals	Establish a monitoring and recording programme to document the amount of hazardous chemicals collected.	Completed – On-going annual report	Rates and Waste Levy	<i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities.	<i>Action H:</i> Implement National Waste Data Framework and utilise the Framework to increase strategic information.
				Hierarchy level: Treatment and disposal	

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D.5: Recovery and recycling rates	Investigate current recovery and recycling rates for a list of priority wastes, and increase these rates.	Ongoing - Part of waste minimisation role	Rates and Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recovery and recycling	<i>Action I:</i> Identify specific targets in the Waste Management and Minimisation Plan for each council and the region, specifying achievable reduction, reuse, recycling and diversion of waste.
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Rationale: Although a significant amount of waste data is currently collected regionally, it is not always consistent or comparable between councils in the region. TAs in the region have agreed to collect and manage data in line with the National Waste Data Framework. Action under this heading will give effect to the National Waste Data Framework in our district.

10.5.3 Wairarapa Communications Engagement

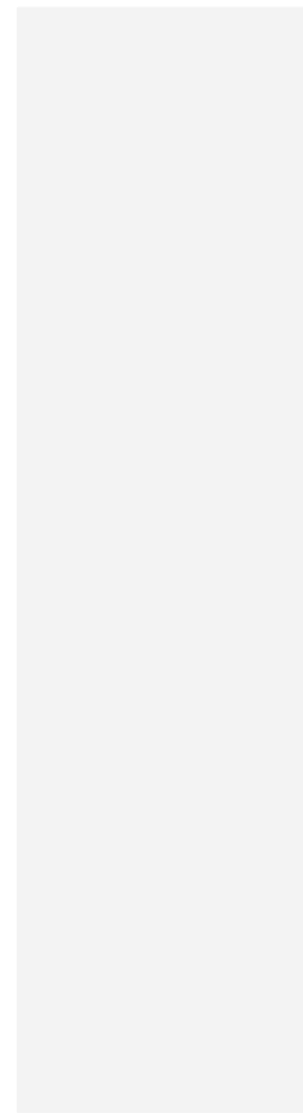
Reference and Title	Description	Timeframe	Funding Options	Strategic Goals and Hierarchy Position	Method and Targets
CM.1: Community minimisation practices	Encourage the community, through education and promotion, to adopt sustainable waste minimisation practices	Ongoing – Continue as part of waste minimisation role and co-ordinate with regional actions	Rates and Waste Levy	<i>Objective:</i> To reduce the total quantity of waste to landfill, with an emphasis on wastes that create the most harm. Hierarchy level: Reduction, reuse, recycling and treatment	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.
CM.2: Publicise waste management in Wairarapa	Regularly publicise recent achievements and future initiatives in waste management in the Wairarapa.	Ongoing – Continue as part of waste minimisation role and co-ordinate with regional	Rates and Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions.	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.

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		actions		Hierarchy level: Reduction	
CM.3: Education and Promotion	Liaise with the Ministry for the Environment, the Department of Conservation and Greater Wellington Regional Council to ensure a consistent approach to education and promotion.	Ongoing – Continue as part of waste minimisation role and co-ordinate with regional actions	Rates and Waste Levy	<i>Objective:</i> To investigate and where appropriate develop partnership, joint working and co-operation across the private and community sectors as well as territorial and regional councils including shared services. Hierarchy level: Reduction	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.
CM.4:	Encourage the market for reusable goods, recycled goods and composting products.	Ongoing – Continue as part of waste minimisation role and co-ordinate with regional actions	Rates and Waste Levy	<i>Objective:</i> To use Council influence to advocate for increased or mandatory producer responsibility Hierarchy level: Reduction and re-use	<i>Action E:</i> Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship.
CM.5: Use of hazardous materials	Promote sharing of information to encourage reduced use of hazardous materials.	Ongoing – Continue as part of waste minimisation role and co-ordinate with regional actions	Rates and Waste Levy	<i>Objective:</i> To reduce the total quantity of waste to landfill, with an emphasis on wastes that create the most harm. Hierarchy level: Reduction	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.

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CM.6: Industrial and commercial waste reduction	Promote industrial and commercial waste reduction mechanisms by: <ul style="list-style-type: none"> - Promoting waste audits of businesses - Promoting Cleaner Production 	Ongoing – Continue as part of waste minimisation role and co-ordinate with regional actions	Rates and Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reduction	<i>Action B:</i> Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste.
CM.7: Education on minimisation and recycling	Facilitate education and the dissemination of information to individual households on best practice minimisation and recycling processes.	Ongoing – Continue as part of waste minimisation role and co-ordinate with regional actions	Rates and Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions. Hierarchy level: Reduction	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.
CM.8: Public waste reduction information	Facilitate the provision of information to the public on how they can reduce the amount of waste being disposed of include encouraging the processing and use of diverted resources locally.	Ongoing – Continue as part of waste minimisation role and co-ordinate with regional actions	Rates and Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: Reduction	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.
CM.9: Reduced use of hazardous	Encourage reduced use of hazardous materials Promote knowledge and	Ongoing – Continue as part of waste minimisation	Rates and Waste Levy	<i>Objective:</i> To reduce the total quantity of waste to landfill, with an emphasis on wastes that	<i>Action B:</i> Investigate and develop a region-wide resource recovery network – including facilities for construction

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materials	awareness of alternatives to hazardous materials in the home and at work.	role and co-ordinate with regional actions		create the most harm. Hierarchy level: Reduction	and demolition waste, food and/or biosolids, and other organic waste.
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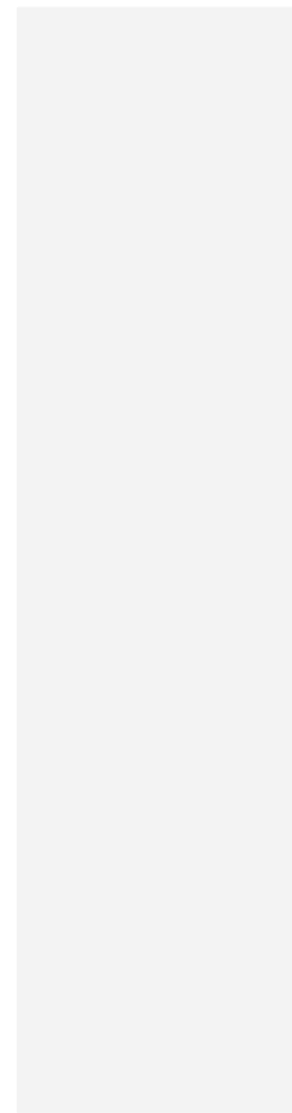
Rationale: In addition to work undertaken as part of the Regional Waste Education Strategy, Council will continue to support local education initiatives that have a positive impact.

10.5.4 Wairarapa Collections

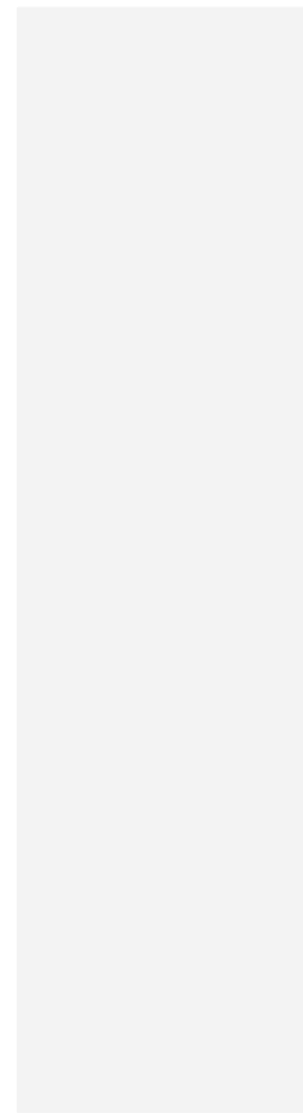
Reference and Title	Description	Timeframe	Funding Options	Strategic Goals and Hierarchy Position	Method and Targets
C.1: Effective collection of recycled material and residual waste	Provide for effective collection and delivery mechanisms of recycled material and residual waste <ul style="list-style-type: none"> Facilitate the collection of urban household residual waste at least once per fortnight. Provide a timetabled collection of kerbside recyclable materials to all urban households in the region. Review of waste management 	Completed – Shared service contract in place. To be reviewed in year one.	User pays and targeted rates	<i>Objective:</i> To work with service providers to identify efficiencies while maintaining or improving service levels.	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities.

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	<p>contracts, including assessing the benefits of collectively tendering out the services.</p> <ul style="list-style-type: none"> Commit individual councils to adopt in-house waste minimisation programmes. 			<p>Hierarchy level: Reduction, reuse, recycling and disposal</p>	
C.2: Waste management practices in rural and holiday areas	<p>Encourage good waste management practices in rural areas and holiday communities</p> <ul style="list-style-type: none"> Provide extra collection services in holiday areas to meet demand. Facilitate the provision of information on management of hazardous chemicals in rural areas. Facilitate the collection, transportation and disposal where appropriate of rural hazardous wastes. Undertake regular reviews of the level 	<p>Completed - On-going review of level of service with annual plans.</p>	<p>User pays and targeted rates/waste levy</p>	<p><i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</p>	<p><i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities.</p>

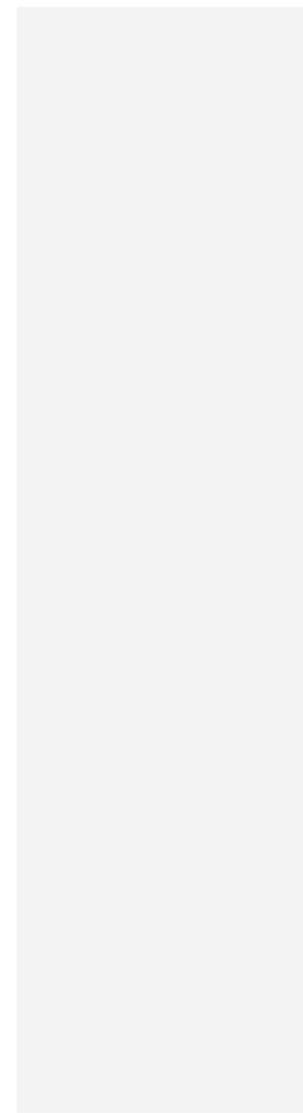


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	of service provided for waste management in rural areas and rural residential settlements.			Hierarchy level: Recycling and disposal	
C.3: Support the reduction and diversion of organic waste	Support the sustainable reduction and diversion of organic waste by supporting collection initiatives.		Fees and rates. Waste Levy where applicable.	<i>Objective:</i> To engage the community and provide information, education and resources to support actions. Hierarchy level: All Levels	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities. Contribution to targets, Wairarapa = 1765 tonnes.
C.4: Collection and disposal charges	Encourage waste minimisation through collection and disposal charges <ul style="list-style-type: none"> Encourage the councils to put in place systems that will achieve full cost recovery of waste management operations. Encourage waste minimisation practices through collection and disposal charges which reflect the full cost of treatment and disposal. 	On-going review of level of service with annual plans.	User pays and rates	<i>Objective:</i> To consider both short and long term cost impacts of all actions across the community including economic costs and benefits.	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities.

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	<ul style="list-style-type: none"> Ensure charges for disposal of hazardous or difficult wastes reflect the nature of the waste. Have differential charges for green waste. Encourage a consistent charging policy for waste Disposal across the Wairarapa. 			Hierarchy level: Reduction, recycling and recovery	
C.5: Kerbside recycling	Provide for effective kerbside recycling	Completed – Shared service contract in place. To be reviewed in year one.	Targeted rates	<p><i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</p> <p>Hierarchy level: Recycling</p>	<p><i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost-effective to communities.</p>
C.6: Collection of hazardous chemicals	Facilitate periodic collection of unwanted hazardous chemicals in the Wairarapa. Coordinate collection with Agricovery.	Continue as part of waste minimisation role	Rates/Waste Levy	<p><i>Objective:</i> To reduce the total quantity of waste to landfill, with an emphasis on wastes that create the most harm.</p> <p>Hierarchy level: Treatment and disposal</p>	<p><i>Action B:</i> Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids and other organic waste.</p>

Rationale: The Wairarapa Councils offer households a user pays bag service for rubbish and a crate based recycling service. The planned actions will look to improve the performance of the collection services we provide so as to divert more material from landfill while controlling costs to households.

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10.5.5 Wairarapa Infrastructure

Reference and Title	Description	Timeframe	Funding Options	Strategic Goals and Hierarchy Position	Method and Targets
IN.1: Green waste and recycling	Provide for green waste separation and recycling facilities at all transfer stations.	Completed – Shared service contract in place	User pays and Rates/Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reuse, recycling and recovery	<i>Action I:</i> Identify specific targets in the Waste Management and Minimisation Plan for each council and the region, specifying achievable reduction, reuse, recycling, and diversion of waste.
IN.2: Promote private and community facilities	Support and promote private and community resource recovery and reuse facilities throughout the Wairarapa.	Ongoing - Continue as part of waste minimisation role	User pays and Rates/Waste Levy	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level. Hierarchy level: Reuse, recycling and recovery	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.
IN.3: Regional resource recovery	Investigate regional resource recovery facility options and provide additional facilities if feasible.	Investigate as part of waste minimisation role	User pays and Rates/Waste Levy	<i>Objective:</i> To investigate the use of available recovery and treatment technologies and service methodologies and apply these where appropriate. Hierarchy level: Reuse, recycling and recovery	<i>Action B:</i> Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or bio solids, and other organic waste.
IN.4: Accessible recycling	Ensure that recycling facilities are available within a 20 minute	Completed – Shared service	Rates/Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse,	<i>Action I:</i> Identify specific targets in the Waste Management and Minimisation Plan for each council and the region,

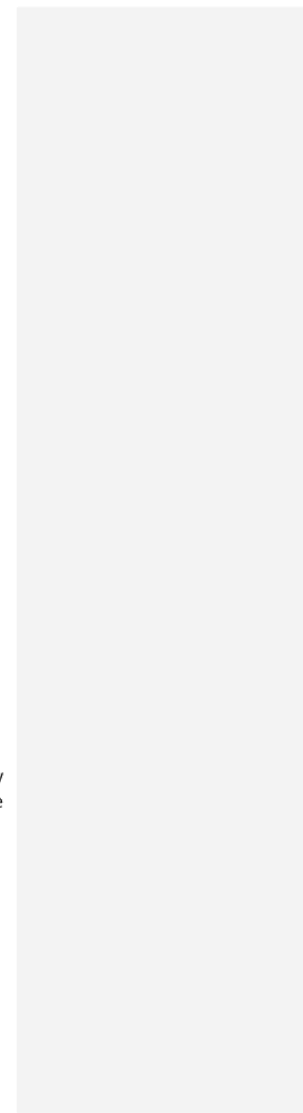
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IN.6: Signage at landfills and transfer stations	Provide clear and consistent signs at landfills and transfer stations to show compost, re-use and recycling facilities.	Completed – Shared service contract in place. To be reviewed in year one.	User pays and targeted rates	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reduction, reuse, recycling and disposal	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.
IN.7: Future residual disposal needs of the Wairarapa	Ensure the residual disposal needs of the Wairarapa community are provided for now and in the future.	Continue as part of long term planning process	User pays	<i>Objective:</i> To consider both short and long term cost impacts of all actions across the community including economic costs and benefits. Hierarchy level: Disposal	<i>Action B:</i> Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids and other organic waste.
IN.8: Council transfer station and landfill management plans	Produce, comply with and regularly revise management plans for council transfer stations and landfills.	Continue as part of regulatory compliance requirements	User pays	<i>Objective:</i> Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making. Hierarchy level: Disposal	<i>Action G:</i> Implement and oversee monitoring and enforcement of the revised regional bylaw.

Rationale: Council is committed to investigating, and where feasible, developing facilities that can form part of a region-wide resource recovery network. This initiative looks to develop our local transfer stations in line with regional standards to increase the quantity of materials that can be economically recovered for beneficial use.



10.5.6 Wairarapa Leadership and Management

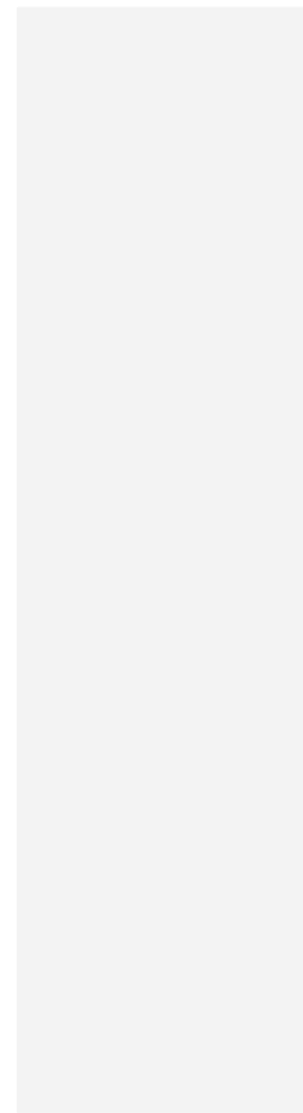
Reference and Title	Description	Timeframe	Funding Options	Strategic Goals and Hierarchy Position	Method and Targets
LM.1: Collective approach to waste management	<p>Take a collective approach to waste management, where appropriate, including the following:</p> <ul style="list-style-type: none"> • Reviewing end markets for recyclable materials, compost and re-useable goods. • Hazardous waste collection, storage and disposal. • Residual disposal options. • Bylaws (solid waste). 	On-going - review of level of service with annual plans	Rates/Waste Levy	<p><i>Objective:</i> To investigate the use of available recovery and treatment technologies and service methodologies and apply these where appropriate.</p> <p>Hierarchy level: All Levels</p>	<i>Action I:</i> Identify specific targets in the Waste Management and Minimisation Plan for each council and the region, specifying achievable reduction, reuse, recycling, and diversion of waste
LM.2: Costs of collective approach	Take into account costs when assessing the benefit of a collective approach.	On-going - review of level of service with annual plans	Rates/Waste Levy	<p><i>Objective:</i> To consider both short and long term cost impacts of all actions across the community including economic costs and benefits.</p> <p>Hierarchy level: All Levels</p>	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost effective to communities.
LM.3: Waste minimisation	Employ dedicated Waste Minimisation staff	Provide resource in	Rates/Waste Levy	<p><i>Objective:</i> To work with local businesses and organisations to actively promote waste</p>	<i>Action D:</i> Deliver enhanced regional engagement, communications and

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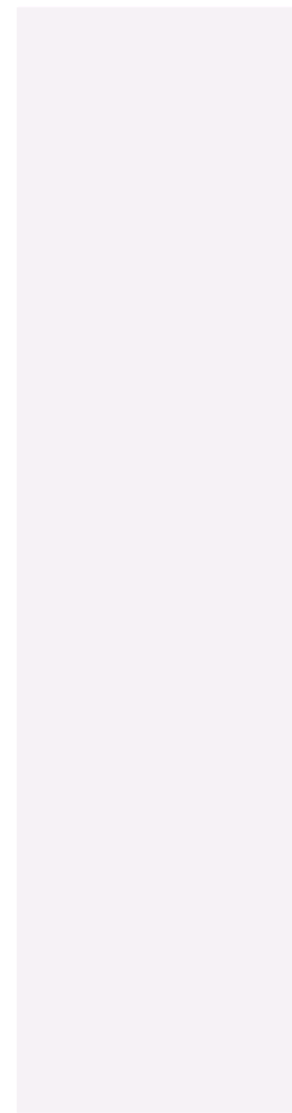
staff		year one		reduction at a local level. Hierarchy level: All Levels	education.
LM.4: Partnering with groups outside the Wairarapa	Investigate partnering with community groups, businesses and local authorities outside the Wairarapa.	Investigate as part of waste minimisation role	Rates/Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions. Hierarchy level: All Levels	<i>Action I:</i> Identify specific targets in the Waste Management and Minimisation Plan for each council and the region, specifying achievable reduction, reuse, recycling, and diversion of waste.
LM.5: Participation with Tangata Whenua	Encourage the active participation of tangata whenua in waste management issues in the Wairarapa <ul style="list-style-type: none"> Facilitate consultation with iwi on solid waste management matters in the Wairarapa region. Encourage iwi participation in decision making on waste management issues in the Wairarapa. 	Include as part of waste minimisation role	Rates/ Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions. Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.
LM.6: Waste Levy funding from MfE	Investigate and support applications for contestable waste levy	Ongoing - Continue as part of waste	Rates/ Waste Levy	<i>Objective:</i> To investigate and where appropriate develop partnership, joint working and	<i>Action F:</i> Fund regional resources for the implementation of the Waste Management and Minimisation Plan,

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	funding from MfE for both Council and community waste reduction and minimisation initiatives. (New action)	minimisation role		co-operation across the private and community sectors as well territorial and regional councils, including shared services. Hierarchy level: Reduction, re-use, recycling and treatment	for example, human resources and research.
LM.7: National approach to Waste Policy	Encourage Central Government to take a consistent national approach to Waste Policy <ul style="list-style-type: none"> Support central government in implementing a consistent statutory and regulatory framework in the waste management area. Encourage central government to facilitate the development of a national approach to identifying the benefits and costs of waste management initiatives. Encourage central government to facilitate national 		Rates/ Waste Levy	<i>Objective:</i> To investigate and where appropriate develop partnership, joint working and co-operation across the private and community sectors as well territorial and regional councils, including shared services.	<i>Action E:</i> Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship.



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	e-waste and product stewardship schemes. (New action)			Hierarchy level: Reduction and recycling	
LM.8: Consistent policies across regional and territorial councils	Encourage the regional and territorial councils to develop consistent policies and approaches to the matter of clean spoil within their respective statutory plans.	Ongoing - Continue as part of waste minimisation role	Rates/ Waste Levy	<p><i>Objective:</i> To investigate and where appropriate develop partnership, joint working and co-operation across the private and community sectors as well territorial and regional councils, including shared services.</p> <p>Hierarchy level: Reduction and disposal</p>	<i>Action E:</i> Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship.
LM.9: Adopt the MfE Cleanfill Guidelines	Promote the adoption of the Ministry for the Environment's Cleanfill Guidelines for all cleanfill sites.	Ongoing	Rates/ Waste Levy	<p><i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling.</p> <p>Hierarchy level: Reduction and disposal</p>	<i>Action B:</i> Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids and other organic waste.
LM.10: Event recycling and zero waste events	Encourage and support event recycling and “zero waste events”. (New action)	Include as part of waste minimisation role	Rates/ Waste Levy	<p><i>Objective:</i> To use Council influence to advocate for increased or mandatory producer responsibility.</p> <p>Hierarchy level: Recycling</p>	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.

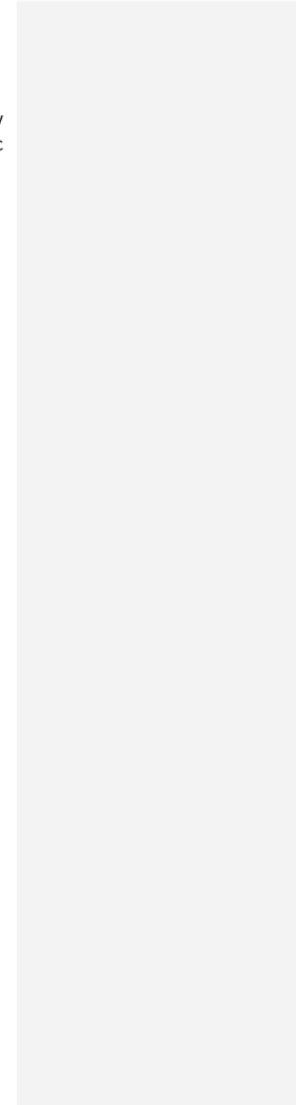
Rationale: The Wairarapa Council are committed to showing leadership by continually improving their own practices to achieve waste minimisation, ensuring sufficient resources are available to implement the regional and local actions as set out in this plan, and enabling other organisations,

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businesses and the broader community to become leaders in waste minimisation. The Councils have no direct control over waste produced by businesses and other organisations but will look to work with local groups and businesses and promote initiatives that assist in enhancing economic development through reducing and recovering waste.

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10.6 Wellington City Council

10.6.1 Wellington City Regulation

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
R.1: Bylaw development, implementation and enforcement	Ensure systems and resources are available for implementing, monitoring and enforcing the Wellington Consolidated Bylaw Part 9: Waste Management, the future Regional Waste Bylaw and any other waste related bylaws e.g. the Collection and Transportation of Waste and Wellington Trade Waste Bylaws.	Ongoing	GWRA Waste Levy	<i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities Hierarchy level: All Levels	Supports RR1; RIN1; RIN2; , IN1; IN5 and other actions that make direct contribution to targets
R.2: Investigation of additional regulatory measures	Investigate additional regulatory measures. For example (but not limited to) licensing options, single use plastic bags, etc.	Ongoing	GWRA Waste Levy	<i>Objective:</i> To take actions that will improve information on waste and recovered material activities, including both Council-contracted and private sector activities. Hierarchy level: All Levels	Supports RR1; RIN1; RIN2; , IN1; IN5 and other actions that make direct contribution to targets
R.3: New building recycling facilities	Work with key internal and external stakeholders to ensure new multi-unit residential and commercial buildings include allocated space for appropriate facilities that move potentially wasted resources up the hierarchy i.e. reduce, reuse or recycle.	Ongoing	Rates GWRA Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling	<i>Action A:</i> Determine and commit to implementing optimised kerbside systems that maximise diversion and are cost effective to communities.

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Rationale: Implementation of the regional bylaw will help ensure that households, businesses and operators make use of systems correctly, don't cause nuisance, and operate in a way that is consistent with the WMMP. This may include but not be limited to, licensing of operators and facilities, specification of approved containers, or the setting of times and places for different types of collections.

10.6.2 Wellington City Data

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
D.1: Implement Waste Data Framework	Collect and manage data in accordance with the National Waste Data Framework, as well as conducting SWAP surveys and other measures to improve data availability and management.	2017 onwards	GWRA Waste Levy	<i>Objective:</i> To align data collection and reporting systems where possible across the districts, region and nationally. Hierarchy level: All Levels	Supports RD1: Implement National Waste Data Framework and utilise the Framework to increase strategic information

Rationale: We will collect and manage data in accordance with the National Waste Data Framework to ensure the consistency, accuracy, and precision of waste data collected in Wellington, and the wider region.

10.6.3 Wellington City Communications Engagement

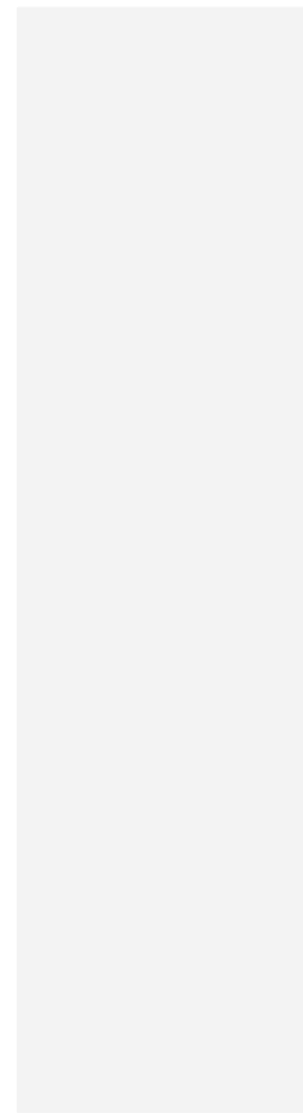
Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
CM.1: Working with schools	Provide support services to schools wishing to explore the effects of waste and waste reduction opportunities. For example, (but not limited to) through school and early learning centre visits, landfill tours, and other resources. Activity may also include support for EnviroSchools programme.	Ongoing	GWRA Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	Action RCM1 Deliver enhanced regional engagement, communications, and education Up to 25T by 2026
CM.2: Support for recycling in	The Council will provide funding support for recycling in	Ongoing	Waste levy	<i>Objective:</i> To engage the community and provide	Action RCM1 Deliver enhanced regional engagement,

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schools and early learning centres	schools and early learning centres, where this is linked with waste minimisation education activities.			information, education and resources to support community actions Hierarchy level: All Levels	communications, and education Up to 25T by 2026
CM.3: Promoting and supporting waste minimisation at events	Promoting and supporting waste minimisation at events and festivals (e.g. through provision of free event bin loan, development of event waste minimisation resources, provision of knowledge-building workshops, etc.)	Ongoing	GWRA Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	Action RCM1 Deliver enhanced regional engagement, communications, and education Up to 20T by 2026
CM.4: Promote and support the reduction and diversion of organic waste	Continue to support and promote organics waste reduction and diversion programmes. For example (but not limited to), the Love Food Hate Waste campaign	Ongoing	GWRA Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	Action RCM1 Deliver enhanced regional engagement, communications, and education LFHW regional target is 2,400 T by 2018; WCC target is 984 T by 2018
CM.5: Support marae and iwi groups to minimise waste	Support iwi and marae to promote and undertake waste minimisation by the provision of information, services and events. For example (but not limited to), support for the Para Kore programme	Ongoing	GWRA Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	Action RCM1 Deliver enhanced regional engagement, communications, and education Para Kore target for the region is 30 T from 20 Marae. WCC's target is 12 T from 8 Marae by 2020
CM.6: Promote and support residents to minimise waste	Support residents to promote and undertake waste minimisation by the provision of information, services and events. For example (but not limited to), Waste Free Parenting workshops and targeted education initiatives	Ongoing	GWRA Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	Action RCM1 Deliver enhanced regional engagement, communications, and education The regional potential diversion for Waste Free Parenting is 315T; the WCC target is 109T (~35% of workshop attendees regionally).

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					Up to 667T from other targeted education initiatives by 2026
CM.7: Optimise regional communications	Work collaboratively with the WMMP partner councils on waste related communications. For example (but not limited to), creation of a regional recycling directory	Ongoing	GWRA Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	Action RCM1 Deliver enhanced regional engagement, communications, and education Supports other initiatives that make direct contribution to targets
CM.8: Wellington Regional Waste Education Strategy	Ensure systems and resources are in place for implementing, the Regional Waste Education Strategy and if necessary, review the strategy.	Ongoing	GWRA Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All Levels	<i>Action D:</i> Deliver enhanced regional engagement, communications, and education

Rationale: We will continue to support schools, community groups, businesses, and residents to minimise waste and shift stakeholder behaviour up the waste hierarchy, through enhanced local and regional communications and education programmes. We will work with local partner Councils to deliver the Regional Waste Education Strategy.

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10.6.4 Wellington City Collections

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
C.1: Household recycling collection	Continue to deliver and optimise the household recycling service.	Ongoing	GWRA Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling	Supports Regional Action RC1: Optimise collection systems Up to an additional 1850 tonnes per annum by 2026
C.2: CBD recycling collection	Continue to deliver and optimise CBD recycling service	Ongoing	GWRA Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling	Supports Regional Action RC1: Optimise collection systems
C.3: Household waste collection	Continue to deliver and optimise household waste collection service that supports increased diversion and a cost effective service for households	2020	User charges GWRA Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Disposal (reduction)	Supports Regional Action RC1: Optimise collection systems Supports other collection initiatives that make direct contribution to targets
C.4: Household food waste collection	Investigate and recommend options for a household food waste collection service or other alternatives that deliver similar outcomes	2020	GWRA Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling	Supports Regional Action RC1: Optimise collection systems Up to an additional 7,100 tonnes per annum by 2026

Rationale: Council is committed to implementing an optimised kerbside system that maximises diversion and that is cost-effective for households.

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10.6.5 Wellington City Infrastructure

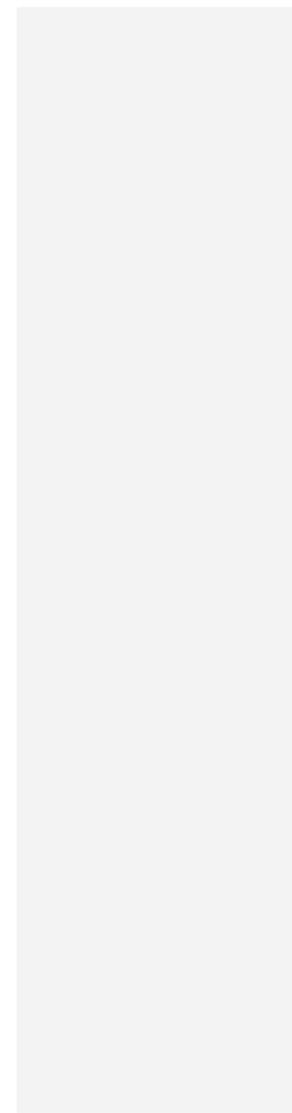
Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
IN.1: Biosolids	Collaborate with Wellington Water and other stakeholders to investigate options that would divert biosolids mainly from the Southern Landfill. WCC operates two waste water treatment plants (and has a minority shareholding in Porirua City's treatment plant) for the purpose of treating sewage effluent.	2020	GWRA Waste Levy for Capex only	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reuse, Recycling	Supports Regional Action RIN2 Approx. 15,000 tonnes per annum of material diverted by 2026
IN.2: Resource Recovery Centre	Operate the resource recovery centre at the Southern landfill. Identify and implement, where appropriate, opportunities for improvements that increase diversion, supporting the region's Resource Recovery Network at the Southern Landfill.	Ongoing	GWRA Waste Levy for Capex only	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reuse, Recycling	Supports Regional Action RIN1: Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste Currently up to 1,000 tonnes per annum of materials diverted Target to increase recovery capacity by up to an additional 4460 tonnes by 2026
IN.3: Compost operation	Operate and make capacity improvements to an organics	Ongoing	GWRA Waste	<i>Objective:</i> To increase diversion of waste that is currently disposed of	Supports Regional Action RIN1: Investigate and develop

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	(currently green waste and commercial food waste) composting plant.		Levy for Capex only	to landfill for reuse, recovery or recycling. Hierarchy level: Reuse, Recycling	a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste Currently up to 5200 tonnes per annum of organic material diverted with the potential to increase in response to regional actions that divert more organics
IN.4: Transfer station (waste drop off facility)	Operate and make capacity improvements to the Transfer Station. This includes drop off facilities for general waste, green waste (diverted), household hazardous waste (including domestic quantities of chemicals, oils, batteries and paint), de-gassing of refrigerants from appliances, and diversion of recoverable household items, building materials, metals, etc.	Ongoing	User Charges	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reuse, Recycling	Supports Regional Action RIN1: Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste Target to increase recovery capacity by up to an additional 7316 tonnes by 2026
IN.5: Waste education centre	Research and develop options for an effective waste education facility at the Southern Landfill (or elsewhere) that meets the needs of the community and Council	2017-2019	GWRA Waste Levy for Capex only	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. <i>And Objective:</i> To engage the community and provide information, education and resources to support community	Supports Regional Action RIN1: Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste

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				actions Hierarchy level: All Levels	And WCCIN2: Resource Recovery Centre. And RCM 1: enhance communications and delivery
IN.6: Public place recycling	Work with relevant stakeholders (collectors, WCC's Urban Design Team, Parks & Recreation, etc) to design and submit for approval an efficient and cost effective public place recycling system that maximises material recovery	2017-2018	Revenue GWRA Waste Levy for Capex only	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Recycling	Supports Regional Action RIN1: Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste
IN.7: Investigate and implement polystyrene recycling options	Consider options for recycling and/or re-processing of polystyrene. Consider business case for a polystyrene drop-off service at Southern Landfill. Implement if appropriate	Ongoing	Revenue GWRA Waste Levy for capex	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reuse, recycling	Supports Regional Action RIN1: Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste
IN.8: Signage at waste/recycling facilities	Provide clear and consistent signs at landfills and transfer stations to show correct disposal, compost, re-use and recycling facilities.	Ongoing	GWRA Waste Levy for capex	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reduction, reuse, recycling and disposal	<i>Action D:</i> Deliver enhanced regional engagement, communications and education.
IN.9: Recovery of energy from landfill gas	Support landfill gas electricity generation and optimisation of capture systems to assist Council in meeting its ETS responsibilities.	Ongoing	Market funded GWRA	<i>Objective:</i> Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making	Not applicable

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IN.10: Closed landfills	Continue to manage closed landfills to ensure relevant environmental and safety standards are met and in accordance with all relevant policies and plans.	Ongoing	Rates	Hierarchy level: Recovery <i>Objective:</i> Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making Hierarchy level: Disposal	Not applicable
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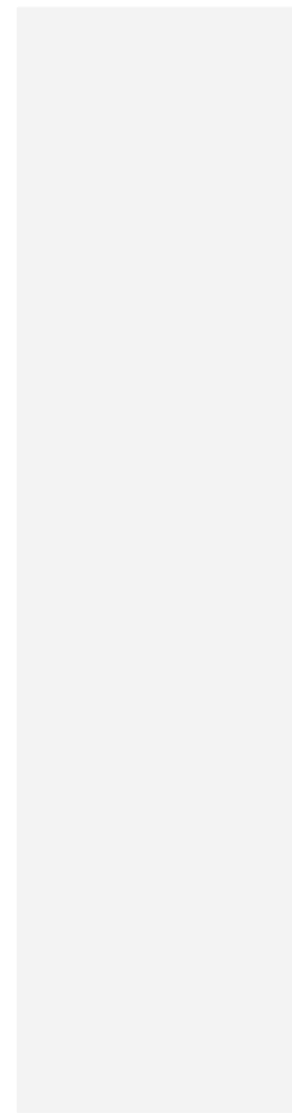
Rationale: Council will continue to work towards best practice in landfill management, including closed landfills and landfill gas capture.

10.6.6 Wellington City Leadership & Management

Reference & Title	Description	Timeframe	Funding Options	Strategic Goals & Hierarchy Position	Method and Targets
LM.1: Support community groups and the business sector	Provide support to businesses and community groups to develop waste minimisation initiatives and opportunities	Ongoing	GWRA Waste Levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All levels	Action RCM1 Deliver enhanced regional engagement, communications, and education
LM.2: Provide grants for community and business development projects	Provide grants for stakeholder groups and individuals to develop waste minimisation initiatives. Grants are allocated under a contestable process and guided by council's strategic priorities as described in the relevant LTP.	Ongoing	Waste levy	<i>Objective:</i> To engage the community and provide information, education and resources to support community actions Hierarchy level: All levels	Action RCM1 Deliver enhanced regional engagement, communications, and education
LM.3: Industry-based reuse	Support business sector stakeholders wishing to reuse materials – for example (but not limited to) through Waste Exchange programmes.	Ongoing	GWRA Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reuse	Supports Regional Action RIN1: Investigate and develop a region-wide resource recovery network – including facilities for construction and demolition waste, food and/or biosolids, and other organic waste

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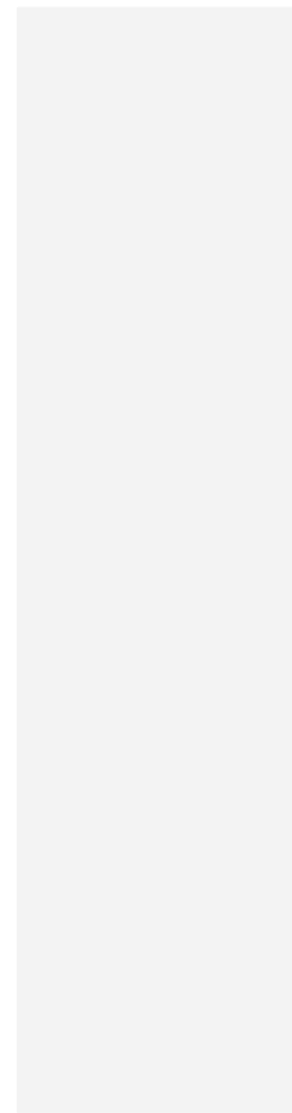
LM.4: Behaviour change	Lead, deliver, support and promote change initiatives that shift stakeholder behaviour and waste management practices up the waste hierarchy	Ongoing	GWRA Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reduction	Action RCM1 Deliver enhanced regional engagement, communications, and education
LM.5: Advocacy and lobbying	WCC will continue to advocate and lobby for progressive waste management and minimisation policy and support actions in order to deliver on the goals and objectives of the WMA and the WMMP. For example (but not limited to): product stewardship, levy increases, clarification and enforcement of the WMA, national operator licensing requirement, national implementation of Waste Data Framework, progress on national regulation of priority waste streams such as organics, plastics, tyres, etc.	Ongoing	GWRA	Hierarchy level: All Levels	Action RLM2: Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship
LM.6: Collaborate with private sector and community	Work with local groups to investigate opportunities to enhance economic development through waste minimisation (e.g. circular economy initiatives)	Ongoing	GWRA Waste Levy	<i>Objective:</i> To work with local businesses and organisations to actively promote waste reduction at a local level Hierarchy level: All Levels	Action RLM2: Collaborate on and lobby for waste minimisation policies and strategies, for example product stewardship
LM.7: Funding options	Explore and where feasible implement new funding models for waste management and	Ongoing	GWRA Waste Levy General	<i>Objective:</i> To consider both short and long term cost impacts of all actions across the community including economic costs and	Supports initiatives that make direct contribution to targets

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	minimisation activities		and Targeted Rates User charges	benefits <i>Objective:</i> Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making	
LM.8: Shared Services	As appropriate, investigate shared service options for potential regional, sub regional and super regional scaled waste management and minimisation initiatives.	Ongoing	GWRA Waste Levy	<i>Objective:</i> To consider both short and long term cost impacts of all actions across the community including economic costs and benefits <i>Objective:</i> Consider the environmental impact of all options and ensure that the overall environmental impact is taken into account in decision making	Supports initiatives that make direct contribution to targets
LM.9: Innovation and technology	Investigate, support and promote innovation and technology that enables or enhances increased diversion and reduced waste	Ongoing	GWRA Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reuse, recycling	Supports initiatives that make direct contribution to targets
LM.10: WCC internal waste minimisation	Council leadership through waste minimisation initiatives that reduce waste and increase diversion at WCC facilities	Ongoing	GWRA Waste Levy	<i>Objective:</i> To increase diversion of waste that is currently disposed of to landfill for reuse, recovery or recycling. Hierarchy level: Reuse, recycling	Action RCM1 Deliver enhanced regional engagement, communications, and education
LM.11: Waste Levy funding from MfE	Investigate and support applications for contestable waste levy funding from MfE for both Council and	Ongoing - Continue as part of waste minimisation	GWRA Waste Levy	<i>Objective:</i> To investigate and where appropriate develop partnership, joint working and co-operation across the private and	Supports initiatives that make direct contribution to targets

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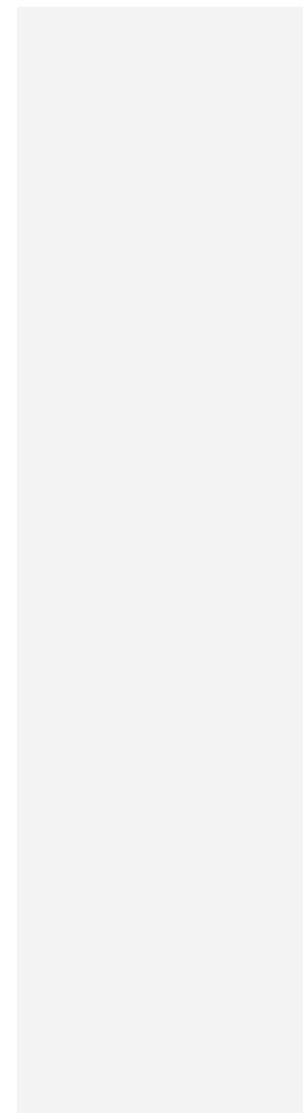
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	community waste reduction and minimisation initiatives.	role		community sectors as well territorial and regional councils, including shared services. Hierarchy level: Reduction, re-use, recycling and treatment	
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Rationale: Council will aspire to be a leader in innovative waste minimisation and management, through investigation into shared services, new technologies, circular economy initiatives, and leading by example.

DRAFT



Part C: Supporting Information

A.1.0 Waste Assessment

4/11/2016

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Joint Waste Assessment

Prepared for the Wellington Region Councils

July 2016

Prepared for:

Carterton District Council
Hutt City Council
Kāpiti Coast District Council
Masterton District Council
Porirua City Council
South Wairarapa District Council
Upper Hutt City Council
Wellington City Council
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1.0 Introduction

This Waste Assessment has been prepared for the territorial authorities of the Wellington region in accordance with the requirements of the Waste Minimisation Act 2008 (WMA). This document provides background information and data to support the constituent Councils' waste management and minimisation planning process.

1.1 Structure of this Document

This document is arranged into a number of sections designed to help construct a picture of waste management in the region.

Introduction

The introduction covers a number of topics that set the scene. This includes clarifying the purpose of this Waste Assessment, its scope, the legislative context, and key documents that have informed the assessment.

Wellington Region

This section presents a brief overview of key aspects of the region's geography, economy, and demographics that influence the quantities and types of waste generated and potential opportunities.

Waste Infrastructure, Services, Data and Performance Measurement

These sections examine how waste is currently managed, where waste comes from, how much there is, its composition, and where it goes. The focus of these sections is on the regional picture.

Gap Analysis and Future Demand

This section provides an analysis of what is likely to influence demand for waste and recovery services in the region and identifies key gaps in current and future service provision and the Councils' ability to promote effective and efficient waste management and minimisation.

Statement of Options & Councils' Proposed Role

These sections develop options available for meeting the future demand and the Councils' proposed role in ensuring that future demand is met and that the Councils are able to meet their statutory obligations.

Statement of Proposals

The statement of proposals sets out what actions are proposed to be taken forward. The proposals are identical to the actions that will be put forward in the upcoming Waste Management and Minimisation Plan (WMMP) so the Waste Assessment solely references the WMMP for this section.

Appendices

The appendices contain additional waste management data and further detail about facilities in each district. This additional data will enable territorial authorities (TAs) to “drill down” and access information about their district. This section includes the statement from the Medical Officer of Health as well as additional detail on legislation.

1.2 Purpose of this Waste Assessment

This Waste Assessment is intended to provide an initial step towards the development of a WMMP and sets out the information necessary to identify the key issues and priority actions that will be included in the draft WMMP.

Section 51 of the WMA outlines the requirements of a waste assessment, which must include:

- a description of the collection, recycling, recovery, treatment, and disposal services provided within the territorial authority’s district
- a forecast of future demands
- a statement of options
- a statement of the territorial authority’s intended role in meeting demands
- a statement of the territorial authority’s proposals for meeting the forecast demands
- a statement about the extent to which the proposals will protect public health, and promote effective and efficient waste management and minimisation.

1.3 Legislative Context

The principal solid waste legislation in New Zealand is the Waste Minimisation Act 2008 (WMA). The stated purpose of the WMA is to:

*“encourage waste minimisation and a decrease in waste disposal in order to
(a) protect the environment from harm; and
(b) provide environmental, social, economic, and cultural benefits.*

To further its aims, the WMA requires TAs to promote effective and efficient waste management and minimisation within their district. To achieve this, all TAs are required by the legislation to adopt a WMMP.

Section 45 of the WMA allows for two or more TAs to jointly prepare and adopt a WMMP. This joint waste assessment has been prepared in accordance with this section of the Act.

The WMA requires every TA to complete a formal review of its existing waste and minimisation management plan at least every six years. The review must be consistent with WMA sections 50 and 51. Section 50 of the WMA also requires all TAs to prepare a ‘waste assessment’ prior to reviewing its existing plan. This document has been prepared in fulfilment of that requirement. The Councils’ existing Waste Assessment was written in September 2011 and the WMMP was adopted on 15th December 2011.

Further detail on key waste-related legislation is contained in Appendix 3.0.

1.4 Scope

1.4.1 General

As well as fulfilling the statutory requirements of the WMA, this Waste Assessment will build a foundation that will enable the Councils of the Wellington region to update their WMMP in an informed and effective manner. In preparing this document, reference has been made to the Ministry for the Environment's *'Waste Management and Minimisation Planning: Guidance for Territorial Authorities'*¹.

A key issue for this Waste Assessment will be forming a clear picture of waste flows and management options in the region. The WMA requires that a waste assessment must contain:

"A description of the collection, recycling, recovery, treatment, and disposal services provided within the territorial authority's district (whether by the territorial authority or otherwise)".

This means that this Waste Assessment must take into consideration all waste and recycling services carried out by private waste operators as well as the TAs' own services. While the Councils have reliable data on the waste flows that they control, data on those services provided by private industry is limited. Reliable, regular data on waste flows is important if the TAs choose to include waste reduction targets in their WMMP. Without data, targets cannot be readily measured.

The New Zealand Waste Strategy 2010 also makes clear that TAs have a statutory obligation (under the WMA) to promote effective and efficient waste management and minimisation in their district. This applies to all waste and materials flows in the district, not just those controlled by councils.

1.4.2 Period of Waste Assessment

The WMA requires WMMPs to be reviewed at least every six years, but it is considered prudent to take a longer-term view. The horizon for the WMMP is not fixed but is assumed to be centred on a 10-year timeframe, in line with councils' Long Term Plans (LTPs). For some assets and services, it is necessary to consider a longer timeframe and so this is taken into account where appropriate.

1.4.3 Consideration of Solid, Liquid and Gaseous Wastes

In line with the Councils' previous joint WMMP, this Waste Assessment is focused on solid waste that is disposed of to land or diverted from land disposal.

The guidance provided by the Ministry for the Environment on preparing Waste Management and Minimisation Plans states that:

"Councils need to determine the scope of their WMMP in terms of which wastes and diverted materials are to be considered within the plan".

¹ Ministry for the Environment (2009), Waste Management and Minimisation Planning: Guidance for Territorial Authorities. Wellington.

The guidance further suggests that liquid or gaseous wastes that are directly managed by a TA, or are disposed of to landfill, should be seriously considered for inclusion in a WMMP.

Other wastes that could potentially be within the scope of the WMMP include gas from landfills and the management of biosolids from wastewater treatment plant (WWTP) processes.

Gas from the three Class 1 landfills in the Wellington region is managed by the facility operators and gas is captured under the national environmental standard for air quality. Biosolids from the WTP processes are, however, disposed of at Class 1 landfills and so it is reasonable to consider them in the context of this assessment. Therefore, apart from some liquid hazardous wastes that are managed through solid waste facilities, this Waste Assessment and the subsequent WMMP will focus primarily on solid waste.

1.4.4 Public Health Issues

Protecting public health is one of the original reasons for local authority involvement in waste management. The New Zealand Waste Strategy 2010 contains the twin high-level goals of “Reducing the harmful effects of waste”, and “Improving the efficiency of resource use”. In terms of addressing waste management in a strategic context, protection of public health can be considered one of the components entailed in “reducing harm”.

Protection of public health is currently addressed by a number of pieces of legislation. Discussion of the implications of the legislation is contained in Appendix A.3.0.

1.4.4.1 Key Waste Management Public Health Issues

Key issues that are likely to be of concern in terms of public health include the following:

- Population health profile and characteristics
- Meeting the requirements of the Health Act 1956
- Management of putrescible wastes
- Management of nappy and sanitary wastes
- Potential for dog/seagull/vermin strike
- Timely collection of material
- Locations of waste activities
- Management of spillage
- Litter and illegal dumping
- Medical waste from households and healthcare operators
- Storage of wastes
- Management of biosolids/sludges from WWTP
- Management of hazardous wastes (including asbestos, e-waste, etc.)
- Private on-site management of wastes (i.e. burning, burying)
- Closed landfill management including air and water discharges, odours and vermin
- Health and safety considerations relating to collection and handling

1.4.4.2 Management of Public Health Issues

From a strategic perspective, the public health issues listed above are likely to apply to a greater or lesser extent to virtually all options under consideration. For example, illegal dumping tends to take place ubiquitously, irrespective of whatever waste collection and transfer station systems are in place. Some systems may exacerbate the problem (infrequent collection, user-charges, inconveniently located facilities etc.), but by the same token the issues can be managed through methods such as enforcement, education and by providing convenient facilities.

In most cases, public health issues will be able to be addressed through setting appropriate performance standards for waste service contracts. It is also important to ensure performance is monitored and reported on and that there are appropriate structures within the contracts for addressing issues that arise. There is expected to be added emphasis on workplace health and safety under the Health and Safety at Work Act 2015. This legislation could impact on the choice of collection methodologies and working practices and the design of waste facilities, for example.

In addition, public health impacts will be able to be managed through consideration of potential effects of planning decisions, especially for vulnerable groups. That is, potential issues will be identified prior to implementation so they can be mitigated for.

1.5 Local Planning Context

This Waste Assessment and the resulting WMMP will have been prepared within a local planning context whereby the actions and objectives identified in the Waste Assessment and WMMP reflect, intersect with, and are expressed through other planning documents. Key planning documents and waste-related goals and objectives are noted in this section.

1.5.1 Long Term Plans

All Councils that contribute to this joint Waste Assessment and resulting WMMP have renewed long term plans (LTPs) dating from July 2015.

A key part of these LTPs is the visions that have been set for the TAs involved. These are:

- *Carterton District: A welcoming and vibrant community where people enjoy living*
- *Hutt City: Making our city a great place to live, work and play*
- *Kāpiti Coast District: Vibrant, diverse and thriving*
- *Masterton District: Moving forward together*
- *Porirua City: A great place to live, work and raise a family*
- *South Wairarapa District: (to) work with and for the South Wairarapa communities to achieve the best possible social and economic outcomes which are based on valuing and respecting the people, the land and the resources.*
- *Upper Hutt City: Our city is one of a kind. In Upper Hutt we are surrounded by outstanding natural beauty and a wide range of leisure and recreational activities. We're recognised as a great place for families and for people who enjoy*

the best of the outdoors. We have recognised our strengths and want to build on them.

- Wellington City: Wellington Towards 2040: Smart Capital. *...to grow and sustain the city as an inclusive place where talent wants to live.*

LTPs also set out a number of community outcomes, such as “healthy people” and “a sustainable healthy environment”. Solid waste is mentioned in a number of the LTPs as contributing to a number of different community outcomes. However, the most common approach is to link solid waste management with community outcomes relating to environment and sustainability. Some LTPs also link solid waste management to economic and health outcomes.

Some of the LTPs refer to solid waste in the preamble sections, making reference to national legislation or the New Zealand Waste Strategy 2010. Others refer to the regional WMMP as a ‘key document’. However, not all LTPs include reference to solid waste management in these preliminary sections.

All of the Councils’ LTPs include a dedicated section discussing solid waste management activities. Depending on the Council, these are included in services, infrastructure, or environmental management sections. In some LTPs, solid waste management is mentioned in a number of other activity sections, where appropriate.

The solid waste management activity sections generally include reference to the regional WMMP. In many sections, it is clear that the regional WMMP is the key guiding policy document for solid waste management. In other LTPs, other documents are also mentioned and these may include their solid waste asset management plans.

Most LTPs include a summary of the regional WMMP, and then elaborate on the implications of the WMMP for the term of the LTP. Key actions and projects are taken from the regional WMMP and shown as regional or city/district specific tasks.

Some LTPs include additional actions or work areas alongside the regional WMMP, with a number of key projects included in the LTP. Masterton, Carterton and South Wairarapa make frequent mention of working in cooperation with each other at a level greater than those Councils’ cooperation with other Councils in the Wellington region.

Key projects include:

- Landfill consents and management for Carterton, Hutt City and South Wairarapa
- Closed landfill management projects for Kāpiti Coast and Masterton
- Other infrastructure projects, such as transfer station upgrades or expansion, for Masterton and South Wairarapa.

Most solid waste management activity sections of LTPs also include a review of the regional WMMP.

1.5.2 Wellington Regional Council Plans

The *Regional Policy Statement for the Wellington Region* (RPSWR) became operative on 24 April 2013. The RPSWR provides an overview of the resource management issues in the Wellington region and the objectives, policies, and methods to achieve integrated

management of natural and physical resources. Regional and district plans cannot be inconsistent with the RPSWR.

The objective of the RPSWR that directly pertains to solid waste is as follows:

Objective 11

The quantity of waste disposed of is reduced.

Policy 65: *Promoting efficient use and conservation of resources – non-regulatory*

To promote conservation and efficient use of resources by:

- (a) reducing, reusing and recycling waste;*
- (b) using water and energy efficiently; and*
- (c) conserving water and energy.*

Explanation

For waste, using resources efficiently means following the waste hierarchy: reducing unnecessary use of resources, including reducing packaging; reusing unwanted goods that are still 'fit for purpose'; recycling new products from waste materials; and recovering resources (such as energy) from waste before disposing of the remaining waste safely. If resources are used efficiently, the amount of unwanted materials disposed of at landfills and at sewage treatment plants will be reduced.

Method 17: *Information about waste management*

Prepare and disseminate information about how to reduce, reuse or recycle waste.

Implementation: Wellington Regional Council and city and district councils

Method 56: *Assist the community to reduce waste and use water and energy efficiently*

Assist the community to adopt sustainable practices to:

- (a) reduce, reuse or recycle waste;*
- (b) use water and energy efficiently; and*
- (c) conserve water and energy.*

Implementation: Wellington Regional Council and city and district councils

2.0 Wellington Region

This section presents a brief overview of key aspects of the Wellington region's geography, economy, and demographics. These key aspects influence the quantities and types of waste generated and potential opportunities for the Councils to manage and minimise these wastes in an effective and efficient manner.

2.1 Overview

Local authorities in the Wellington region comprise eight territorial authorities and the Greater Wellington Regional Council. The land area of the region covers 813,000 hectares with 497 kilometres of coastline.

Figure 1: Map of Wellington Region and Territorial Authority Areas



Source: <http://gwlive.blackwebs2.co.nz/page/the-region.aspx>

There is significant diversity within the region, with large metropolitan areas concentrated around Wellington City and the Hutt Valley through to the predominantly rural Wairarapa. The geography also generates clear distinctions, with the Rimutaka and Tararua Ranges creating a physical barrier between different parts of the region. This physical division of the region restricts, to some degree, the movement of people, and particularly in the residential context, recovered materials and waste. There are also large numbers of workers coming into the city centres. For example, Wellington City has an inflow of around 70,000 workers every weekday from other cities/districts. The complexities of geography, people, and wastes create a wide range of challenges for planning more effective waste management and minimisation across the region.

2.1.1 Demographics

The Wellington region is home to approximately half a million people. Forty percent of the population resides in Wellington City, with another 40% in the Hutt Valley and Porirua City, 10% in Kāpiti Coast, and 10% in the Wairarapa. The region has experienced an overall annual population growth rate of approximately 1% since 2010/11. This varies between 1.8% for Carterton District and 0.4% for Hutt City. The population distribution and growth is shown in the following table:

Table 1: Population Wellington Region 2010/11 – 2014/15

Wellington region population	2010/11	2011/12	2012/13	2013/14	2014/15	Mean annual growth rate
Carterton District	8,191	8,340	8,490	8,680	8,800	1.81%
Hutt City	100,406	100,803	101,200	101,700	102,000	0.39%
Kāpiti Coast District	50,010	50,355	50,700	51,100	51,400	0.69%
Masterton District	23,804	23,952	24,100	24,200	24,400	0.62%
Porirua City	52,912	53,306	53,700	54,100	54,500	0.74%
South Wairarapa District	9,604	9,702	9,800	9,920	10,000	1.02%
Upper Hutt City	40,612	40,956	41,300	41,800	42,000	0.84%
Wellington City	191,395	194,447	197,500	200,000	203,800	1.58%
TOTAL	476,933	481,861	486,790	491,500	496,900	1.03%

Source: Statistics NZ sub-national population estimates

The table on the next page shows key demographic metrics for each of the districts as well as for the region as a whole.

As well as showing substantial variation in size, there are notable differences amongst the districts across most metrics. Average household size for the region is 2.6 people, but varies between 2.3 in South Wairarapa and 3.0 in Porirua. In general, the metropolitan areas have larger households compared to the rural areas.

Median income is similarly diverse. Wellington City has the highest median income in New Zealand, (this has helped the region to also have the highest median income for a region), while a number of districts – Carterton, Kāpiti Coast, and Masterton - have median incomes below the national average.

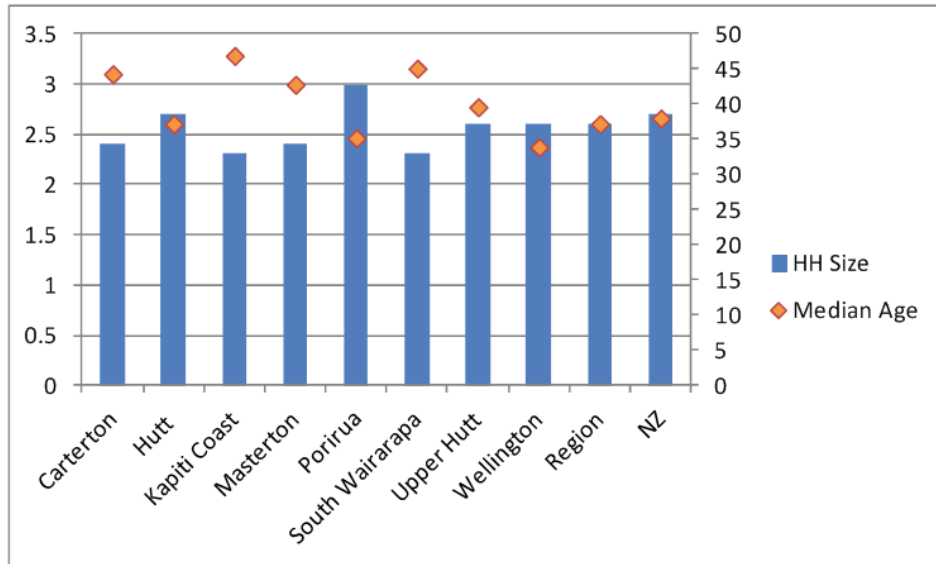
Similarly, Wellington City also has the highest proportion of people with formal qualifications (and the highest with tertiary qualifications) while Masterton and Carterton are below the national average.

Table 2: Key Demographic Indicators for Wellington Region

Demographic indicators	Households (Occupied Dwellings)	HH Size	Median income	Home ownership	Formal qualifications	Building consents
Carterton District	3,333	2.4	\$26,700	73.9	74.1%	73
Hutt City	36,213	2.7	\$31,500	66.2	79.5%	197
Kāpiti Coast District	20,703	2.3	\$26,900	74.5	80.5%	145
Masterton District	9,600	2.4	\$25,300	67.3	72.2%	66
Porirua City	17,013	3.0	\$31,400	63.9	79.1%	152
South Wairarapa District	4,035	2.3	\$28,800	72.2	77.1%	37
Upper Hutt City	15,132	2.6	\$32,000	72.1	79.2%	141
Wellington City	71,781	2.6	\$37,900	59.1	91.1%	623
Region	177,816	2.6	\$32,700	64.9	84.0%	1,573
New Zealand	1,570,695	2.7	\$28,500	64.8	79.1%	24,432

Source: Compiled from <http://www.stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-about-a-place.aspx?>

Figure 2: Household Size and Median Age



The chart above plots the relationship between household size and median age. There appears to be a clear relationship between the smaller household sizes and higher median age. In the rural areas of Wairarapa there are fewer young people, which raises the median age and reduces household size. This is similar to Kāpiti Coast where there are more retired people. This correlates to reduced average household size and an increase in the median age.

Porirua, by contrast, has the largest household size and a low median age, indicating the presence of young families. Wellington City has a relatively low household size and median age as a result of having a high proportion of working age population. In a waste management context, larger households generate more waste per household but less per capita.

As shown in Table 3 on the next page, in 2013 there were 185,400 households in the region, with approximately 40% of these located in Wellington City. The number of households is projected to grow to 220,000 by 2038.

Table 3: Households and Projected Household Growth

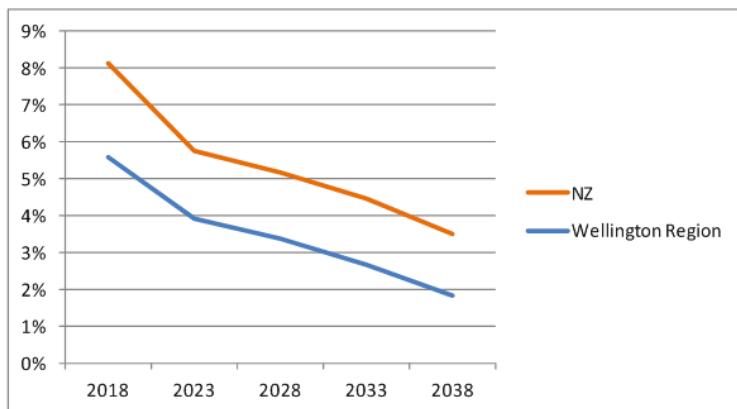
Number of households	2013	2018	2023	2028	2033	2038	% Per Annum
Kāpiti Coast District	21,600	22,700	23,700	24,700	25,500	26,200	0.8 %
Porirua City	17,800	19,000	19,800	20,500	20,900	21,200	0.7 %
Upper Hutt City	15,800	16,800	17,600	18,300	18,800	19,200	0.8 %
Lower Hutt City	37,800	39,000	40,000	40,700	41,200	41,200	0.3 %
Wellington City	74,700	79,400	82,900	86,400	89,600	92,200	0.8 %
Masterton District	10,000	10,500	10,700	10,800	10,900	10,800	0.3 %
Carterton District	3,500	3,900	4,100	4,300	4,400	4,500	1.0 %
South Wairarapa District	4,200	4,400	4,600	4,700	4,700	4,700	0.5 %
Wellington region	185,400	195,800	203,500	210,400	216,000	220,000	0.7%
New Zealand	1,648,500	1,782,700	1,885,400	1,982,600	2,071,000	2,144,000	1.1%

Source: http://www.stats.govt.nz/browse_for_stats/people_and_communities/Families/SubnationalFamilyandHouseholdProjections_HOTP13-38.aspx

Projections for household growth rate in Wellington region compared to New Zealand are shown in Figure 3 on the next page.

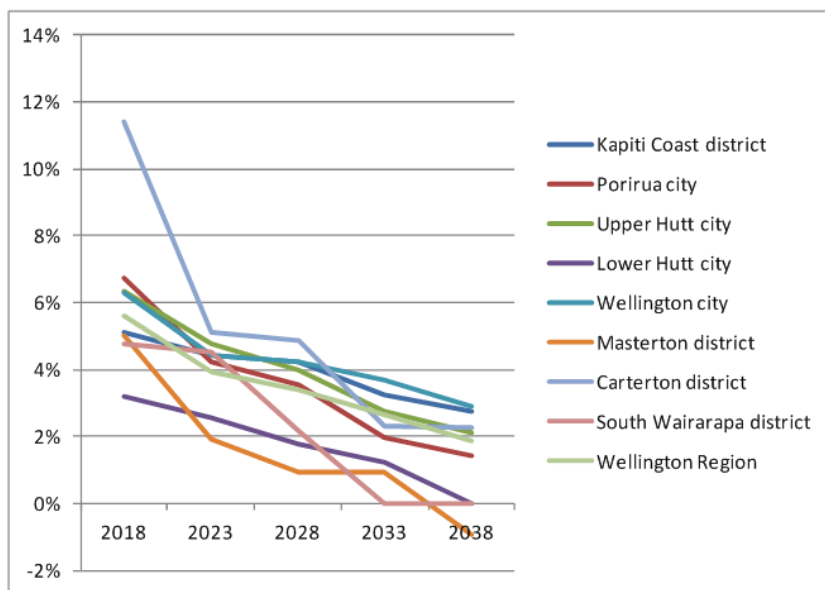
The projected pattern of growth for the region mirrors that for New Zealand as a whole, however Wellington is starting from a lower base level of growth (6% over 5 years compared to 8% nationally).

Figure 3: Regional and National Household Growth Rate Projections



The pattern for five-yearly growth intervals, by district, is shown in the chart below.

Figure 4: Household Growth Rate Projections by District



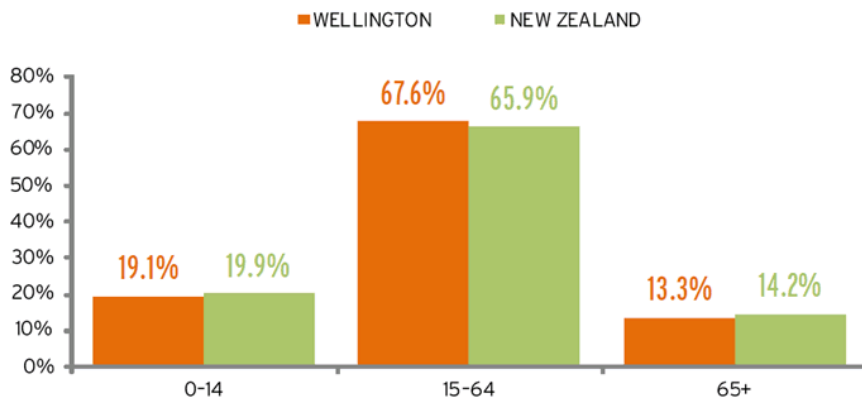
Source:

http://www.stats.govt.nz/browse_for_stats/people_and_communities/Families/SubnationalFamilyandHouseholdProjections_HOTP13-38.aspx

Carterton District is predicted to have the highest average annual growth rate over the next 23 years (1%), although growth is projected to be very high between 2013 and 2018 and fall away steeply after that. Wellington and Upper Hutt have the next highest rates of growth over the period, with both projected to grow by an average of 0.8%.

Masterton and Hutt City are expected to experience the least growth, with an average of 0.3%, and Masterton is projected to experience a net household loss by 2038.

Figure 5: Age Composition of Wellington Region (2013)



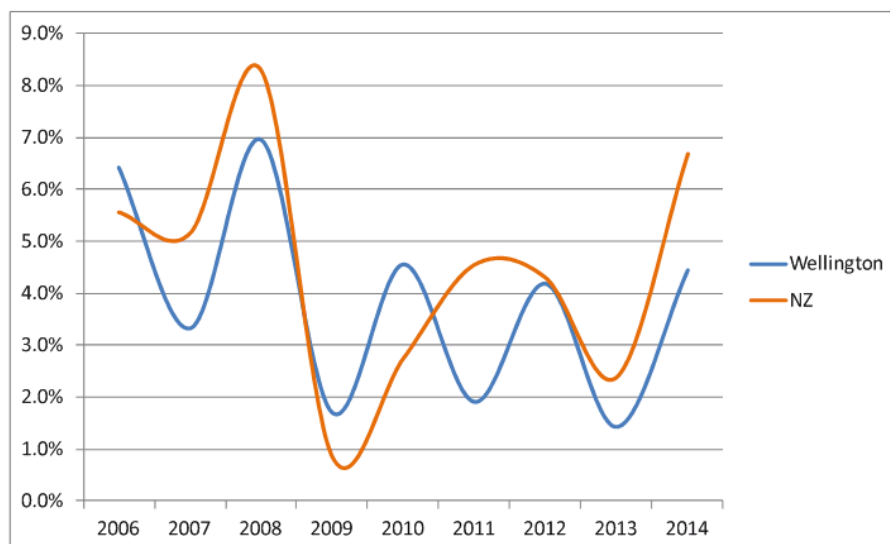
Source: Infometrics (2013) Annual Economic Profile: Wellington Region

Wellington has a median age of 35.3 years, which is significantly lower than the national median age of 37.1. Wellington has a higher proportion of working age people and slightly lower proportions of both young people and people over 65.

2.2 Economy

Gross domestic product (GDP) in the region increased by 4.4% in the year to March 2014 compared to 6.7% for New Zealand. The rate of growth has generally been less than the national rate but the pattern of growth has approximately tracked that of the country as a whole. This is shown in the chart below.

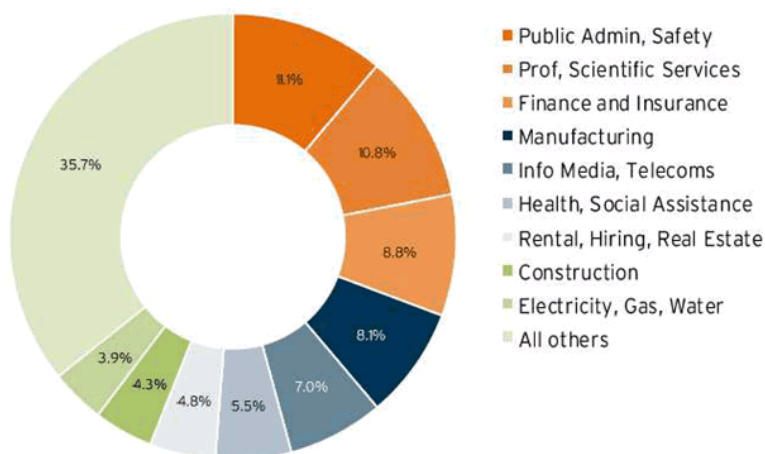
Figure 6: Gross Domestic Product Annual Average % Change



Source: Statistics New Zealand

The relative importance to the regional economy of different sectors is shown in the following chart, which maps share of GDP by industry type.

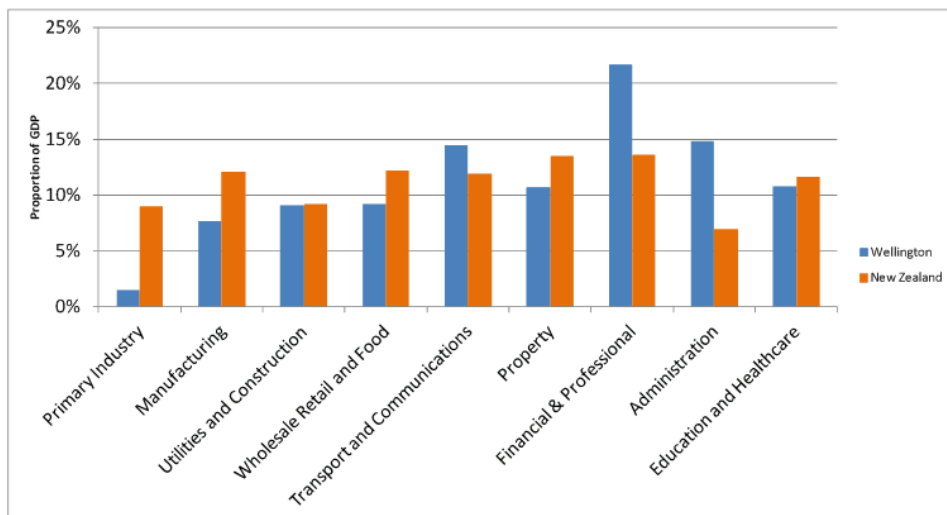
Figure 7: Share of Total Wellington Region GDP by Industry Type



Source: Infometrics. Wellington Annual Economic Profile 2013

The contribution of the different industry types to GDP in Wellington region are compared to New Zealand as a whole in Figure 8.

Figure 8: Wellington Region GDP by Industry Type Compared to NZ

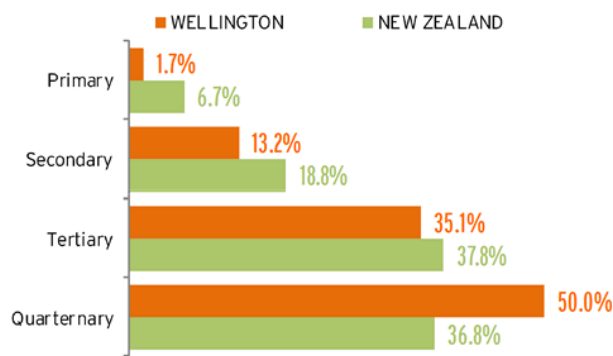


Source: Statistics New Zealand

Administrative and financial and professional services are the largest sectors of the Wellington region economy and play a much larger role compared to national-level figures. The sectors account for approximately one-third of GDP compared to approximately one-fifth across New Zealand as a whole. By contrast, primary industry

(farming, forestry, fishing and mining), and manufacturing play a substantially lesser role in the region’s economy. From a waste management perspective, this would suggest that rural and industrial wastes are likely to be less significant contributors to waste generation and that there will be more office worker-generated waste. The importance of these sectors varies across the region, however, with primary industry of significant importance in the Wairarapa and Kāpiti Coast, manufacturing more significant in the Hutt Valley, and the financial, professional, and administration sectors dominant in Wellington City.

Figure 9: Employment by Broad Sector



Source: Infometrics. Wellington Annual Economic Profile 2013

The broad structure of the economy is also reflected in the employment profile of the region, with under-representation most notable in the primary and secondary sectors and over-representation in the quarternary sector.

In terms of employment creation, the largest area of absolute growth has been in professional, technical, and environmental services (1008 jobs in 2013), while the largest area of relative growth was in mining (20.9%) followed by Agriculture forestry and fishing (6.1%) and Electricity Gas Water and Waste Services (4.3%). Administrative and Support services suffered the largest decline in jobs both in absolute (1,435 jobs) and relative terms (10.2% decline in job numbers)²

² Infometrics. Wellington Annual Economic Profile 2013

Figure 10: Unemployment Rate in Wellington Region



Source: Infometrics. Wellington Annual Economic Profile 2013

The above chart suggests that Wellington region has generally tracked below the national unemployment rate, with the exception being prior to the global financial crisis (GFC) in 2008-2009. The latest available unemployment figures show that this trend has continued, with unemployment at 6% nationally³ and 5.6 % for the region⁴.

³ <http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7080>

⁴ <http://wellington.scoop.co.nz/?p=80456>

Figure 11: Building Consents over Time



Source: <http://www.stats.govt.nz/infoshare/ViewTable.aspx?pxID=7a47932e-7c21-40f4-bb94-5d9bf1003da3>

Building consent activity was highest prior to the GFC in 2008-2009, which saw a dramatic fall in building activity – particularly residential activity. Residential building activity has recovered somewhat in the region but appears to have plateaued from 2014-2015 while it continues to grow for New Zealand as a whole (driven largely by Auckland housing growth). Non-residential construction also fell from the pre-GFC high and, while it has remained steady, has not recovered in either the Wellington region or the country as a whole.

2.3 Implications of Economic and Demographic Trends

The Wellington region is a high-performing part of the New Zealand economy, with higher per capita and household incomes compared to the national average. However, this level of prosperity masks significant variation across the districts. Wellington City has the highest median income in NZ, (which has helped the region to also have the highest median income for a region), while a number of districts – Carterton, Kāpiti Coast and Masterton have median incomes below the national average.

Wellington’s economy is powered to a large degree by the public and administrative sectors, which make up the largest employers and contributors to GDP. This sector appear to add a degree of stability to the local economy which, while mirroring national patterns, has not experienced the same extremes of growth and contraction as the country as a whole.

While there is an industrial base, predominantly in the Hutt Valley, this is a smaller part of the Wellington region economy compared to NZ as a whole. Similarly, primary production is largely confined to the Wairarapa and Kāpiti Coast. Industrial and primary processing waste are therefore likely to make up a smaller fraction of the waste production in the region than in other regions. It is worth noting that because many industrial waste streams are relatively homogeneous, and are generated in quantities that are economically viable, they are often easier to target for recovery. These types of waste minimisation gains may not, therefore, be readily achievable for the region. While the administrative sector produces relatively low levels of waste, there can still be substantial quantities of materials such as paper, e-waste, furniture, and construction and demolition waste generated.

Population and the numbers of households are expected to increase at 0.7% per annum across the region over the next 20-25 years, which is below the national projected rate of 1.1%. The projections show a steady decline in the rate of growth over time. These figures again hide some disparity across the districts, with Masterton projected to enter a period of negative household growth in 20 years and South Wairarapa to remain static.

The absolute growth in population and economic activity in the region is likely to lead to increased waste generation. Household waste generation is linked to retail spending and population; both of these metrics are growing, although the impact is not expected to be substantial. Although Wellington has an age structure skewed towards the working population, the population as a whole is ageing and lower numbers of people are living in each household. These are long-term trends that are common in many parts of New Zealand. These trends are likely to result in lower waste being generated per household – although higher waste generation per capita, as smaller households typically generate more waste per capita than larger households. Design of waste services should take into account that, in the future, a larger number of households will generate less waste.

The construction sector is relatively waste-intensive. Construction and demolition activity can generate substantial quantities of relatively dense material, much of which is recoverable, such as brick and concrete, timber, plasterboard, and metal. While this sector does not appear to have matched the levels of growth in New Zealand as a whole, it is still growing and will likely continue to grow in line with household growth. Other sectors of the economy, such as tourism, are not anticipated to grow significantly and will have a limited impact on waste generation rates.

3.0 Waste Infrastructure

This section provides a summary of key strategic waste facilities that currently service households and businesses in the Wellington region.

Figure 12: Map of Key Waste and Recovery Facilities in Wellington Region



3.1.1 Class 1 Landfills

There are three Class 1 landfill disposal facilities⁵ within the region. These are referred to as “disposal facilities” in the WMA. In addition, there is Bonny Glen landfill, which is located outside of the region in the Rangitikei District but which serves councils in the Wairarapa, and the Horowhenua District Council-owned Class 1 landfill in Levin, which accepts waste from Kāpiti Coast District. There are a further thirteen transfer stations that accept waste and or recyclable materials that is bulked for transport to further disposal or recovery. Key data on the facilities is shown in the table on the next page.

⁵ Based on definitions in the Technical Guidelines for the Disposal to Land, WasteMINZ, April 2016

Table 4: Disposal Facilities Used by Wellington Region Operators

Facility Name & Owner	Location	Approx annual quantity accepted (tonnes)	Consent Expiry/Fill Date	Advertised General Waste Gate Fee
Southern landfill (WCC)	Happy Valley, Wellington	80,000	Current cell capacity to approx 2025. Valley capacity for 100yrs	\$121.80
Silverstream landfill (HCC)	Upper Hutt	100,000	Consented to 2055	\$118.00
Spicers landfill (PCC)	Porirua	45,000	Consented to 2030, capacity to 2045	\$129.00
Bonny Glen landfill (Mid West Disposals)	Rangitikei District (outside of region)	Up to 250,000	Consented to 2050	\$166.18 ⁶
Levin landfill (Horowhenua DC)	Horowhenua District (outside of region)	30,000	Consented to 2037	\$163.50

In aggregate, the region is well-served in terms of the number of available Class 1 landfills and the remaining capacity of those facilities. The three landfills located in the region all have substantial remaining capacity at existing fill rates, with Spicers having capacity for another 30 years, Silverstream for 40 years, and Southern potentially 100 years. Having three major landfills within the region makes Wellington region the best-served region of the country for landfill space. However, the ability to practically access these facilities is constrained by geography. The Rimutaka Range means access to these facilities from the Wairarapa is not only difficult but unreliable, due to weather and road closures. Similarly, Kāpiti Coast is able to more easily access the Levin disposal facility.

The table below shows the approximate distances to each landfill from the centre of each TA area.

⁶ Bulk charge at Wairarapa transfer stations that take material to Bonny Glen

Table 5: Travel Distances (km) to Lower North Island Landfills

Travel distances (km)	Southern landfill	Silverstream landfill	Spicers landfill	Bonny Glen landfill	Levin landfill
Carterton	91	61	85	155	146
Hutt	24	12	29	161	91
Kāpiti	64	52	42	111	42
Masterton	106	76	100	142	133
Porirua	28	25	5	142	73
South Wairarapa	88	60	82	183	112
Upper Hutt	41	11	35	142	73
Wellington	8	28	24	162	93

3.1.2 Refuse Transfer Stations & Recycling Centres

As well as being able to take waste and recoverable material direct to the landfills, waste and recycling collectors and members of the public have access to thirteen refuse transfer stations and recycling centres that consolidate material before transport to disposal or recovery. These are shown in the table below. In addition, the three Class 1 landfills in the region allow public access and provide facilities for drop-off of waste, recycling, and compostable materials.

Table 6: Refuse Transfer Stations and Recycling Centres

Facility Name & Location	Owner/ Operator	Hours and Public Access	Material Range ⁷
Seaview Recycle & Transfer Station (Hutt City)	Waste Management NZ Ltd	Monday - Saturday 7.30am - 5.00pm Sunday and Public Holidays 8.30am - 4.30pm	Refuse Recycling Greenwaste
Otaihanga Resource Recovery Facility (Kāpiti Coast)	Kāpiti Coast DC/ Midwest Disposals Ltd	Monday to Saturday 8.00am to 5.00pm Sunday and Public Holidays 9.00am to 5.00pm	Refuse Recycling Greenwaste
Waikanae Greenwaste and Recycling Centre (Kāpiti Coast)	Kāpiti Coast DC/ EnviroWaste Services Ltd	Monday to Saturday 8.00am to 5.00pm Sunday and Public Holidays 9.00am to 5.00pm	Recycling Greenwaste

⁷ A table of fees and charges and the range of materials accepted is provided in Appendix A.6.0

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Facility Name & Location	Owner/ Operator	Hours and Public Access	Material Range ⁷
Ōtaki Refuse Transfer Station (Kāpiti Coast)	Kāpiti Coast DC/ EnviroWaste Services Ltd	Monday to Saturday 8.00am to 5.00pm Sunday and Public Holidays 9.00am to 5.00pm	Refuse Recycling Greenwaste
Martinborough Transfer Station (South Wairarapa District)	SWDC / Wairarapa Environmental	Wednesday 1.00pm – 3.00pm Saturday 10.00am – 4.00pm Sunday 10.00am – 1.00pm	Refuse Recycling Greenwaste
Greytown Recycling Station (South Wairarapa District)	SWDC / Wairarapa Environmental	Tuesday 1.00pm – 3.30pm Saturday 10.00am – 12.00pm Sunday 10.00am – 1.00pm	Recycling Greenwaste
Featherston Recycling Station (South Wairarapa District)	SWDC / Wairarapa Environmental	Thursday 11.00am – 3.00pm Saturday 11.00am – 3.00pm Sunday 11.00am – 3.00pm	Recycling Greenwaste
Pirinoa Recycling Station (South Wairarapa District)	SWDC / Wairarapa Environmental	Wednesday 1.00pm – 3.00pm Saturday 10.00am – 12.00pm Sunday 4.00pm – 6.00pm	Recycling Greenwaste
Castlepoint (Masterton District)	Masterton DC / Wairarapa Environmental	Wednesday 9:00am - 12:00noon Sunday 11:00am - 3:00pm	Refuse Recycling Greenwaste
Riversdale (Masterton District)	Masterton DC / Wairarapa Environmental	Wednesday 1:30pm - 4:30pm Sunday 1:30pm - 4:30pm Sundays during December, January and February 1:30pm - 7:30pm	Refuse Recycling Greenwaste
Masterton (Masterton District)	Masterton DC / Wairarapa Environmental	Monday to Friday 7:30am - 4:30pm Masterton Saturday 8.30am - 4.30pm Masterton Sunday & Public Holidays 10.00am - 4.00pm	Refuse Recycling Greenwaste
Dalefield Road Transfer Station (Carterton District)	Carterton DC / Wairarapa Environmental	Mon – Saturday 9am - 11am Sunday 2.30 pm - 4.30 pm	Refuse Recycling Greenwaste
Woods Waste (Ngaio, Wellington)	Woods Waste	No public access	Refuse Recycling

3.1.3 Closed Landfills

Most closed landfills in the Wellington region have become open space areas and are used as sports fields or passive recreation reserves. In many cases, the extent of the fill in the closed landfill is not known with any degree of accuracy. There are approximately 80 closed landfill sites in the Wellington region, of which 33 are within Wellington City Council area.

3.1.4 Cleanfills (Class 2-4 Landfills)

The Greater Wellington Regional Council describes cleanfills and their management within the region as follows:

As the name suggests, cleanfills can only accept clean "non-polluting" waste. This means that material like concrete, dirt, bitumen and some construction rubble is ok. Materials like household rubbish, old timber, car wrecks, reinforcing steel or corrugated iron is not ok. Non-clean waste must be disposed of at a landfill.

Cleanfill operations don't have problems with leachate, landfill gas, odour, rats and so on. This means that, provided they only accept clean waste, the Regional Council doesn't require any resource consent for them to operate. Landfills must have site-specific management plans and the Regional Council requires them to make sure that contaminants in the waste do not leak out and pollute the environment, or affect people's health.

Cleanfills are controlled in the Regional Plan for Discharges to Land. Discharges of dust associated with cleanfills are controlled in the Regional Air Quality Management Plan. The deposition of material in rivers and lakes is controlled in the Regional Freshwater Plan. The deposition of material in the coastal marine area is controlled in the Regional Coastal Plan.⁸

The Greater Wellington website also references the MfE's 2002 "A Guide to the Management of Cleanfills". In the document, "cleanfill" is defined as:

Material that when buried will have no adverse effect on people or the environment. Cleanfill material includes virgin natural materials such as clay, soil and rock, and other inert materials such as concrete or brick that are free of:

- *combustible, putrescible, degradable or leachable components*
- *hazardous substances*
- *products or materials derived from hazardous waste treatment, hazardous waste*
- *stabilisation or hazardous waste disposal practices*
- *materials that may present a risk to human or animal health such as medical and*
- *veterinary waste, asbestos or radioactive substances*
- *liquid waste.*

⁸ <http://www.gw.govt.nz/Cleanfills/>. Management of air quality, freshwater and coastal issues is expected to be brought together under the proposed Natural Resources Plan

In April 2016, the Waste Management Institute of New Zealand (WasteMINZ) released the final version of *Technical Guidelines for Disposal to Land*. These guidelines set out new standards for disposal of waste to land and, if the Regional Council implements the new guidelines, then there will be significant changes to the operation of cleanfill sites in the region, including tighter controls. In the 'Technical Guidelines for Disposal to Land' (2016)⁹ the following definitions are given:

Class 1 - Landfill

A Class 1 landfill is a site that accepts municipal solid waste as defined in this Guideline. A Class 1 landfill generally also accepts C&D waste, some industrial wastes and contaminated soils. Class 1 landfills often use managed fill and clean fill materials they accept, as daily cover.

Class 1 landfills require:

- *a rigorous assessment of siting constraints, considering all factors, but with achieving a high level of containment as a key aim;*
- *engineered environmental protection by way of a liner and leachate collection system, and an appropriate cap, all with appropriate redundancy; and*
- *landfill gas management.*

A rigorous monitoring and reporting regime is required, along with stringent operational controls. Monitoring of accepted waste materials is required, as is monitoring of sediment runoff, surface water and groundwater quality, leachate quality and quantity, and landfill gas.

Waste acceptance criteria comprises:

- *municipal solid waste; and*
- *for potentially hazardous leachable contaminants, maximum chemical contaminant leachability limits (TCLP) from Module 2 Hazardous Waste Guidelines – Class A4.*

WAC for potentially hazardous wastes and treated hazardous wastes are based on leachability criteria to ensure that leachate does not differ from that expected from nonhazardous municipal solid waste.

For Class 1 landfills, leachability testing should be completed to provide assurance that waste materials meet the WAC.

Class 2 Landfill

A Class 2 landfill is a site that accepts non-putrescible wastes including C&D wastes, inert industrial wastes, managed fill material and clean fill material

⁹ Technical Guidelines for the Disposal to Land. WasteMINZ , April 2016

as defined in these Guidelines. C&D waste can contain biodegradable and leachable components which can result in the production of leachate – thereby necessitating an increased level of environmental protection. Although not as strong as Class 1 landfill leachate, Class 2 landfill leachate is typically characterised by mildly acidic pH, and the presence of ammoniacal nitrogen and soluble metals, including heavy metals. Similarly, industrial wastes from some activities may generate leachates with chemical characteristics that are not necessarily organic.

Class 2 landfills should be sited in areas of appropriate geology, hydrogeology and surface hydrology. A site environmental assessment is required, as are an engineered liner, a leachate collection system, and groundwater and surface water monitoring. Additional engineered features such as leachate treatment may also be required.

Depending on the types and proportions of C&D wastes accepted, Class 2 landfills may generate minor to significant volumes of landfill gas and/or hydrogen sulphide. The necessity for a landfill gas collection system should be assessed.

Operational controls are required, as are monitoring of accepted waste materials, monitoring of sediment runoff, surface water and groundwater quality, and monitoring of leachate quality and quantity.

Waste acceptance criteria comprises:

- *Waste acceptance criteria comprise: a list of acceptable materials; and*
- *maximum ancillary biodegradable materials (e.g. vegetation) to be no more than 5% by volume per load; and*
- *maximum chemical contaminant leachability limits (TCLP) for potentially hazardous leachable contaminants.*

For Class 2 landfills, leachability testing should be completed to provide assurance that waste materials meet the WAC.

Class 3 Landfill – Managed/Controlled Fill

A Class 3 landfill accepts managed fill materials as defined in these Guidelines. These comprise predominantly clean fill materials, but may also include other inert materials and soils with chemical contaminants at concentrations greater than local natural background concentrations, but with specified maximum total concentrations.

Site ownership, location and transport distance are likely to be the predominant siting criteria. However, as contaminated materials (in accordance with specified limits) may be accepted, an environmental site assessment is required in respect of geology, stability, surface hydrology and topography.

Monitoring of accepted material is required, as are operational controls, and monitoring of sediment runoff and groundwater.

Waste acceptance criteria comprises:

- *a list of acceptable solid materials; and*
- *maximum incidental or attached biodegradable materials (e.g. vegetation) to be no more than 2% by volume per load; and*
- *maximum chemical contaminant limits.*

A Class 3 landfill does not include any form of engineered containment. Due to the nature of material received it has the potential to receive wastes that are above soil background levels. The WAC criteria for a Class 3 landfill are therefore the main means of controlling potential adverse effects.

For Class 3 landfills, total analyte concentrations should be determined to provide assurance that waste materials meet the WAC.

Class 4 Landfill - Cleanfill

Class 4 landfill accepts only clean fill material as defined in these Guidelines. The principal control on contaminant discharges to the environment from Class 4 landfills is the waste acceptance criteria.

Stringent siting requirements to protect groundwater and surface water receptors are not required. Practical and commercial considerations such as site ownership, location and transport distance are likely to be the predominant siting criteria, rather than technical criteria.

Clean filling can generally take place on the existing natural or altered land without engineered environmental protection or the development of significant site infrastructure. However, surface water controls may be required to manage sediment runoff.

Extensive characterisation of local geology and hydrogeology is not usually required. Monitoring of both accepted material and sediment runoff is required, along with operational controls.

Waste acceptance criteria comprises:

- *virgin excavated natural materials (VENM), including soil, clay, gravel and rock; and*
- *maximum incidental inert manufactured materials (e.g. concrete, brick, tiles) to be no more than 5% by volume per load; and*
- *maximum incidental or attached biodegradable materials (e.g. vegetation) to be no more than 2% by volume per load; and*
- *maximum chemical contaminant limits are local natural background soil concentrations.*

Materials disposed to a Class 4 landfill should pose no significant immediate or future risk to human health or the environment.

The WAC for a Class 4 landfill should render the site suitable for unencumbered potential future land use, i.e. future residential development or agricultural land use.

The WAC for a Class 4 landfill are based on the local background concentrations for inorganic elements, and provide for trace concentrations of a limited range of organic compounds.

Note: The Guidelines should be referred to directly for the full criteria and definitions.

For some types of waste, Class 2-4 landfills are competing directly with Class 1 landfills. However, Class 2-4 landfills are much less costly than Class 1 landfills to establish and require much lower levels of engineering investment to prevent discharges into the environment. Class 2-4 landfills also have much lower compliance costs than landfills. Because of these differing cost structures, cleanfills charge markedly less for disposal than Class 1 landfills. In Wellington charges for depositing cleanfill materials currently average approximately \$10 per cubic metre.¹⁰

The currently consented and active Class 2-4 landfills sites in the region are listed in Table 7.

Table 7: Consented and Active Class 2-4 Landfills

Name/Operator	Location	Class	Consent Expiry (earliest applicable)
Carterton Transfer Station	Dalefield Road, Carterton District	4	
T&T Landfill	289 Happy Valley Rd, Owhiro Bay, Wellington 6023	4	Jun 2049
C&D Landfill	Landfill Rd, Happy Valley, Wellington City	2	Jun 2026
Masterton landfill	Nursery Rd, Masterton District	4	Sep 2045
Colonial Knobb Farm Holdings Ltd	32 Broken Hill Road, Porirua, City	4	Sep 2039
Kalanmac Holdings Ltd	Kiln Street, Silverstream, Upper Hutt City	4	
Wainuiomata landfill (closed landfill)	Coast Road, Wainuiomata, Hutt City	4	Oct 2019
Higgins Quarry	Kāpiti Coast District	4	Feb 2049

The consent conditions for each of these sites are different. For example, the range of materials which can be disposed of at each site may vary as well as reporting requirements, and permitted discharges.

¹⁰ Personal communication with C&D Landfill and T&T Landfill, Nov 2015

While there are a large number of consented fill sites, the number of these that are actively accepting material at any one time is difficult (if not impossible) to estimate. Many fill sites accept material for limited periods of time, meaning sites are continually opening and closing.

3.1.5 Assessment of Residual Waste Management Infrastructure

While the region is well-served in terms of disposal facility infrastructure overall, access to those facilities is restricted in certain areas – most notably the Wairarapa, which sends material for disposal to Bonny Glen – 150km away. Similarly, cleanfill disposal access is uneven with some areas having no immediate access to consented fills.

3.2 Hazardous Waste Facilities and Services

The hazardous waste market comprises both liquid and solid wastes that, in general, require further treatment before conventional disposal methods can be used. The most common types of hazardous waste include:

- Organic liquids, such as those removed from septic tanks and industrial cesspits
- Solvents and oils, particularly those containing volatile organic compounds
- Hydrocarbon-containing wastes, such as inks, glues and greases
- Contaminated soils (lightly contaminated soils may not require treatment prior to landfill disposal)
- Chemical wastes, such as pesticides and agricultural chemicals
- Medical and quarantine wastes
- Wastes containing heavy metals, such as timber preservatives
- Contaminated packaging associated with these wastes.

A range of treatment processes are used before hazardous wastes can be safely disposed.

Most disposal is either to Class 1 landfills or through the trade waste system. Some of these treatments result in trans-media effects, with liquid wastes being disposed of as solids after treatment. A very small proportion of hazardous wastes are 'intractable', and require exporting for treatment.

These include polychlorinated biphenyls, pesticides, and persistent organic pollutants.

There are a number of participants in the Wellington region's hazardous waste market. Table 8 contains known hazardous waste operators in the region.

Table 8: Hazardous Waste Operators

Name	Location
Chemwaste Industries (part of EnviroWaste Technical Services Ltd)	Seaview, Hutt City
Enviropaints Ltd	Ōtaki, Kāpiti Coast
Waste Management Technical Services	Seaview, Hutt City
InterWaste Services	Broken Hill Rd, Porirua
Dawson Waste Services	Owhiro Bay, Wellington
Waste Petroleum Combustion (Oil Recovery ¹¹)	Throughout North Island

Domestic quantities (up to 20kg or 20 litres) of hazardous waste may be dropped off at the Hazmobile (supported by the Greater Wellington and Hutt Valley Councils) when it is in service.

The Hazmobile will accept:

- Paint, stains and varnishes
- Paint stripper
- Petrol and oil
- Thinners and degreasers
- Garden chemicals
- Cleaning chemicals
- Gas cylinders
- Fluorescent bulbs
- Batteries
- Pool chemicals

The Hazmobile does not accept electronics, asbestos, medical waste or needles, ammunition, or explosives.¹²

In addition, some of the Councils' resource recovery facilities offer drop-off facilities for domestic quantities of hazardous waste.

Hazardous waste from commercial operations, or hazardous waste that is not accepted at the Councils' landfill facilities, can be handled by the commercial hazardous waste operators.

The Agrecovery Rural Recycling programme operates in the Wellington region with drop-off points at Martinborough, Masterton, and Ōtaki. This programme provides New

¹¹ <http://www.oilrecovery.co.nz/waste-oil-collection-recovery/regular-collection/>

¹² [http://www.gw.govt.nz/Got-hazardous-waste-Go-to-the-Hazmobile-/
http://www.eventfinda.co.nz/2015/hazmobile/lower-hutt](http://www.gw.govt.nz/Got-hazardous-waste-Go-to-the-Hazmobile-/)

Zealand’s primary sector with responsible and sustainable systems for the recovery of ‘on farm’ plastics and the disposal of unwanted chemicals. It currently provides three nationwide programmes:

- **Containers** for the recovery of agrichemical, animal health and dairy hygiene plastic containers
- **Wrap** for the recovery of used silage wrap and pit covers
- **Chemicals** for the disposal of unwanted and expired chemicals in agriculture

The Masterton District Council site at Nursery Road accepts domestic quantities of “hazardous” waste that are periodically removed from the site by a licensed contractor, who provides certification of its disposal.

3.3 Recycling and Reprocessing Facilities

Waste processing and recycling facilities that handle materials collected in the Wellington region are listed in the following table.

Table 9: Details of Facilities

Facility Type	TA Area	Materials	Description
Composting	Wellington	Accepts food waste and greenwaste	Capital Compost. Static pile windrow, Southern landfill
	Kāpiti	Accepts greenwaste	Composting NZ. Static pile windrow
	Masterton	Accepts greenwaste	Nursery Road, Static pile windrow
	Hutt City	Nappies and greenwaste	Envirocomp, Hot Rot in-vessel
C&D Waste	Wellington	Timber, metal, concrete, brick etc.	Woods Waste -
Drop Off	Hutt City	Cans, bottles, paper and card	4 Council drop off sites
		Used paint	2 Paintwise paint drop off points
		Nappies	1 Envirocomp site
		Soft plastics (plastic bags)	Various retail sites (Warehouse, NW and Pak’nSave)
	Kāpiti	Used paint	1 Paintwise paint drop off point
		Soft plastics (plastic bags)	Various retail sites (Warehouse, NW and Pak’nSave)
		Household hazardous	Otaihanga RRF
	Masterton	Used paint	1 Paintwise paint drop off point

Facility Type	TA Area	Materials	Description
Drop-off		Soft plastics (plastic bags)	Various retail sites (Warehouse, NW and Pak'nSave)
		Farm plastics	1 Agrecovery site
	Porirua	Used paint	1 Paintwise paint drop off point
		Soft plastics (plastic bags)	Various retail sites (Warehouse, NW and Pak'nSave)
	South Wairarapa	Cans, bottles, paper and card	2 Council drop off sites
		Farm plastics	1 Agrecovery site
	Upper Hutt	Used paint	1 Paintwise paint drop off point
		Nappies	1 Envirocomp site
		Soft plastics (plastic bags)	Various retail sites (Warehouse, NW and Pak'nSave)
		Greenwaste	Taken to CNZ in Paraparaumu
	Wellington	Used paint	4 Paintwise paint drop off points
		Nappies	8 Envirocomp sites
Soft plastics (plastic bags)		Second Treasures (Southern Landfill) and Various retail sites (Warehouse, NW and Pak'nSave)	
E-waste (drop off)		Second Treasures (Southern landfill)	
E-waste processing	Wellington	E-waste dismantling, refurbishment and reuse	ReMarkIT
	Hutt City	E-waste	IT Recycla
	Masterton	E-waste dismantling, refurbishment and reuse	Wairarapa Resource Centre
	Upper Hutt	E-waste dismantling, refurbishment and reuse	Earthlink
Glass processing	Kāpiti	Glass crushing and paving manufacture	Silaca Glass Crushers
Hazardous	Hutt City	Hazardous and chemical wastes	Transpacific, Gracefield

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Facility Type	TA Area	Materials	Description
	Porirua	Hazardous quarantine and medical waste	Broken Hill Rd, Porirua
	Wellington	Free drop off of domestic hazardous wastes	Up to 20L /kg per visit, Southern landfill
MRF	Hutt City	Kerbside collected mixed recyclables	2 Facilities: OJI MRF, WAM MRF
	Masterton	Further separation of kerb sorted recyclables	Wairarapa Environmental MRF
Other organic	Wellington	Food rescue	Kaibosh and Kiwi Community Assistance
Plastics Reprocessing	Porirua	Polystyrene	Poly Palace. Remanufacture into panel insulation products
Reuse Stores	Hutt City	Building materials	Various
		Household items	EarthLink
		Cartridges	Cartridge World
		Car parts	Various
	Kāpiti	Household Items	
		Building materials	Kāpiti Building Recyclers Ltd, Ace Building Recycle Barn
		Household items	Otaihanaga RRC, and Ōtaki RTS
		Cartridges	Cartridge World, Second Image
	Masterton	Car parts	Various
		Building materials	Renovators Ltd, Rummages
	Porirua	Household Items	Wairarapa Resource Centre
		Building materials	The Building Recyclers
		Household items	Trash Palace
		Cartridges	Cartridge World
	Upper Hutt	Car parts	Various
		Building materials	Ironman Building Recyclers, James Henry Joinery
		Cartridges	Cartridge World
	Wellington	Car parts	Various
		Building materials	No.8 Recyclers
		Household items	Second Treasures (Southern landfill)
Cartridges		Cartridge World	
		Car parts	Various

Facility Type	TA Area	Materials	Description
Scrap Metal	Hutt City	Ferrous and non-ferrous	Macaulay Metals, Ingot Scrap Metals, Sims Pacific, General Metal Recyclers, Total Recycling Ltd
	Kāpiti	Ferrous and non-ferrous	Rameka Metal Recyclers Ltd
	Masterton		Wairarapa Scrap Metals Ltd
	Porirua		Ingot Scrap Metals, Wellington Scrap Metals
	Upper Hutt		Upper Hutt Metals
	Wellington	Ferrous and non-ferrous	Wellington Scrap Metals
Rendering	Wellington	Animal by-products from meat processing	Taylor Preston Ltd

3.3.1 Assessment of Recycling and Reprocessing Facilities

While the region has a good range of recycling and reprocessing facilities, overall the ability to access these from all parts of the region is restricted.

To date there has been a notable issue in respect of the provision of recyclable material recovery facilities (MRF). While there are three facilities (one in Masterton and two in Seaview, Hutt City), access to these has been restricted to the facility operators and their direct contractors. This has impeded competition in the private recycling collection market, with one operator having to transport collected recyclable material to Palmerston North for processing, adversely affecting the economics of their service. During the course of developing this Waste Assessment, one of the MRF operators, OJI, initiated the construction of a new larger, automated MRF with sufficient capacity to accept material from around the region, and from different operators. At the time of writing the facility had been constructed and was undergoing testing. It is expected to become fully operational in before the end of-2016.

Organic waste processing facilities are also unevenly spread, with garden waste collected in the Hutt Valley and Porirua being transported to Paraparaumu for composting. While the Capital Composting facility at Southern landfill accepts food waste for processing in windrows, the quantity of food waste processed is small, and there is not a facility in the region that would be capable of, for example, processing large amounts of recovered food and catering waste or biosolids.

Construction and demolition (C&D) waste sorting facilities are not well represented. Woods Waste operates out of Wellington central and some materials are separated at Southern landfill and at C&D landfill, but there is a notable lack of dedicated C&D sorting and processing facilities. These facilities separate out metals, wood, concrete and brick, plasterboard, and some plastics for recovery.

While there is a range of drop-off facilities provided across the region, there is no standardisation of these facilities and the range of materials that are accepted is variable.

Similarly, reuse stores are variable and generally dependent on the presence of local community groups for their operation.

Within the context of current legislative and policy arrangements, there is reasonable provision for e-waste collection and recovery within the region – although still room for greater levels of recovery.

The recovery of polystyrene has been led by Poly Palace and WAM at Seaview RTS. It is understood that Poly Palace has recently announced its closure. While other plastics are collected for processing there is no local processing market for these materials.

4.0 Waste Services

4.1 Council Waste Services

4.1.1 Council-contracted Collection Services

The tables below outline the key Council-provided refuse and recycling collection services.

4.1.1.1 Kerbside Collection of Refuse

Table 10: Council Kerbside Refuse Collections

Council	Kerbside collection service	Charges/funding	Refuse collection contractor	Contract review dates
Carterton District Council	User pays bags (weekly)	\$2.70	Earthcare Environmental Ltd.	2017
Hutt City Council	User pays bags (weekly)	\$2.50	Transpacific Allbrite	Dec 2019
Kāpiti Coast District Council	No Council service	N/A	N/A	N/A
Masterton District Council	User pays bags (weekly)	\$3.20	Earthcare Environmental Ltd.	2017
Porirua City Council	User pays bags (weekly)	\$2.50	Waste Management NZ Ltd	1/09/2011 3 years +1+1
South Wairarapa District Council	User pays bags (weekly)	\$8 /10pk (part rates funded)	Earthcare Environmental Ltd.	2017
Upper Hutt City Council	User pays bags (weekly)	Varies.	Waste Management NZ Ltd	30 October 2016 + 2
Wellington City Council	User pays bags (weekly)	\$2.50	EnviroWaste Services Ltd	Expiry:2nd August 2019 Rights of Extension: 3 years after

4.1.1.2 Kerbside Recycling Collection

Table 11: Council Kerbside Recycling Collections

Council	Kerbside collection service	Materials	Refuse bag/wheelie bin collection contractor	Contract review dates
Carterton District Council	Kerb sort 2 55L crates (paper & card separate) (weekly)	Paper, cardboard, glass bottles, plastic containers 1-7*, steel and aluminium cans	Earthcare Environmental Ltd.	2017
Hutt City Council	Kerb sort 55L crate (weekly)	Paper, cardboard, glass bottles, plastic containers 1-7*, steel and aluminium cans	Transpacific Allbrite	Dec 2019
Kāpiti Coast District Council	Private service provision	Through bylaw provisions, private service providers must collect: paper, cardboard, glass bottles, plastic containers 1-7, steel and aluminium cans	N/A	N/A
Masterton District Council	Kerb sort 2 55L crates (paper & card separate) (weekly)	Paper, cardboard, glass bottles, plastic containers 1-7*, steel and aluminium cans	Earthcare Environmental Ltd.	2017
Porirua City Council	Kerb sort 60L crate (weekly)	Paper, cardboard, glass bottles, plastic containers 1-7*, steel and aluminium cans	Waste Management NZ Ltd	1/09/2011 3 years +1+1
South Wairarapa District Council	Kerb sort 2 55L crates (paper & card separate) (weekly)	Paper, cardboard, glass bottles, plastic containers 1-7*, steel and aluminium cans	Earthcare Environmental Ltd.	2017
Upper Hutt City Council	Private service provision	N/A	N/A	N/A

Council	Kerbside collection service	Materials	Refuse bag/wheelie bin collection contractor	Contract review dates
Wellington City Council	2 stream: glass in 45L crate, mixed in 140L wheeled bin or recycling bag	Paper, cardboard, glass bottles, plastic containers 1-7*, steel and aluminium cans	EnviroWaste Services Ltd	Expiry: 2nd August 2019 Rights of Extension: 3 years after

*Excluding polystyrene (plastic number 6)

The data on Council-provided services from the previous two tables is summarised in the two following tables.

Table 12: Summary of Council Services

	Rubbish		Recycling	
	Containers	Charges (RRP)	Containers	Materials
Carterton		\$2.70	 	Paper, glass, cans, plastic 1-7
Hutt		\$2.50	 	Paper, glass, cans, plastic 1-7
Kāpiti	Services provided by private sector			
Masterton		\$3.20	 	Paper, glass, cans, plastic 1-7
Porirua		\$2.50	 	Paper, glass, cans, plastic 1-7
South Wairarapa		\$0.80	 	Paper, glass, cans, plastic 1-7
Upper Hutt		Varies	Services provided by private sector	
Wellington		\$2.50	 	Paper, glass, cans, plastic 1-7

Table 13: Summary of Council Contracts and Renewal Dates

Council (consent expiry)	Refuse Collection	Recycling Collection	RTS/RRC	Composting	Transport	Landfill
Carterton	Earthcare Environmental (2017)	Earthcare Environmental (2017)	Earthcare Environmental (2017)	Earthcare Environmental (2017)	Earthcare Environmental (2017)	
Hutt	Waste Management NZ Ltd (2019)	Waste Management NZ Ltd (2019)	Earthlink			Waste Management NZ Ltd (2021)
Kāpiti			Otaihanaga lease Midwest (2023) Waikanae Composting NZ (2017) Ōtaki ESL (2018)	Composting NZ (2022)	EnviroWaste Services Ltd (ongoing)	Otaihanaga cleanfill & biosolids Composting NZ (2016)
Masterton	Earthcare Environmental (2017)	Earthcare Environmental (2017)	Earthcare Environmental (2017)	Earthcare Environmental (2017)	Earthcare Environmental (2017)	
Porirua	Waste Management NZ Ltd (2016)	Waste Management NZ Ltd (2016)	Metallic Sweepings Ltd			EnviroWaste Services Ltd (2018)
South Wairarapa	Earthcare Environmental (2017)	Earthcare Environmental (2017)	Earthcare Environmental (2017)	Earthcare Environmental (2017)	Earthcare Environmental (2017)	
Upper Hutt	Waste Management NZ Ltd (2018)					
Wellington	EnviroWaste Services Ltd (2022)	Collection EnviroWaste Services Ltd (2022) Processing OJI (2026)	WCC Owner / Operator Kai to Compost Operations divested December 2015	WCC Owner / Operator		HG Leach (2019)

4.1.2 Waste Education and Minimisation Programmes

Most Councils in the region provide a level of waste minimisation education and support for community waste minimisation initiatives. These programmes generally promote appropriate waste management behaviour such as reuse, recycling, recovery, and treatment required.

Programmes that focus on raising awareness and encouraging positive action are implemented in the wider community, with schools, businesses and community groups, or at community events. They are commonly run in partnership with a range of agencies and organisations including EarthLink, Sustainability Trust, Greater Wellington Regional Council, EnviroSchools Foundation, and Keep Porirua Beautiful.

Current educational initiatives undertaken by each of the councils is shown in the table below:

Table 14: Council Waste Education and Minimisation Programmes

Council	Schools	Community	Business
Carterton District Council		Waste minimisation advice Wairarapa Waste Management Environmental Awards	Promote Cleaner Production Wairarapa Waste Management Environmental Awards
Hutt City Council	World of Waste tours EnviroSchools	Bike Tech (bike re-use) Eco Fashion Show	Greening your business Silver Lining (product redesign and use of recovered materials)
Kāpiti Coast District Council	EnviroSchools	Eco Design Advisor (Sustainable home advice) Waste Reduction Grants	Waste Reduction Grants
Masterton District Council	EnviroSchools Paper 4 Trees	Waste minimisation advice Wairarapa Waste Management Environmental Awards	Promote Cleaner Production Wairarapa Waste Management Environmental Awards
Porirua City Council	Trash Palace Education Programme EnviroSchools	Support Trash Palace, public waste minimisation workshops (for example, composting and recycling workshops) for the local community Waste minimisation advice to households	Work with Porirua businesses to support waste minimisation and develop recycling systems

31/07/2016

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Council	Schools	Community	Business
		through various media Te Maara Community garden and community compost facility Support the annual Housing New Zealand Makeover week Reusable nappy hire service and reusable nappy making workshops,	
South Wairarapa District Council		Waste minimisation advice Wairarapa Waste Management Environmental Awards	Promote Cleaner Production Wairarapa Waste Management Environmental Awards
Upper Hutt City Council	Enviroschools	Website information and promotion via local newspapers	Subsidised waste audits for community and business Eco design advisor
Wellington City Council	Enviroschools Sustainability Trust Waste Audits 1 FTE Waste Education Officer providing school visits, landfill and Recycle Centre tours, compost workshops, free compost/worm farm resources Waste Minimisation Grant Fund & School Recycling Grant Fund	Waste Minimisation Grant Fund Landfill and Recycle Centre tours, educational stalls at events, free event recycling bins & hoods for use Website information Brochures	Waste Minimisation Grant Fund awarded to Sustainability Trust in 2015 to complete 10 business waste audits within the year

4.1.2.1 Wellington Region Waste Minimisation Education Strategy

In 2013, the combined Councils in the region produced the *Wellington Region Waste Minimisation Education Strategy (WMES)*, which sets out a vision, aims and objectives and a range potential areas for combined action. The areas for action identified are summarised in the table below:

Education (E) Initiatives	Sectors		
	Residential	Businesses	Schools
E1: Organics	Organics investigation and subsequent WMES funding proposal. The key sectors to be addressed will be further clarified after a more detailed investigation of the regions organics waste stream. Interim promotion of diversion options for residents and businesses while the investigation is on-going.		Regional (or national) toolkits and programmes – investigate options and opportunities for promoting uptake of regionally available toolkits and programmes
E2: Paper	Regional (generic) promotion of kerbside recycling	Working with business and the public to promote waste minimisation, thereby reducing waste related costs for consumers and businesses alike	
E3: Plastics			
E4: Timber	Timber investigation (R11) and subsequent WMES funding proposal (if required) – acknowledging the very low cost of some C&D waste disposal options within the Wellington region as a potential barrier to local council influence in this area. Interim promotion of diversion options for residents and businesses while the investigation is on-going.		
E5: Events	Develop and promulgate regional resources for waste minimisation at events		
E6: Communications	The communication of consistent messaging using a common brand is important to ensure communities and businesses are able to recognise and easily access relevant and useful information. For example, generic promotion of kerbside recycling. This is also important for achieving stakeholder input and buy-in on shared/common goals		
E7: Littering	Investigate a regional approach to education on littering and promoting community led clean-ups		
E8: e-Waste	The promotion of reuse and recycle centres around the region		

Source: Wellington Region Waste Minimisation Education Strategy (2013)

4.1.3 Other Council Services

In addition to the services described above, there are other waste-related programmes and services provided by the Councils. All the Councils undertake rates-funded clean ups of illegal dumping, and provide litter bins in public places. Porirua City, Upper Hutt City, Hutt City, and Wellington City are all members of the Public Place Recycling scheme and provide public place recycling bins in key areas.

4.1.4 Solid Waste Bylaws

In addition to key strategic waste infrastructure assets, the Councils also have responsibilities and powers as regulators through the statutory obligations placed upon them by the WMA. The Councils operate in the role of regulator with respect to:

- Management of litter and illegal dumping under the Litter Act 1979
- Trade waste requirements
- Nuisance related bylaws.

Under the WMA, the Councils were required to review their waste bylaws by July 2012. Waste-related bylaws must not be inconsistent with the Councils' WMMPs. Table 15 summarizes the current scope of solid waste bylaws throughout the region.

Table 15: Solid Waste Bylaws - Wellington Region

Council	Date	Licensing provisions	Approved Containers	Restrictions on materials	Events	Collection requirements	Facility requirements
Carterton							
Hutt	2008		✓			✓	
Kāpiti	2010	✓	✓	✓ (haz)	✓	✓	
Masterton	2012	✓ ¹³		✓ (haz)		✓	
Porirua	2009		✓	✓		✓	✓
South Wairarapa	2012	✓ ¹³		✓ (haz)		✓	
Upper Hutt	2005	✓ ¹³		✓ (haz)		✓	✓
Wellington	2008		✓	✓		✓	✓

A number of the bylaws are very similar and use similar wording (e.g. Masterton and Upper Hutt), but overall there is little standardisation in what the bylaws cover and how they address key issues. Key issues that could be addressed through a more standardised approach to bylaws include:

¹³ The bylaw contains a clause requiring Council consent and providing for the Council to impose conditions but it is not a formal licensing clause

- Licensing of operators and facilities
- Restrictions on material that is collected and landfilled
- Definitions
- Allowance for technology change
- Events
- Tyres and other difficult wastes
- Controls over private collectors of residual wastes
- Collection containers (e.g. colours)
- Container restrictions (e.g. 240-litre wheeled bin bans)
- Multi-unit dwellings, rural waste
- Collection areas and days
- Cleanfills.

It is understood that the Councils of the region have agreed to progress the development of a regional solid waste bylaw (as approved by the Councils in 2011), and that work on this will be advanced within the period of the current WMMP. If the regional bylaw is in place by 2016/17, this will fall inside the timeframe for the statutory review of the Councils' current bylaws.

4.1.5 Funding for Council Services

Table 16: Summary of 2014/15 Annual Reports

Council	Expenditure (\$000)				Income (\$000)				
	Landfill/ RTS	Collections	Other ¹⁴	Total	User Charges	General Rates	Targeted Rates	Levy & Other	Total
Carterton	\$405	\$291		\$695	\$187	\$189	\$340	\$29	\$745
Hutt*		\$8,062		\$8,062	\$13,888		-\$5,887	\$61	\$8,062
Kāpiti	\$682		\$1,034 ¹⁵	\$1,734	\$531		\$636	\$172	\$1,339
Masterton	\$2,139	\$576	\$732	\$3,447	\$2,516	\$308	\$466	\$157	\$3,447
Porirua	\$3,740	\$1,404		\$5,144	\$6,453	\$283	\$260	\$1,852	\$5,144
South Wairarapa*	\$1,093	\$384		\$1,477	\$318	\$718	\$432		\$1,468
Upper Hutt*		\$232		\$232	\$594		-\$363	\$1	\$232
Wellington	\$4,195	\$8,090	\$1,661	\$13,946	\$13,253	\$0	\$0	\$1,335	\$14,589

Source: Data provided by TAs except where indicated by * data from Annual Reports 2014/15

¹⁴ Includes a range of services including interest on capital, education, projects etc.

¹⁵ includes depreciation on capex loans of \$394,456 that is not funded through rates

The table above shows the different ways in which the Council's services are funded across the region. Expenses range from \$232,000 in Upper Hutt to \$13.9 million in Wellington City.

All Councils have some level of cost recovery through user-charges. In Hutt City, user-charges substantially exceed operating costs and result in approximate \$5.9 million being returned to general rates. This operating surplus is understood to be primarily from Silverstream landfill.

Upper Hutt City also produces a small surplus from income (also as a result of a return from Silverstream landfill). Upper Hutt does supply a Council-contracted refuse collection service, but this is understood to be cost-neutral, as the operator directly receives all bag sales income as compensation for providing the service.

Wellington largely breaks even, with user charges all but offsetting the costs of waste management and minimisation including refuse and recycling collections. Again landfill income is understood to be the primary source of income.

By contrast the Wairarapa Councils all have a much higher rates-burden from waste services, with South Wairarapa meeting nearly 80% of its costs through general and targeted rates while for Carterton it is in the order of 60%. This likely reflects a number of factors, including the costs of providing services to a predominantly rural district, and relatively high costs of transport and disposal for residual waste.

4.2 Current Joint Solid Waste Initiatives/Services

The Councils currently work together on a number of shared services initiatives. These include:

- Landfill ownership and management – Wellington and Porirua have joint ownership of Spicers landfill, Hutt and Upper Hutt are both shareholders in the gas system at Silverstream landfill
- Facility usage – Hutt and Upper Hutt– agreement for usage of Silverstream landfill, all Councils in the Wairarapa use Masterton's Nursery Road Resource Recovery Centre
- Bulk haulage – the Wairarapa councils have a joint agreement for haulage of waste to landfill
- Waste management and minimisation planning – all the Councils of the region are participating in the development of the waste assessment and joint WMMP
- Solid waste bylaws. Work is underway to develop a region-wide solid waste bylaw.
- Innovation, trials – disposal options for sewage sludge - Wellington City, Porirua City and Kāpiti Coast District
- Masterton, Carterton, and South Wairarapa Districts have a joint waste and recycling contract
- Waste Minimisation Education Strategy. Actions include Nappy Lady (Green Parenting) workshops, eco-mailbox stickers, zero waste events, video resources, and food waste investigation (which led to the national 'Love Food Hate Waste' campaign)

- Initiated the development of the national 'Love Food Hate Waste' campaign

4.2.1 Assessment of Council Services

4.2.1.1 Assessment of Collection Services

There is a range of collection services and approaches to the provision of these services. While there is some justification for tailoring local service provision to the needs of local communities, there is potentially substantial benefit in greater standardisation of these services and adoption of industry best practice.

While there is far from a consensus around best practice collection and processing systems, there is a convergence towards certain systems in new contracts – notably two-stream collection of recyclable materials, with glass collected separately (as is undertaken in Wellington City), and a growing move towards smaller (80-140-litre) wheeled bins for refuse.

A key issue is the implementation of the new Health and Safety at Work Act 2015, which came into force from 1 April 2016. This has put new requirements on the principals to ensure that the safest systems are chosen, with cost being considered insufficient justification for not doing so. This issue will be of particular relevance for most of the Councils in the region, as the majority of systems involve manual handling, which is considered to present greater health and safety risks than automated collection and sorting systems.

The difference in service level provision across the Councils is likely to remain a barrier, however, with two Councils – Kāpiti and Upper Hutt – no longer providing a rates-funded Council recycling collection service, and Kāpiti also withdrawing from direct service provision of residual waste collection. Having moved away from service provision, these Councils may be reluctant to re-enter the collection market in the immediate future.

4.2.1.2 Assessment of Other Services

The provision of other waste services across the different Councils is variable. Most Councils have school environmental education programmes and there are a variety of services available to provide advice and support to the community and businesses in some areas.

All Councils provide litter and illegal dumping clean up, but only four offer public place recycling services.

The solid waste bylaws have potential to be aligned for greater effectiveness and efficiency, particularly around definitions, operator licensing, and data collection.

4.3 Non-Council Services

There are a number of non-Council waste and recycling service providers operating in the region. The number of operators are listed in the table below

Table 17: Waste Collection Services

Number of service providers	Private Residential	Private Commercial	Non Hazardous Special Waste
Carterton	2	2	1
Hutt	9	8	4
Kāpiti	7	5	4
Masterton	2	2	1
Porirua	5	6	4
South Wairarapa	2	2	1
Upper Hutt	4	4	2
Wellington	6	6	3

Refer Appendix A.5.0 for a list of service providers.

Table 18: Diverted Material Services for Businesses

Number of service providers	Recycling	Organic waste	Other (Tyres, e-waste, re-use, etc.)
Carterton	2	2	1
Hutt	6	2	5
Kāpiti	2	1	3
Masterton	2	2	2
Porirua	2	2	4
South Wairarapa	1	2	2
Upper Hutt	2	1	2
Wellington	3	3	4

Table 19: Diverted Material Services for Households

Number of service providers	Recycling	Greenwaste
Carterton	1	2
Hutt	4	3
Kāpiti	4	1
Masterton	1	2
Porirua	2	2
South Wairarapa	1	2
Upper Hutt	3	1
Wellington	1	1

4.3.1 Assessment of Non-Council Services

The waste and recovered materials market is relatively fragmented in terms of both geography and by sector. While the three landfills in the region are Council-controlled, the operation of two of these are contracted to the large waste companies: Waste Management NZ Ltd and EnviroWaste Services Ltd, with the third managed by another significant national landfill operator, HG Leach.

The two large waste companies dominate collections and services within the Wellington metropolitan area, while the Wairarapa is dominated by Wairarapa Environmental, which operates the Council services as well as having a very strong market share of local service provision (as a result of acquiring the small local collection companies).

Of concern to the Councils, with regards to meeting their waste management objectives, is the increasing proportion of the kerbside refuse market controlled by the private waste operators, particularly as the objectives of the private waste operators are at variance to those of the Councils. To increase their market share and their profitability, the private operators in several areas are competing for customers for their subscription services on the basis of price and the convenience of their product. This is of particular concern with regards to any increase in the usage of large wheeled bins. Residential users of large wheeled bins have been shown to dispose of greater quantities of recyclable and compostable materials, such as greenwaste, than users of smaller wheeled bins or user-pays refuse bags¹⁶.

In the resource recovery sector, specialist companies tend to dominate each particular field – for example Macaulays Metals is the largest scrap metal dealer, Composting NZ is the largest composting operator, and Woods Waste dominates the C&D recovery market.

¹⁶ D Wilson (2014) The Horror of 240L Wheeled Bins. Presentation to WasteMINZ Conference 2014

The private sector is generally very good at responding to commercial opportunity and ensuring that services are available where there is a viable demand. Within this, however, it has been noted that there are several areas where the level of private sector service provision is not as great as might be expected. These include:

- Greenwaste collection (only one operator in Wellington and the Hutt, one in Kāpiti Coast, and one in the Wairarapa)
- Private recyclables collections (currently constrained by the availability of sorting facilities, which is likely to ease mid-2016)
- Construction and demolition waste sorting and recovery
- Composting and organic waste processing.

5.0 Situation Review

5.1 Waste to Class 1-4 Landfills

5.1.1 Definitions Used in this Section

The terminology that is used in this section to distinguish sites where waste is disposed of to land are taken from the *National Waste Data Framework* which, in turn, are based on those in the *WasteMINZ Technical Guidelines for Disposal to Land*. The definitions of the four classes of landfills provided in the Guidelines are summarised in the following sections.

5.1.1.1 Class 1 - Municipal Landfill

A Class 1 landfill is a site that accepts municipal solid waste. A Class 1 landfill generally also accepts C&D waste, some industrial wastes, and contaminated soils. Class 1 landfills often use managed fill and clean fill materials they accept as daily cover. A Class 1 landfill is the equivalent of a “disposal facility” as defined in the WMA.

5.1.1.2 Class 2 - C&D/Industrial Landfill

A Class 2 landfill is a site that accepts non-putrescible wastes including construction and demolition wastes, inert industrial wastes, managed fill, and clean fill. C&D waste and industrial wastes from some activities may generate leachates with chemical characteristics that are not necessarily organic. Hence, there is usually a need for an increased level of environmental protection at Class 2 sites.

5.1.1.3 Class 3 – Managed Fill

A Class 3 landfill accepts managed fill materials. These comprise predominantly clean fill materials, but may also include other inert materials and soils with chemical contaminants at concentrations greater than local natural background concentrations.

5.1.1.4 Class 4 - Cleanfill

A cleanfill is a landfill that accepts only cleanfill materials. The principal control on contaminant discharges to the environment from clean fills is the waste acceptance criteria.

5.2 Overview of Waste to Class 1-4 Landfills

In general terms, there are four distinct waste catchments within the Wellington region, delineated by the Rimutaka Ranges and the Tararua Ranges, which separate the Wellington Harbour cities from the Wairarapa and Kāpiti Coast. Most of the waste generated within each of these four catchments is disposed of at a single facility and only minor quantities of waste enter the catchments from outside their boundaries.

Waste from the Wairarapa (Masterton, Carterton, and South Wairarapa Districts) is virtually all disposed of at the privately-owned Bonny Glen Class 1 municipal landfill in Rangitikei District or the council-owned, closed landfill in Masterton District. Each of the

councils operates transfer stations from which the residual waste is taken directly to Bonny Glen landfill. Cleanfill is disposed of at the closed council-owned Masterton landfill, which no longer accepts other wastes.

Kāpiti Coast District waste is primarily disposed of at the Horowhenua District Council-owned Class 1 landfill in Levin. Kāpiti Coast District's waste is aggregated at Otaihanga and Ōtaki transfer stations before being bulk-hauled to Levin landfill. Some waste from Kāpiti Coast District is disposed of at Silverstream landfill. Cleanfill and some special wastes are disposed of at the council-owned landfill at Otaihanga, which is in the process of being capped and closed.

Waste from Upper Hutt City and Hutt City is disposed of primarily at the Hutt City Council-owned Class 1 Silverstream landfill. There is a privately-owned transfer station in Hutt City, from which residual waste is also disposed of at Silverstream landfill. There are three operating Class 4 cleanfills in the catchment. Some waste from these cities may be disposed of at other facilities, but there is no recent data upon which to base an estimate.

Southern and central Wellington City waste is disposed of at the council-owned Class 1 Southern landfill. There are two operating Class 2-4 landfills within Wellington City boundaries.

Porirua City waste and most waste from northern Wellington City (Tawa and Johnsonville) is disposed of at Porirua City Council-owned Class 1 Spicer landfill. There is one Class 2-4 landfill in Porirua City, which is not currently accepting waste.

5.3 Waste Quantities

5.3.1 Waste to Class 1 Landfills

The quantity of waste from the Wellington region that is disposed of at Class 1 landfills has been estimated primarily on an analysis of product codes from weighbridges at Silverstream, Southern, and Spicer landfills, Masterton and Kāpiti coast Districts transfer stations. The landfill operators' waste levy returns have been used to verify the weighbridge data analysis.

The analysis is based on the following:

- The data includes all waste, subject to the exceptions discussed below, being disposed of from the Wellington region to Class 1 landfills, including landfills inside and outside of the region. Minor amounts of cleanfill and special wastes being disposed of at 'closed' Class 1 landfills in the region are also included. These materials are levy exempt.
- The data includes both waste upon which the waste levy has been paid and cleanfill that has been classified by the landfill operator as diverted material for levy return purposes. Data on these waste streams are presented separately. The tonnages for "Levied waste" have been based on the operators' waste levy returns to MfE or on weighbridge records for waste transported from transfer stations to Class 1 landfills.

- An anomalous disposal of 50,000 m³ of sewage sludge by Masterton District Council in 2013 is excluded from the analysis. The disposal represents the clearing of treatment ponds after approximately 35 years use.
- The Wainuiomata landfill, in Hutt City, closed on 31 December 2012. After that time, most of the waste that was disposed of at the facility was disposed of at either the Seaview transfer station, from which waste is transported to Silverstream landfill, or was transported directly to Silverstream landfill.
- The “General” category includes waste from the following activity sources - construction & demolition, domestic kerbside, industrial/commercial/industrial, landscaping, and residential. In a few instances, it also includes cleanfill upon which the waste levy has been paid.
- The “Cleanfill” category comprises materials imported into the landfill sites and given a product code that allows them to be identified as either cleanfill or virgin excavated natural materials. The waste levy has not been paid on the waste materials in this category. In terms of the activity sources of waste, cleanfill includes both virgin excavated natural material and construction and demolition waste.
- Cover material that is sourced within the landfill site has not been included in the analysis. While all three landfills in Wellington region source cover material from within the site, only one records the weight of cover material. In terms of the activity sources of waste, cover material of this sort is virgin excavated natural material.
- Recovered and recycled materials that are identifiable from weighbridge records are *not* included in the waste total. Some of these materials will have been identified in weighbridge records as entering the facility as recycling, while some of the materials will have been recovered from incoming waste. Weighbridge records do generally not allow this differentiation to be made.
- Sludges, while shown separately, are, in terms of activity source, special wastes. The sludges are primarily from wastewater treatment plants.

The estimates for the five financial years 2010/11 to 2014/15 are presented in Table 20 and Figure 13. Tonnages are given for separate waste streams, based on the activity sources of the waste materials. The levied waste data, broken down by disposal facility, is presented in Table 21.

The equivalent tonnage for 2009/10, taken from information in the previous waste assessment, is also shown.

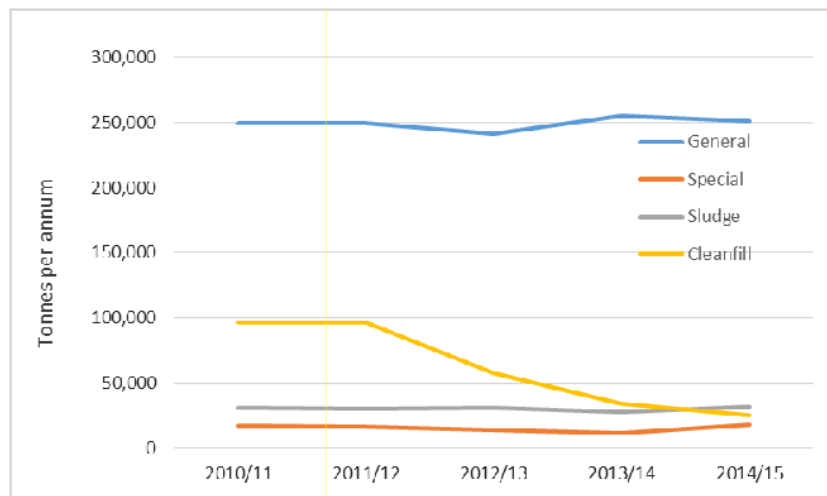
Table 20: Waste to Class 1 Landfills from Wellington Region

Tonnes/annum	2009/10 (1)	2010/11	2011/12	2012/13	2013/14	2014/15
General	-	250,001	249,523	242,849	256,274	252,536
Special	-	16,804	15,862	13,279	10,973	17,717
Sludge	-	30,997	30,035	30,487	27,191	31,823
Levied waste	301,807	297,802	295,421	286,615	294,439	302,076
Cleanfill (2)	-	96,419	96,790	57,903	34,394	24,942
TOTAL	-	394,221	392,211	344,518	328,833	327,018

(1) Derived from information in previous waste assessment

(2) Classified by the landfill operators as 'diverted material' upon which the waste levy has not been paid.

Figure 13: Waste to Class 1 Municipal Landfills from Wellington Region



The four categories of waste display different trends over the five-year timeframe analysed. Tonnages of sludge and special wastes remained relatively consistent through the period analysed. A large, one-off disposal of sewage sludge in 2013/14 has not been included in the analysis.

The tonnages of cleanfill, region-wide, decreased significantly, from 96,000 tonnes in 2010/11 to 25,000 tonnes in 2014/15, a 74% decrease. A significant proportion of this decrease, about 52%, occurred at Southern landfill. This decrease can be associated with an increase in tonnages of waste material in 2010-2012 that was associated with Rugby World Cup developments and significant yard improvements at Wellington Railway Station. Disposal of these materials decreased substantially in subsequent

years. The impact of the global financial crisis on construction activity is likely to also have been a factor. If construction activity increases this could see a reversal of the decline in cleanfill tonnage.

General waste, which includes construction & demolition, domestic kerbside, industrial/commercial/industrial, landscaping, and residential waste, remained relatively consistent through the five years. There was a 1.0% increase in the tonnage of general waste between 2010/11 and 2014/15.

Tonnage data for levied waste disposed of at each of the landfills individually is presented in Table 21. Note that the "TOTAL" row in this table is the same as the "Levied waste" row in Table 20.

Table 21: Levied Waste from Wellington Region - by Class 1 Landfill

Levied waste to Class 1 landfills - Tonnes/annum	2010/11	2011/12	2012/13	2013/14	2014/15
Bonny Glen & Levin	36,603	37,891	40,801	44,097	45,214
Silverstream	95,506	88,685	91,936	117,356	125,885
Southern	80,635	86,928	82,781	81,764	81,492
Spicer	59,353	56,287	56,954	51,222	49,485
Wainuiomata	25,706	25,630	14,143	-	-
TOTAL	297,802	295,421	286,615	294,439	302,076

More detailed data on the quantity of waste disposed of at the individual Class 1 landfills and transfer stations in Wellington region is provided in A.4.1.

5.3.2 Other Waste Disposed of to Land

5.3.2.1 Class 2 - 4 Landfills

As outlined in section 5.2, there are a number of sites other than Class 1 landfills in Wellington region where waste materials are disposed of to land. These sites range from quarries, where only overburden from the site is disposed of, to commercial operations that accept construction and demolition wastes and/or inert cleanfill materials. Council-owned "closed" landfills that no longer accept "household waste" (as defined in the WMA), but do accept cleanfill and small amounts of special waste are not included in the analysis.

While Class 2 - 4 landfills are generally required to obtain resource consents to operate, few are required to report, as a consent condition, to the regional council or a territorial authority on the quantity of materials that are disposed of. As a result, little quantitative

information is available for these sites. This issue is nationwide, and not restricted to the Wellington region. As a 2011 MfE report on non-levied disposal facilities stated¹⁷:

No information about cleanfill quantities was compiled for this report because the few sites with available data are unlikely to be indicative of what is happening around the country.

Two operators of the major Class 2 landfills in Wellington region have provided an estimate for the quantity of material disposed of at their site. This information has been used to estimate the quantity of waste material disposed of at Class 2-4 landfills throughout Wellington region. This estimate is shown in Table 22.

Several other studies have attempted to quantify the disposal of waste to Class 2-4 landfills, often on a per capita basis, with widely-varying results. To evaluate the estimate that has been made based on Wellington operator data, Table 22 shows the results of applying the per capita estimates from three other sources to the population of the Wellington region. Christchurch cleanfill tonnage data from 2009, obtained through its cleanfill licensing bylaw, has also been used to calculate a tonnage estimate for Wellington region.

Table 22: Estimates of Disposal to Class 2-4 Landfills in Wellington Region

Disposal to Class 2-4 landfills in Wellington Region	Tonkin & Taylor 2014 ¹⁸	Waste Not Consulting 2006 ¹⁹	Wellington operator estimate 2015	Canterbury bylaw data 2009 ²⁰	SKM 2008 ²¹
Tonnes per capita disposal	0.19	0.91	1.06	1.46	1.50
Tonnes per annum (2015 population estimate)	94,520 ⁽¹⁾	452,179	525,000	726,813	747,602

⁽¹⁾ This figure differs from that presented in the Tonkin & Taylor report (21,902 tonnes), which was incorrect.

Using the per capita estimates from previous studies to calculate the quantity of material disposed of at Class 2-4 landfills in Wellington region results in a range from 94,000 tonnes to nearly 750,000 tonnes per annum. The estimate of 525,000 tonnes per

¹⁷ Ministry for the Environment (2011) *Consented Non-levied Cleanfills and Landfills in New Zealand: Project Report*. Wellington: Ministry for the Environment

¹⁸ Tonkin & Taylor (2014), *New Zealand Non-Municipal Landfill Database*, prepared for Ministry for the Environment

¹⁹ Waste Not Consulting (2006), *Waste Composition and Construction Waste Data*, prepared for Ministry for the Environment

²⁰ Christchurch City Council *State of the Environment Monitoring Cleanfill Indicator Reporting Sheet* at http://resources.ccc.govt.nz/files/Waste_2128_QuantityOfMaterialDispoedOfInCleanfills-docs.pdf

²¹ SKM (2008) *Waste Facilities Survey - Methodology and Summary of Results*, prepared for Ministry for the Environment

annum, based on information from Wellington region facility operators, converts into a per capita disposal rate of 1.06 tonnes per capita per annum.

In practical terms, the lack of precise data about disposal of waste to Class 2-4 landfills makes it impossible to reliably monitor any changes over time in the disposal of major waste streams, such as construction and demolition waste.

5.3.2.2 Farm Waste Disposed of On-site

Very little research has been conducted on the quantity of waste generated on farms and disposed of on-site. One of the few substantive pieces of research, a 2013 study of farm waste in Canterbury, found that 92% of the farms surveyed practised one of the “3B” methods (burn, bury, or bulk store indefinitely) for on-site disposal of waste.²² The Canterbury study calculated average annual tonnages of waste for four different types of farm in the region. As farm waste from a specific type of farms is likely to be similar around the country, the data is considered to be suitable for applying to other regions, if the correct number of farm types is used for the calculations.

The presence of hazardous wastes including agrichemicals and containers, treated timber, paints solvents, and used oil was noted in the study, and the management techniques applied to these was variable and often of concern.

The data from the Canterbury report was applied nationally, on a regional basis, in a 2014 study that produced a database of non-municipal landfills for the Ministry for the Environment.²³ The report considered “non-municipal landfills” to include “cleanfills, industrial fills, construction and demolition fills, and farm dumps”.

Using the raw data from the 2014 study, taken from spreadsheets provided by MfE, the estimates in Table 23 of on-farm disposal of waste in Wellington region have been prepared. The estimates for Wellington region have been customised for the region by adjusting the numbers of the four types of farms to reflect the Wellington situation.

It should be noted that not all of the figures in the table are the same as the corresponding figures in the published report, as errors in the spreadsheets were corrected while preparing the estimates for this waste assessment.

Based on the data contained in the 2013 Canterbury and 2014 national studies, the 1,516 farms in the Wellington region are estimated to have generated an average of 26.7 tonnes of waste per farm per annum. Of this total, 24.6 tonnes per farm are estimated to be disposed of on the farm itself through burial, burning, or indefinite bulk storage. In total, over 37,000 tonnes of waste per annum are estimated to be disposed of in this manner across the region.

²² GHD (2013), *Non-natural rural wastes - Site survey data analysis*, Environment Canterbury Report No.R13/52

²³ Tonkin & Taylor (2014), *New Zealand Non-Municipal Landfill Database*, prepared for Ministry for the Environment

Table 23: Estimated On-farm Disposal of Farm Waste in Wellington Region

On-farm disposal of farm waste in Wellington region- tonnes/annum	Dairy	Livestock	Arable	Viticulture	TOTAL
Number of farm holdings (2012)	201	1,041	196	78	1,516
Non-natural rural waste (T/farm/annum)	6.1	8.9	7.4	5.5	
Domestic waste (T/farm/annum)	0.6	0.08	1.1	0	
Organic materials (T/farm/annum)	21.2	21.2	3.2	10	
Total waste generated (T/farm/annum)	27.9	30.18	11.7	15.5	26.7
Total tonnes/annum per farm, disposed of on-farm	25.7	27.8	10.8	14.3	24.6
Total waste disposed of on-farm (T/annum)	5,170	28,898	2,111	1,109	37,288

Of this total of 37,000 tonnes of waste, 30% (11,381 tonnes per annum) is non-natural rural waste. This waste stream includes materials such as scrap metal, treated timber, fence posts, plastic wraps and ties, crop netting, glass, batteries, and construction and demolition wastes.

Over two-thirds of farm waste is organic materials (25,520 tonnes per annum), which the survey found to include animal carcasses and crop residues.

5.3.3 Summary of Waste Disposed of to Land

The previous sections have quantified the disposal of solid waste to land through three separate mechanisms: waste to Class 1 landfills, farm waste disposed of onsite, and waste to Class 2-4 landfills. The disposal of solid waste to land in 2015 in Wellington region is summarised in Table 24.

Table 24: Waste Disposed of to Land - 2015

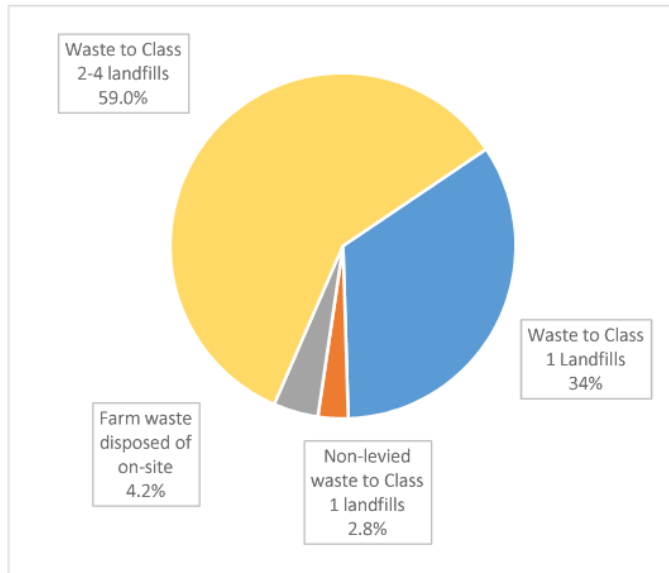
Waste disposed of to land in Wellington region - 2015	Tonnes 2015	% of total	Tonnes/capita/annum
Levied waste to Class 1 landfills			
General	252,536	28.4%	0.508
Special	17,717	2.0%	0.036
Sludge	31,823	3.6%	0.064
Subtotal	302,076	34.0%	0.608
Non-levied waste to Class 1 landfills			
Cleanfill	24,942	2.8%	0.050
Farm waste disposed of on-site			
All waste	37,285	4.2%	0.075
Waste to Class 2-4 landfills			
All waste	525,000	59.0%	1.057
TOTAL	889,303	100.0%	1.790

It has been estimated that a total of 889,303 tonnes of solid waste were disposed of to land in Wellington region in 2015. Waste disposed of at Class 2-4 landfills comprised nearly 60% of the total, and was equivalent to more than 1 tonne per person in 2015.

It should be noted that the reliability of the estimates for the different types of waste disposal varies. The data on waste to Class 1 landfills is reliable, being based on weighbridge records and waste levy returns. On the other hand, the accuracy of the estimates of waste to Class 2-4 landfills cannot be determined, as the estimates are based on information provided by site operators. The estimate of farm waste is potentially the least reliable, being based on data from a relatively small study of farms in Canterbury.

The data is illustrated in Figure 14.

Figure 14: Waste disposed of to land - 2015



5.4 Composition of Waste to Class 1 Landfills

This section presents the composition of waste disposed of at Class 1 landfills from Wellington region in the 2014/15 financial year. The composition is presented in this section using the 12 primary classifications in the SWAP. A more detailed composition, using further secondary classifications, is provided in A.4.2.

The composition has been calculated as follows:

- General waste disposed of at Silverstream, Southern, and Spicer landfills is deemed to have the same composition as general waste at Silverstream landfill, as was determined by a SWAP survey in June 2014. The catchments for these three landfills are similar, being urban and industrialised, and there are no other recent SWAP results available for Southern or Spicer landfills. Therefore, it is considered appropriate to apply the Silverstream composition to all three landfill tonnages, particularly in the absence of other applicable data.
- All greenwaste dropped off at the separate disposal points at Silverstream landfill and most greenwaste at Spicer landfill was classified as levied waste in 2014/15, rather than diverted material. A high proportion of greenwaste at Southern landfill was composted, and classified as diverted material for levy purposes. To reflect this, the proportion of greenwaste in the Silverstream SWAP result has been reduced by 20%. This has the effect of reducing the quantity of greenwaste disposed of to landfill at the three facilities combined by an amount equivalent to that diverted at Southern landfill.
- General waste from Kāpiti Coast, Carterton, South Wairarapa, and Masterton districts is deemed to have the same composition as general waste at Kāpiti Coast transfer stations, as determined by a SWAP survey in September 2013. The

four districts are sufficiently similar, containing a mixture of rural properties and small towns, that it is considered appropriate to use the Kāpiti Coast data for all four areas, particularly in the absence of data specific to the other districts.

- In all cases, waste identified by weighbridge product codes as being either special waste or sludge has been classified as “potentially hazardous”.
- The compositions as described above have been applied to tonnages for the 2014/15 year on which the waste levy has been paid.
- Tonnages of materials identified as being non-levy paid from weighbridge product codes and waste levy returns have been excluded from the analysis.

The primary composition of levy-paid waste from Wellington region disposed of to Class 1 landfills is shown in Figure 15 and Table 25 on the next page. The primary compositions are presented for both general waste - excluding special waste and non-levied cleanfill - and general waste and special waste combined - excluding non-levied cleanfill.

A more detailed composition, using 24 secondary classifications, is provided in A.4.2.

Organic material, which includes food waste, greenwaste, and other organic material represents the greatest proportion of the waste streams shown. Organic waste comprises 31.9% of general waste and 26.7% of general waste and special wastes combined. In the composition of general waste, plastic is the second largest component, at 13.6%, but timber and paper represent similar percentages, at 13.0% and 12.4% respectively.

When special wastes are combined with the general waste, potentially hazardous materials represent the second largest proportion, at 17.0%. These materials include contaminated soils and sludges.

Figure 15: Composition of Waste to Class 1 Landfills

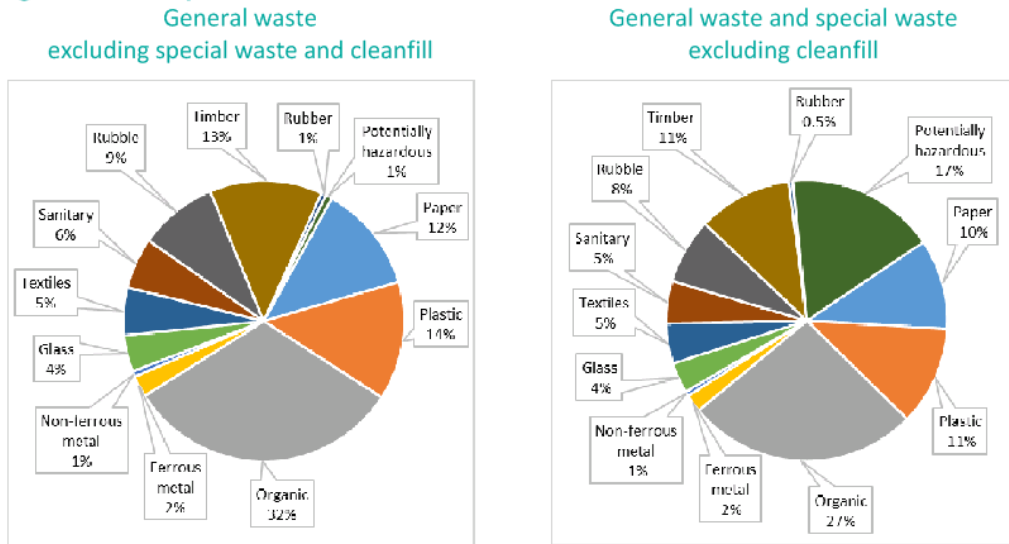


Table 25: Composition of Levied Waste to Class 1 Landfills

Composition of Levied Waste to Class 1 Landfills - 2014/15	General waste - excludes special waste and cleanfill		General waste and special waste - excludes cleanfill	
	% of total	Tonnes 2014/15	% of total	Tonnes 2014/15
Paper	12.4%	31,400	10.4%	31,400
Plastic	13.6%	34,449	11.4%	34,449
Organic	31.9%	80,589	26.7%	80,589
Ferrous metal	2.5%	6,202	2.1%	6,202
Non-ferrous metal	0.6%	1,626	0.5%	1,626
Glass	4.2%	10,616	3.5%	10,616
Textiles	5.5%	13,868	4.6%	13,868
Sanitary	5.9%	14,818	4.9%	14,818
Rubble	9.1%	22,908	7.6%	22,908
Timber	13.0%	32,795	10.9%	32,795
Rubber	0.5%	1,389	0.5%	1,389
Potentially hazardous	0.7%	1,878	17.0%	51,418
TOTAL	100.0%	252,536	100.0%	302,076

5.5 Activity Source of Waste

This section presents the activity source of levied waste disposed of at Class 1 municipal landfills from Wellington region. The composition is presented in this section using six of the seven “activity sources” specified in Volume One of the *New Zealand Waste Data Framework*. The seventh activity source, virgin excavated natural material, which would be primarily soil used as cover material, has not been used. While all three landfills in Wellington region source cover material from within the site, only one records the weight of cover material and the waste levy is not paid on cover materials of this type.

The activity source of the waste has been calculated as follows:

- General waste disposed of at Silverstream, Southern, and Spicer landfills is deemed to have the same proportion of activity sources as general waste at Silverstream landfill, as determined by a SWAP survey in June 2014. The catchments for these three landfills are similar, being urban and industrialised. Therefore, it is considered appropriate to apply the Silverstream activity sources to all three landfill tonnages, particularly as other relevant data is not available.
- General waste from Kāpiti Coast, Carterton, South Wairarapa, and Masterton districts is deemed to have the same activity sources as general waste at Kāpiti Coast transfer stations, as determined by a SWAP survey in September 2013. The four districts are sufficiently similar, containing a mixture of rural properties and small towns, that it is considered appropriate to use the Kāpiti Coast data for all four areas, particularly as no other relevant data is available.
- The “Kerbside refuse” data in both the Kāpiti Coast and Silverstream SWAP surveys included kerbside refuse from domestic and commercial properties. To account for this when calculating the “Domestic kerbside” activity source, it has been assumed that 5%, by weight, of kerbside collections are from industrial/commercial/institutional sources.
- All tonnage data is taken from weighbridge records and waste levy returns for the 2014/15 year.
- The tonnage for special wastes has been taken from weighbridge records, and is the same as that shown in Table 20 for “Special” and “Sludge” combined for 2014/15.
- Tonnages of materials identified as being non-levy paid have been excluded from the analysis.

The activity source of waste from Wellington region disposed of at Class 1 landfills is shown in Table 26. The activity source is presented for both general waste - excluding special waste and cleanfill - and general waste and special waste combined - excluding cleanfill on which the waste levy has not been paid.

Table 26: Activity Source of Waste to Class 1 Landfills

Activity source of levied waste to Class 1 landfills from Wellington region - 2014/15	General waste - excludes special waste and cleanfill		General waste and special waste - excludes cleanfill	
	% of total	Tonnes 2014/15	% of total	Tonnes 2014/15
Construction & demolition	12.7%	32,099	10.6%	32,099
Domestic kerbside	40.5%	102,403	33.9%	102,403
Industrial/commercial/institutional	34.3%	86,494	28.6%	86,494
Landscaping	6.1%	15,476	5.1%	15,476
Residential	6.4%	16,064	5.3%	16,064
Specials	0.0%	0	16.4%	49,540
TOTAL	100.0%	252,536	100.0%	302,076

Domestic kerbside refuse is the largest activity source of levied waste being disposed of to Class 1 landfills from the Wellington region. Domestic kerbside refuse comprises 41% of the general waste stream (excluding special waste and cleanfill) and 34% of general waste and special waste combined (excluding cleanfill).

Waste from industrial/commercial/institutional sources is the second largest activity source and construction and demolition waste the third largest.

5.6 Diverted Materials

5.6.1 Overview of Diverted Materials

Kerbside recycling collections are available to residential properties in all areas of Wellington region through both council-contracted and private service providers. The exceptions to this are rural properties in some areas.

Drop-off facilities for recyclable materials, either at a landfill or transfer station or as a stand-alone facility, are available in all areas of the region, other than Upper Hutt City. A small number of privately-operated drop-off facilities are also available.

Commercial recycling and scrap metal collectors operate throughout the region.

Commodities, such as glass, plastic, and metal containers, paper, and cardboard are handled by a small number of aggregators, processors, and exporters. Scrap metal is generally handled through a separate processing system than other materials.

Greenwaste drop-off facilities are available at all of the council-owned landfills and transfer stations in the region. Private greenwaste collections are also available.

Greenwaste from the Wairarapa drop-off facilities is processed at the Masterton transfer station. Greenwaste collected at Southern landfill is processed on-site along with food waste. Greenwaste from Kāpiti Coast drop-off facilities is processed commercially by

Composting New Zealand. Greenwaste collected separately at Silverstream landfill is handled as waste at the site and not classified as a “diverted material” for waste levy purposes. Most greenwaste collected separately at Spicer landfill is used for erosion control but is not classified as a “diverted material” for waste levy purposes.

A significant proportion of greenwaste is generated by commercial arborists. This waste material is generally chipped *in situ* and used as mulch without entering any “waste stream”, as such.

Food waste collected in the region is co-processed with greenwaste at Southern landfill.

Significant quantities of meat waste are rendered by the meat processing industry. Meat wastes are also collected from supermarkets and butcheries for rendering.

5.6.2 Kerbside Recycling and Drop-Off Facilities

Tonnage data for kerbside recycling and drop-off facilities, separately and combined, is presented in Table 27. The data is for all services and facilities in Wellington region combined. Data on the individual territorial authorities can be found in A.4.3.

The following points relate to the data in Table 27:

- Separate tonnages for Carterton District Council kerbside recycling and drop-off facilities are not available. All of these materials are taken to the Masterton transfer station for processing, but the weights are not recorded separately.
- Separate tonnages for South Wairarapa District Council kerbside recycling and drop-off facilities are not available. All of these materials are taken to the Masterton transfer station for processing, but the weights are not recorded separately.
- The tonnage figure for Masterton transfer station includes recyclable materials both dropped off at the facility and collected commercially from throughout Wairarapa.
- Upper Hutt City Council did not provide a kerbside recycling service after February 2013. After that date, two private service providers offered kerbside recycling services to residents. The time series of data, however, is complete, with the private kerbside recycling collectors providing data to council.
- Tonnages of recyclable materials from privately-owned drop-off facilities are not included as no data is available.
- Kāpiti Coast District Council ceased providing a kerbside recycling service after September 2013. The time series of data is complete, with the licensed waste and recycling collectors providing data to council.

Table 27: Kerbside Recycling and Drop-Off Facilities

Tonnes/annum	2010/11	2011/12	2012/13	2013/14	2014/15
Kerbside recycling	26,776	28,587	26,960	26,659	26,375
Drop-off facilities	9,137	7,407	5,933	8,544	7,016
TOTAL	35,914	35,994	32,893	35,204	33,391

In 2014/15, approximately 33,000 tonnes of materials were collected through kerbside recycling and drop-off facilities. Approximately 80% of this material was through kerbside recycling, both council-operated and private.

5.6.3 Composition of Kerbside Recycling

The composition of kerbside recycling collected by both councils and private service providers is presented in Table 28. The composition is based on a weighted average of data provided to Hutt, Wellington, and Porirua City Councils by their contracted service providers. The tonnage data is for 2014/15, as shown in Table 27.

Table 28: Composition of Kerbside Recycling in Wellington Region

Composition of kerbside recycling - 2014/15	% of total	Tonnes/annum
Mixed paper	47.3%	12,485
Glass bottles & jars	38.4%	10,116
Plastic containers	6.8%	1,787
Aluminium cans	0.5%	123
Steel cans	2.5%	656
Contamination	4.6%	1,208
TOTAL	100.0%	26,375

Mixed paper is the largest component of kerbside recycling, comprising 47%, by weight, of the total. Glass bottles & jars comprise 38% of the total.

5.6.4 Commercially-Collected Diverted Materials

Several waste operators in Wellington region collect divertable materials from commercial and industrial organisations. Cardboard/paper and scrap metal collections are the most common, although other recyclable commodities, such as glass bottles and other containers, are also collected in this manner.

Most commercially-collected commodities are processed at one of three materials recovery facilities - Masterton District Council's Masterton transfer station, Waste Management's Seaview facility, and OIJ's Fullcircle facility in Hutt City.

Scrap metal other than that collected through kerbside recycling collections, is processed separately, with Macaulay Metals being the major collector and processor.

A range of other materials are also diverted on a commercial basis, such as:

- Concrete, which is crushed and used for aggregate
- Scrap plastic from plastic manufacturers that is reprocessed into feedstock
- Clothing and textiles, used for rags or resale.

As there is no verifiable data on these other diverted material streams, only the main diverted materials for which data is available are included in Table 29. The data in the table below includes metals processed by Macaulays Metals, and commercially-collected, non-kerbside recyclables processed at Masterton transfer station, Waste Management's Seaview facility, and OIJ's Fullcircle facility in Hutt City. It is recognised that there is likely to be some double-counting of scrap metal, as Macaulays Metals may handle some metals from the other facilities. Any double-counting is likely to be minor.

Table 29: Commercially-Collected Diverted Materials

Diverted materials, excluding council and private domestic kerbside recycling collections	Tonnes/annum 2015
Cardboard/paper/containers	14,904
Scrap metal	101,877
TOTAL	116,781

Based on data provided by recycling processors, approximately 15,000 tonnes of cardboard, paper, and recyclable containers were collected commercially and processed in 2015.

Based on information provided by the scrap metal industry, over 100,000 tonnes of scrap were collected in 2015. This represents a per capita rate for Wellington region of 207 kg/capita/annum, when metals from kerbside collections are included. There is little reliable New Zealand data against which this figure can be checked, but a recent publication²⁴ gave the per capita scrap metal recovery rate for Australia as 177 kg/capita/annum, so the figure for Wellington appears reasonable.

²⁴ Golev, A., Corder, G., Modelling metal flows in the Australian economy, Journal of Cleaner Production (2015), viewed on 22/01/2016 at <http://dx.doi.org/10.1016/j.jclepro.2015.07.083>
<http://wealthfromwaste.net/wp-content/uploads/2015/09/Modelling-metal-flows-in-the-Australian-economy.pdf>

5.6.5 Diversion of Organic Waste

Greenwaste, meat waste, and food waste are the principal organic materials that are diverted in Wellington region.

Commercial collections of food waste, excluding meat products, are available to supermarkets, restaurants, and food manufacturers. Southern landfill is the only site in the region where food waste is composted. Data for composted food waste has been taken from Southern landfill records.

Greenwaste is collected on a commercial basis from residential properties and separately collected at all transfer stations and landfills. Greenwaste is composted at Masterton transfer station, Southern landfill, and Composting NZ's Otaihangā facility. Minor quantities of wood waste are also composted at Southern landfill. Data on composted greenwaste has been taken from the facilities' weighbridge records.

Greenwaste collected separately at Silverstream and Spicer landfills is primarily disposed of on-site and not classified as a "diverted material" for waste levy purposes. Consequently, greenwaste collected separately at these facilities has not been included in this analysis.

Meat processing waste and meat waste from supermarkets and butchers are rendered into tallow and blood and bone meal by Taylor Preston. This diverted material stream has been estimated, with the estimate being based on publicly-available documents.

Several organisations collect edible food waste for re-distribution on a not-for-profit basis. This diverted material stream has been estimated using publicly-available documents.

Organic waste is diverted from landfill disposal through other means, which are not quantified in this waste assessment, including:

- arborists chip considerable quantities of vegetation, much of which is disposed of as mulch
- piggeries collect food waste from supermarkets and food manufacturers for use as stock feed.

Table 30 estimates the quantity of diverted organic waste in Wellington region in 2015.

Table 30: Diversion of Greenwaste and Food Waste - 2015

Organic waste diversion - 2015	Tonnes per annum - 2015
Greenwaste and wood waste	19,785
Food waste - composted	1,121
Food waste - recovered	200
Meat waste - rendered	25,000
TOTAL	46,106

It is estimated that over 46,000 tonnes of organic waste were diverted from landfill disposal in 2015. Over half of this total was rendered meat waste from meat processing and commercial collections. The accuracy of the estimate of meat waste that is rendered was not able to be verified with the processor.

6.0 Performance Measurement

6.1 Current Performance Measurement

This section provides comparisons of several waste metrics between Wellington region and territorial authorities in other regions. The data from the other districts has been taken from a variety of research projects undertaken by Eunomia Research & Consulting and Waste Not Consulting.

6.1.1 Per Capita Waste to Class 1 Landfills

The total quantity of waste disposed of at Class 1 landfills in a given area is related to a number of factors, including:

- the size and levels of affluence of the population
- the extent and nature of waste collection and disposal activities and services
- the extent and nature of resource recovery activities and services
- the level and types of economic activity
- the relationship between the costs of landfill disposal and the value of recovered materials
- the availability and cost of disposal alternatives, such as Class 2-4 landfills
- seasonal fluctuations in population (including tourism).

By combining Statistics NZ population estimates and the Class 1 landfill waste data in section 5.3.1, the per capita per annum waste to landfill in 2014/15 from Wellington region can be calculated as in Table 31 below. The estimate includes special wastes but excludes unlevied cleanfill materials.

Table 31: Waste Disposal per Capita – Wellington Region

Calculation of per capita waste to Class 1 landfills	
Population (Stats NZ 2015 estimate)	496,900
Total waste to Class 1 landfill (tonnes 2014/15)	302,076
Tonnes/capita/annum of waste to Class 1 landfills	0.608

In 2014/15, approximately 0.608 tonnes of levied waste was disposed of at Class 1 landfills for each person in the Wellington region.

The movement of waste across territorial authority boundaries makes it difficult to estimate per capita waste disposal rates for the individual councils in the region.

However, geographic distances between the Class 1 landfills in the region restrict, but do not eliminate, the cross-boundary movement of waste. Estimates for the four separate waste "catchments" in the region can be made if the following are assumed:

- all waste from Upper Hutt City and Hutt City is disposed of at Silverstream landfill
- all waste from Wellington City and Porirua City is disposed of at Southern and Spicer landfills
- all waste from Kāpiti Coast District is disposed of at the transfer stations in the district
- all waste from Carterton, Masterton, and South Wairarapa Districts is disposed of at the transfer stations in the districts.

Based on these assumptions, which are known not to be entirely accurate, per capita disposal rates for the four waste catchments are calculated as shown in Table 32. The estimates include special wastes but exclude unlevied cleanfill materials.

Table 32: Waste Disposal per Capita – by Waste Catchment - 2014/15

Calculation of per capita waste to Class 1 landfills - 2014/15	Kāpiti Coast District	Wellington & Porirua	Upper Hutt & Hutt	Wairarapa
Population (Stats NZ 2015 estimate)	51,400	258,300	144,000	43,200
Total levy-paid waste to Class 1 landfills (tonnes 2014/15)	30,015	130,977	125,885	15,199
Tonnes/capita/annum of waste to Class 1 landfill	0.584	0.507	0.874	0.352

By considerable margins, the greatest rate of waste per capita is disposed of at Class 1 landfills from Upper Hutt City and Lower Hutt City and the lowest rate per capita is from Wairarapa.

The low disposal rate from Wairarapa is associated with a lower level of industrial and commercial activity and a higher proportion of rural properties. A substantial proportion of rural waste is disposed of on-site.

The high disposal rate from Upper Hutt City and Hutt City could be associated with higher levels of industrial and commercial activity than in the other areas. Additionally, waste from other areas is understood to be transported to Silverstream landfill for disposal. Anecdotally, it is understood that some kerbside refuse from Kāpiti Coast District is disposed of at Silverstream landfill. As the major waste collectors' depots are all in Hutt City, it is likely that collection vehicles often dispose of their final load of waste at Silverstream landfill. Quantitative information on any other cross-boundary movements of waste to Silverstream is not available.

The per capita estimates for waste disposal for Wellington region and the four separate catchments are compared to estimates for other districts in Table 33. The data for other districts has been taken from the results of SWAP surveys by Waste Not Consulting Ltd.

Table 33: Per Capita Waste to Class 1 Landfills Compared to Other Districts

Overall waste to landfill (excluding cleanfill and cover materials)	Tonnes per capita per annum
Gisborne District 2010	0.305
Waimakariri District 2012	0.311
Westland District 2011	0.331
Carterton/Masterton/South Wairarapa Districts 2015	0.352
Ashburton District 2014-15	0.366
Tauranga and WBoP District 2010	0.452
Napier/Hastings 2012	0.483
Southland region 2011	0.500
Wellington City & Porirua City 2015	0.507
Christchurch City 2012	0.524
Taupo District 2013	0.528
Kāpiti Coast District 2015	0.584
Wellington region 2015	0.608
New Plymouth District 2010	0.664
Hamilton City	0.668
Queenstown Lakes District 2012	0.735
Rotorua District 2009	0.736
Auckland region 2012	0.800
Upper Hutt City & Hutt City 2015	0.874

The districts with the lowest per capita waste generation tend to be rural areas or urban areas with relatively low levels of manufacturing activity. The areas with the highest per capita waste generation are those with significant primary manufacturing activity or with large numbers of tourists.

The per capita disposal rate for Upper Hutt and Hutt City is the highest rate of the territorial authorities shown. While it is accepted that there is some cross-boundary movement of waste into the catchment, the effect cannot be quantified.

6.1.2 Per Capita Domestic Kerbside Refuse to Class 1 Landfills

The quantity of domestic kerbside refuse disposed of per capita per annum has been found to vary considerably between different areas. There are several reasons for this variation.

Kerbside refuse services are used primarily by residential properties, with small-scale commercial businesses comprising a relatively small proportion of collections (typically on the order of 5-10%). In districts where more businesses use kerbside wheelie bin collection services - which can be related to the scale of commercial enterprises and the services offered by private waste collectors - the per capita quantity of kerbside refuse can be higher. There is relatively little data in most areas on the proportion of businesses that use kerbside collection services, so it is not usually possible to provide data solely on residential use of kerbside services.

The type of service provided by the local territorial authority has a considerable effect on the per capita quantity of kerbside refuse. Councils that provide wheelie bins (particularly 240-litre wheelie bins) or rates-funded bag collections generally have higher per capita collection rates than councils that provide user-pays bags. The effect of rates-funded bag collections is reduced in those areas where the council limits the number of bags that can be set out on a weekly basis.

Evidence indicates that the most important factor determining the per capita quantity of kerbside refuse is the proportion of households that use private wheelie bin collection services. Households that use private wheelie bins, particularly larger, 240-litre wheelie bins, tend to set out greater quantities of refuse than households that use refuse bags. As a result, in general terms the higher the proportion of households that use private wheelie bins in a given area, the greater the per capita quantity of kerbside refuse generated.

Other options that are available to households for the disposal of household refuse include burning, burying, or delivery direct to a disposal facility. The effect of these on per capita disposal rates varies between areas, with residents of rural areas being more likely to use one of these options.

The disposal rate of domestic kerbside refuse for Wellington region has been calculated to be 206 kg per capita per annum in 2014/15. It is stressed that this figure is an estimate based on two SWAP surveys of disposal facilities that, when combined, represent less than half of all waste from the region disposed of at Class 1 landfills. A more accurate estimate is not possible because:

- a large proportion of the kerbside refuse market is controlled by private waste collectors and no councils, other than Kāpiti Coast District Council and Upper Hutt City Council, are provided with data by the waste collectors
- no recent SWAP surveys have been undertaken at other facilities in the region

- not all of the landfills in the region gather data on vehicle types that would allow kerbside refuse to be quantified
- at the landfills that do gather data on vehicle types, the dataset is not sufficiently complete or accurate enough to be used to quantify kerbside refuse.

Table 34 compares the per capita rate of disposal of kerbside refuse in Wellington region with other urban areas in New Zealand. Data for the other districts has been taken from SWAP surveys conducted by Waste Not Consulting.

Table 34: Per Capita Disposal of Kerbside Refuse – Comparison with Other Areas

District and year of survey	Kg/capita/annum	Comment
Christchurch City 2011	110	Fortnightly 140-litre refuse wheelie bin. Weekly organic collection
Auckland Council 2012	160	Range of legacy council services.
Hamilton City 2013	182	Rates-funded refuse bags, max. 2 per week
Tauranga City and Western Bay of Plenty District 2010	183	User-pays bags in Tauranga. No council service in WBoP.
Wellington region 2014/15	206	Estimate based on SWAP surveys at Silverstream landfill and Kāpiti Coast
Taupo District 2013	212	User-pays refuse bags
Hastings District/Napier City 2012	214	User-pays refuse bags (Hastings) & rates-funded bags max. 2 bags/week(Napier)
Rotorua District 2009	216	Council rates-funded Kleensaks. No kerbside recycling service

Of the urban areas that have been assessed, Christchurch City has the lowest per capita disposal rate of kerbside refuse. This is associated with the diversion of organic waste through the council's kerbside organic collection and the council's high market share.

Rotorua has the highest disposal rate of the urban areas shown in the table. This is associated with the high proportion of households in Rotorua that use private collector wheelie bin services and the absence of kerbside recycling services.

6.1.3 Per Capita Kerbside Recycling

Per capita recycling rates for Wellington region are calculated in Table 35.

Points to be noted in the analysis include:

- Carterton and South Wairarapa Districts' tonnages include materials dropped off at the transfer stations as separate data is not available for kerbside recycling alone.
- South Wairarapa District's kerbside recycling service was introduced during the 2010/11 year.

Table 35: Per Capita Kerbside Recycling – Kg/Capita/Annum

Kerbside recycling	2010/11	2011/12	2012/13	2013/14	2014/15
Kerbside recycling	26,776	28,587	26,960	26,659	26,375
Population	476,933	481,861	486,790	491,500	496,900
Kg/capita/annum	56	59	55	54	53

The per capita rate of kerbside recycling in Wellington region decreased marginally from the 2011/12 year to the 2014/15 year. The peak of 59 kg/capita/annum occurred in 2011/12 and is associated with the introduction of a two-bin recycling system in Wellington City. In the 2014/15 year, 53 kg of kerbside recycling were collected for every resident of the region.

The decrease in per capita recycling could be associated with a number of factors, including a change in packaging materials (such as from glass to plastic bottles) or changes in consumer consumption patterns (such as a decrease in newspaper purchases).

The figure of 53 kg/capita/annum is compared to data from other councils in Table 36, along with a brief description of the kerbside recycling system in each district. The per capita recycling rates for the individual territorial authorities are provided in Table 37 .

The comparability of data is open to some debate because issues such as measuring and reporting of contamination is inconsistent or the population that is served has not been clearly reported. However, the available information indicates that per capita rates of kerbside recycling in Wellington region are lower than most of the other districts reporting data.

Table 36: Per Capita Kerbside Recycling – Kg/Capita/Annum

District	Kg/capita/ annum	System type
Napier City Council	52 kg	Fortnightly bags or crates
Wellington region	53 kg	Various systems
Ashburton District	62 kg	Weekly bags or crates depending on area
Tauranga City Council	65 kg	Private wheelie bin collection service
Invercargill City Council	69 kg	Fortnightly 240-litre wheeled bin, commingled
Waipa District	73 kg	Weekly/Fortnightly 55-litre crate, separate paper collection
Waikato District	74 kg	Weekly 55-litre crate, separate paper collection
Dunedin City	77 kg	Fortnightly 240-litre wheeled bin, fortnightly crate for glass
Horowhenua District	81 kg	Weekly crate
Auckland Council	84 kg	Fortnightly 240-litre commingled wheelie bins or 140-litre wheelie bin with separate paper collection
Waimakariri District Council	85 kg	Fortnightly 240-litre wheeled bin, commingled
Hamilton City Council	86 kg	Weekly 45-litre crate, separate paper collection
Palmerston North City	87 kg	Fortnightly 240-litre wheeled bin for commingled materials alternating with 45-litre crate for glass
Christchurch	109 kg	Fortnightly 240-litre wheeled bin

While data on kerbside recycling collections is readily available, accurate and reliable data relating to the total quantity of diverted materials, which includes commercial recycling, is not available for most districts.

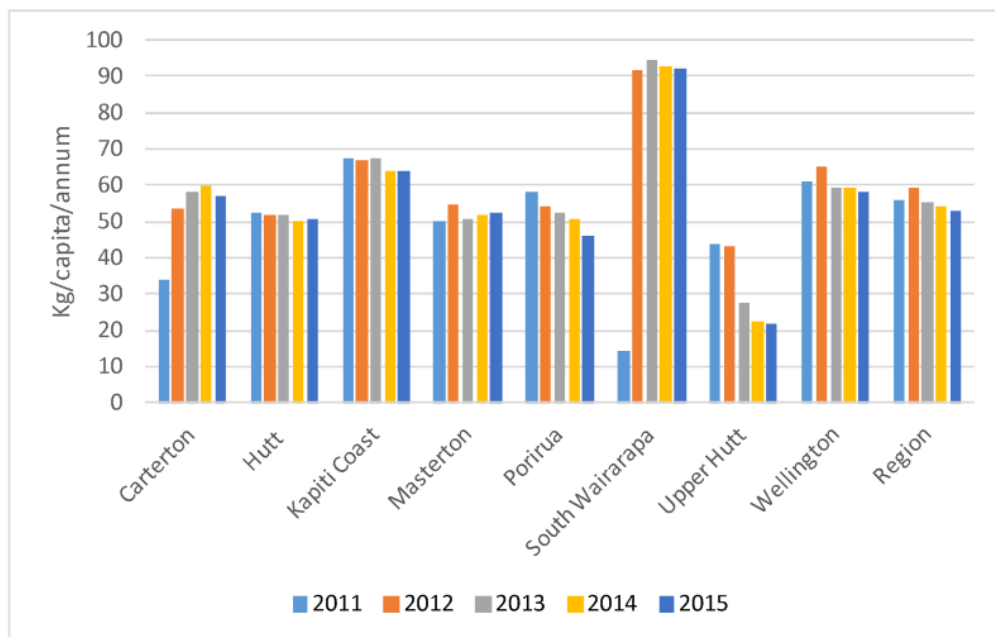
Per capita recycling rates for the individual territorial authorities are provided in Table 37 and Figure 16.

Table 37: Per Capita Kerbside Recycling - Kg/Capita/Annum - By Area

Kerbside recycling - includes council and private collections - kg/capita/per annum	2010/11	2011/12	2012/13	2013/14	2014/15
Carterton (1)	34	53	58	60	57
Hutt	53	52	52	50	50
Kāpiti Coast	67	67	67	64	64
Masterton	50	55	51	52	52
Porirua	58	54	52	51	46
South Wairarapa (1)	14	92	95	93	92
Upper Hutt	44	43	28	22	22
Wellington	61	65	59	60	58
WELLINGTON REGION	56	59	55	54	53

(1) Includes transfer station drop-off tonnages

Figure 16: Per Capita Kerbside Recycling – Kg/Capita/Annum - By Area



Although the per capita kerbside recycling rates vary significantly between the different council areas, several factors need to be taken into consideration:

- The number of households in each area served by kerbside recycling collections has not been taken into account in the calculations
- Residents of rural areas, both those with kerbside recycling and those without, may be more likely to use drop-off facilities than residents of urban areas because of the convenience factor
- Many residents of Carterton District may use Masterton transfer station for their recycling drop-off
- The Wellington City kerbside recycling rate increased markedly when the two-bin system was introduced
- Upper Hutt City Council discontinued its kerbside recycling service in February 2013. Two of the four private operators collecting kerbside refuse also offer kerbside recycling services.
- All of the private operators collecting kerbside refuse in Kāpiti Coast District also offer kerbside recycling services.

6.1.4 Comparison of Activity Source of Waste to Class 1 Landfills

Table 38 compares the proportions of the different activity sources of waste from three other areas with Wellington region. Derivation of the Wellington region data is discussed in section 5.5 Special wastes and cleanfill are excluded from the analysis.

Table 38: Comparison of Activity Sources of Waste with Other Districts

% of waste to landfill – excl. special waste and cleanfill	Christchurch City	Hamilton City	Taupo District	Wellington region
Year of audit	2012	2013	2013	2013 - 2014
Construction & demolition	27.3%	16.9%	17.6%	12.7%
Domestic kerbside (1)	28.4%	27.9%	30.0%	40.5%
Industrial/commercial/institutional	32.4%	45.4%	36.6%	34.3%
Landscaping	4.2%	3.9%	3.6%	6.1%
Residential	7.7%	6.0%	12.2%	6.4%
TOTAL	100%	100%	100%	100%

(1) Includes both council and private kerbside collections and includes an unknown proportion of refuse from commercial properties

The relative proportions of the activity sources of waste in each district reflect the economic activity in the area and other factors, such as earthquake reconstruction in

Christchurch. The low proportion of C&D waste in Wellington region is likely to be associated with a low level of construction activity compared to the other areas.

6.1.5 Council Bag Share of Domestic Kerbside Refuse Market

All of the councils in Wellington region (other than Kāpiti Coast District Council) currently provide for kerbside refuse collection services to residents, based on user-pays plastic refuse bags. Kāpiti Coast District Council no longer offers this service to residents, having ceased the sale of refuse bags in July 2013. In all areas where a council service is offered, the council service is in competition for market share with private refuse collectors.

In section 6.1.2, the uncertainties related to quantifying the domestic kerbside refuse market are discussed. However, by extrapolating the results of two SWAP audits across the region, a figure of 206 kg/capita/annum of domestic kerbside refuse (from Table 26) has been derived. This figure includes both council and private collections.

The most accurate basis for measuring the individual council's share, by weight, of the domestic kerbside refuse market is by converting the number of refuse bags sold by the councils each year into a tonnage figure. This tonnage (based on an average bag weight of 6.25 kg) can then be used to calculate each council's share of the domestic kerbside refuse market for the year, based on total kerbside collection equalling 205 kg/capita/annum. The calculation for Wellington region in 2014/15 is shown below.

Table 39: Council Bag Share of Domestic Kerbside Refuse Market - 2014/15

Council bag share of domestic kerbside refuse market - by weight - assuming 206 kg/capita/annum of domestic kerbside refuse generated	
Total tonnage of domestic kerbside refuse	102,403
Number of council refuse bags sold	2,812,167
Tonnage of council refuse bags at 6.25 kg/bag	17,576
Tonnage of council refuse bags as % of total tonnage	17.2%

The results of the calculations for individual territorial authorities for the last five years are shown in Table 40. It is emphasised that these are high-level estimates of the councils' market shares and have not involved the detailed data-gathering and analysis that would be required for more reliable estimates to be made. It should also be noted that the market share is calculated on the basis of weight, not the numbers of households using the services. Low volume users tend to be more likely to use a bag service as is provided by most councils, meaning the share of households is likely to be higher than indicated on the basis of weight. Further estimates made by some of the councils are presented in Appendix A.7.0.

The regional calculations do not take into account a number of factors that would need to be considered to produce a precise estimate for any individual TA. One such factor, for example, is the number of properties serviced by kerbside refuse collections. In

some areas, private collectors service a wider area than the council's collection and some remote properties receive no kerbside service at all. These factors have not been taken into account.

Table 40: Council Bag Share of Domestic Kerbside Refuse Market (by Weight)

Council bag share of domestic kerbside refuse market – by weight ⁽¹⁾	2010/11	2011/12	2012/13	2013/14	2014/15
Carterton	23%	21%	19%	19%	19%
Hutt	19%	18%	15%	15%	15%
Kāpiti Coast	19%	19%	10%	0%	0%
Masterton	23%	23%	20%	22%	21%
Porirua	19%	17%	16%	13%	12%
South Wairarapa	27%	29%	32%	33%	36%
Upper Hutt	21%	18%	15%	12%	10%
Wellington	30%	28%	27%	26%	24%
WELLINGTON REGION	24%	23%	20%	18%	17%

(1) Assuming each refuse bag weighs 6.25 kg and every resident generates 206 kg of domestic kerbside refuse per year.

Region-wide, the council bag share of the domestic kerbside refuse market has declined from approximately 24%, by weight, in 2010/11 to 17% in 2014/15, assuming a per capita domestic kerbside refuse disposal rate of 205 kg/capita/annum for all areas of the region.

The only council to have increased its market share over this period has been South Wairarapa District Council. In that district, the cost of the Council's user-pays refuse bags is rates-subsidised, resulting in the Council service being more competitive than in other areas.

6.1.6 Diversion Rate - by Material Type

Section 5.4 presents the composition of waste disposed of at Class 1 landfills from Wellington region. In section 5.6, the diversion from landfill disposal of several waste materials has been summarised. By combining the two sets of data, a mass balance for these materials can be estimated and diversion rates calculated for each. The results of this analysis are shown in Table 41.

Table 41: Diversion Rates for Selected Recoverable Materials - 2014/15

Diversion rate of selected recoverable materials - 2014/15	Mixed paper and containers	Scrap metal	Greenwaste	Food and meat waste
Kerbside recycling collections	26,375	0	0	0
Commercial recycling collections	14,904	101,877	0	0
Composted	0	0	19,785	1,121
Recovered	0	0	0	200
Rendered	0	0	0	25,000
Subtotal	41,279	101,877	19,785	26,321
Class 1 landfill	38,888	7,828	27,921	39,934
Recovery rate	51.5%	92.9%	41.5%	39.7%

Based on the available data, scrap metal has the highest recovery rate, with over 90% of metals being recovered as opposed to landfill disposal. This can be compared to a recent study showing the recovery rate for Australia being about 70%.²⁵ Mixed paper and containers (primarily packaging materials) had an estimated recovery rate of 51%. This compares to a Packaging Council of NZ estimated recovery rate for New Zealand of approximately 56%.²⁶

Greenwaste and food and meat waste both had recovery rates of about 40%. It should be noted that the recovery rate for food and meat waste would be markedly lower if rendered meat processing by-products were not included in the total. It could be argued that industrial by-products are not “waste materials”, as such, but one output of the industrial process. If rendered meat by-products were not considered to be “recovered”, the recovery rate for food and meat would be 3%.

6.1.7 Diversion Potential of Waste to Class 1 Landfills

An estimate of the composition of waste disposed of at Class 1 landfills from the Wellington region has been provided in section 5.4. The estimate is presented in terms of the twelve primary categories recommended by the SWAP. The estimate has been based on SWAP surveys in Kāpiti Coast District and Silverstream landfill in 2013 and 2014. These surveys classified waste into 24 materials types, most of which identify the recoverability of a material.

²⁵ Golev, A., Corder, G., Modelling metal flows in the Australian economy, Journal of Cleaner Production (2015), viewed on 22/01/2016 at <http://dx.doi.org/10.1016/j.jclepro.2015.07.083>
<http://wealthfromwaste.net/wp-content/uploads/2015/09/Modelling-metal-flows-in-the-Australian-economy.pdf>

²⁶ PAC.NZ historical data, no longer available online

Based on an analysis of the secondary composition presented in A.4.2, the diversion potential of the waste disposed of at Class 1 landfills from Wellington region has been estimated as shown in Table 42 below.

Materials that have been considered divertable are those which are already being recovered or otherwise diverted from landfill disposal elsewhere in New Zealand. It is recognised that no system established for the recovery of waste materials is capable of diverting 100% of that material from the waste stream. The estimate that is presented, therefore, represents a theoretical maximum, rather than the proportion of the waste stream that is likely to be recovered should a full suite of diversion initiatives be established. As with the primary composition presented in Table 25, the diversion potential is presented for both general waste - excluding special waste and non-levy paid cleanfill - and general waste and special waste combined - excluding non-levy paid cleanfill.

Table 42: Diversion Potential of Levied Waste to Class 1 Landfills

Diversion potential of levied waste to Class 1 landfills from Wellington region		General waste - excludes special waste and cleanfill		General waste and special waste - excludes cleanfill	
Primary category	Secondary category	% of total	Tonnes 2014/15	% of total	Tonnes 2014/15
Paper	Recyclable	10.8%	27,316	9.0%	27,316
Plastics	Recyclable	1.2%	2,925	1.0%	2,925
Putrescibles	Kitchen/food	15.8%	39,934	13.2%	39,934
Putrescibles	Greenwaste	11.1%	27,921	9.2%	27,921
Ferrous metals	All	2.5%	6,202	2.1%	6,202
Non-ferrous metals	All	0.6%	1,626	0.5%	1,626
Glass	Recyclable	3.4%	8,647	2.9%	8,647
Textiles	Clothing/textile	1.5%	3,768	1.2%	3,768
Rubble	Cleanfill	2.3%	5,712	1.9%	5,712
Rubble	Plasterboard	1.8%	4,516	1.5%	4,516
Timber	Untreated/unpainted	2.2%	5,660	1.9%	5,660
Potentially hazardous	Sewage sludge	0.0%	0	10.5%	31,823
TOTAL DIVERTABLE		53.2%	134,227	55.0%	166,050

Over 50% of both waste streams analysed could, theoretically, be diverted from landfill disposal. The largest divertable component of both waste streams is kitchen/food waste. The second largest divertable component of the general waste stream that excludes special waste is paper, which comprises 10.8% of the total. The second largest divertable component of the waste stream that includes special waste is sewage sludge, which comprises 10.5% of the total.

7.0 Future Demand and Gap Analysis

7.1 Future Demand

There are a wide range of factors that are likely to affect future demand for waste minimisation and management. The extent to which these influence demand could vary over time and in different localities. This means that predicting future demand has inherent uncertainties. Key factors in Wellington region's context are likely to include the following:

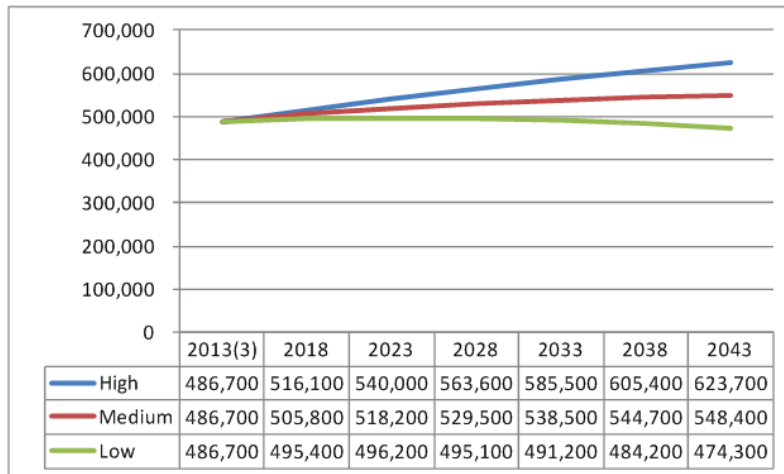
- Overall population growth
- Economic activity
- Changes in lifestyle and consumption
- Changes in waste management approaches

In general, the factors that have the greatest influence on potential demand for waste and resource recovery services are population and household growth, construction and demolition activity, economic growth, and changes in the collection service or recovery of materials.

7.1.1 Population

Statistics NZ population projections (updated February 2015) are presented below.

Table 43: Forecast Wellington Region Population



Source: Statistics New Zealand

Table 44: Forecast Change in Wellington Region Population

	Population change	Average Annual (%)	30-Year Total %
High	+137,000	0.8%	28%
Medium	+61,700	0.4%	13%
Low	-12,400	-0.1%	-3%

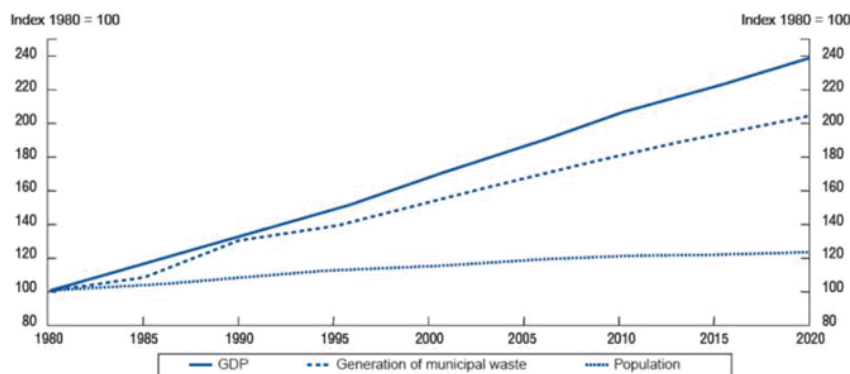
The forecasts represent a wide range of possible future outcomes. Estimating demand for future waste services is a necessary balance between ensuring sufficient infrastructure is available and not over-committing capital. While there are a number of drivers, it is considered that the “medium” series provides a conservative basis for estimating the future increased demand for waste management services due to population growth.

7.1.2 Economic Activity

Overall, the economy in the region has grown relatively slowly, but steadily, in recent years and it is anticipated that this will continue. The implications for waste management are, therefore, that anticipated growth in economic activity will result in an increase in the amount of waste generated. There is a need to ensure that planned changes in services and facilities are sufficiently future proofed.

For reference, Figure 17 below shows the growth in municipal waste in the OECD plotted against GDP and population.

Figure 17: Municipal Waste Generation, GDP and Population in OECD 1980 - 2020



Source: OECD 2001.

Research from the UK²⁷ and USA²⁸ suggests that underlying the longer-term pattern of household waste growth is an increase in the quantity of materials consumed by the average household and that this in turn is driven by rising levels of household expenditure.

The relationship between population, GDP, and waste seems intuitively sound, as an increased number of people will generate increased quantities of waste and greater economic activity is linked to the production and consumption of goods which, in turn, generates waste.

Total GDP is also a useful measure as it takes account of the effects of population growth as well as changes in economic activity. The chart suggests that municipal solid waste growth tracks above population growth but below GDP. The exact relationship between GDP, population, and waste growth will vary according to local economic, demographic, and social factors. To be able to use GDP and population as accurate predictors of waste generation requires establishing correlations between changes in these factors and changes in waste generation. Ideally, co-efficients for each factor would be calculated, with an analysis, such as regression analysis, performed to determine the impact of each of the factors, and projections conducted from this base data.

When data is analysed for the Wellington region, however, the correlations between population, GDP, and waste and recycling are not apparent. While population and GDP have increased over the last 10 years, waste to disposal and to recovery has declined slightly since 2005. Plotting these numbers against each other therefore produces negative correlations. A likely explanation for this disconnect between population and GDP and waste generation is incomplete datasets – particularly around material recovered by the private sector and material going to Class 2-4 landfills.

7.1.3 Changes in Lifestyle and Consumption

Community expectations relating to recycling and waste minimisation are anticipated to lead to increased demand for recycling services.

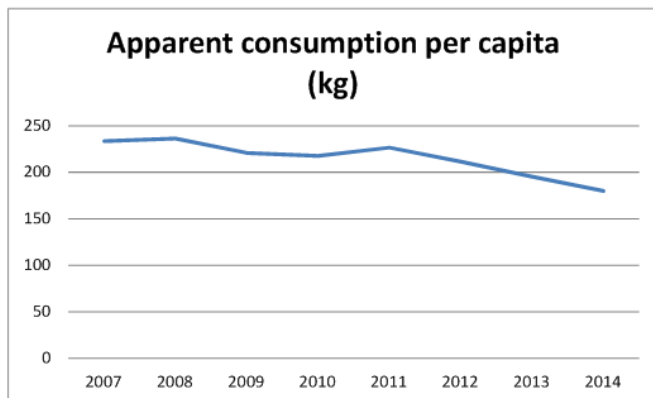
Consumption habits will affect the waste and recyclables generation rates. For example, there has been a national trend related to the decline in newsprint. In New Zealand, the production of newsprint has been in decline since 2005, when it hit a peak of 377,000 tonnes, falling to 276,000 tonnes in 2011.²⁹ Further indication of the decline in paper consumption comes from the Ministry for Primary Industry statistics shown in Figure 18.

²⁷ Eunomia (2007), *Household Waste Prevention Policy Side Research Programme*, Final Report for Defra, London, England

²⁸ EPA, 1999. National Source Reduction Characterisation Report For Municipal Solid Waste in the United States

²⁹ http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=10833117

Figure 18: Apparent Paper Consumption per Capita



7.1.4 Changes in Waste Management Approaches

There are a range of drivers that mean methods and priorities for waste management are likely to continue to evolve, with an increasing emphasis on diversion of waste from landfill and recovery of material value. These drivers include:

- Statutory requirement in the Waste Minimisation Act 2008 to encourage waste minimisation and decrease waste disposal – with a specific duty for TAs to promote effective and efficient waste management and minimisation and to consider the waste hierarchy in formulating their WMMPs.
- Requirement in the New Zealand Waste Strategy 2010 to reduce harm from waste and increase the efficiency of resource use.
- Increased cost of landfill. Landfill costs have risen in the past due to higher environmental standards under the RMA, introduction of the Waste Disposal Levy (currently \$10 per tonne) and the New Zealand Emissions Trading Scheme. While these have not been strong drivers to date, there remains the potential for their values to be increased and to incentivise diversion from landfill
- Collection systems. In brief, more convenient systems encourage more material. An increase in the numbers of large wheeled bins used for refuse collection, for example, drives an increase in the quantities of material disposed of through them. Conversely, more convenient recycling systems with more capacity help drive an increase in the amount of recycling recovered.
- Waste industry capabilities. As the nature of the waste sector continues to evolve, the waste industry is changing to reflect a greater emphasis on recovery and is developing models and ways of working that will help enable effective waste minimisation in cost-effective ways.
- Local policy drivers, including actions and targets in the WMMP, bylaws, and licensing.
- Recycling and recovered materials markets. Recovery of materials from the waste stream for recycling and reuse is heavily dependent on the recovered

materials having an economic value. This particularly holds true for recovery of materials by the private sector. Markets for recycled commodities are influenced by prevailing economic conditions and most significantly by commodity prices for the equivalent virgin materials. The risk is linked to the wider global economy through international markets.

7.1.5 Summary of Demand Factors

The analysis of factors driving demand for waste services in the future suggests that changes in demand will occur over time but that no dramatic shifts are expected. If new waste management approaches are introduced, this could shift material between disposal and recovery management routes.

Population and economic growth will drive moderate increases in the waste generated. The biggest change in demand is likely to come about through changes within the industry, with economic and policy drivers leading to increased waste diversion and waste minimisation.

7.1.6 Projections of Future Demand

Total waste and recovered material quantities in Wellington region are estimated to grow slowly over the next ten years in line with population and economic growth. For the purposes of projecting total waste quantities, it has been assumed that kerbside refuse, greenwaste, and all recyclables will grow in line with population. The Stats NZ ‘med’ population projection has been used for estimating kerbside recycling and refuse. It is assumed that other waste to landfill (mainly industrial/commercial/institutional waste and drop-off materials) and C & D waste will grow at a similar rate as GDP, with an assumed growth rate of 2% per annum.

Figure 19: Mid-Level Projection - No Significant Change in Systems or Drivers

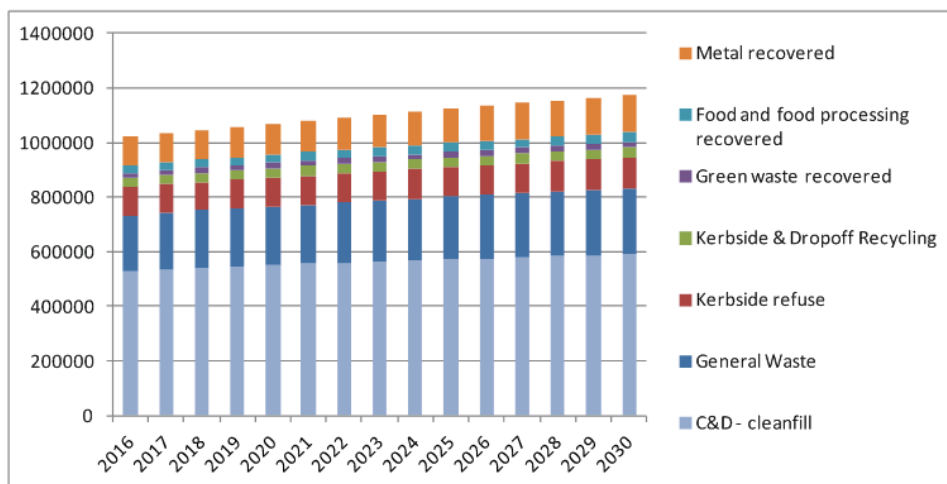
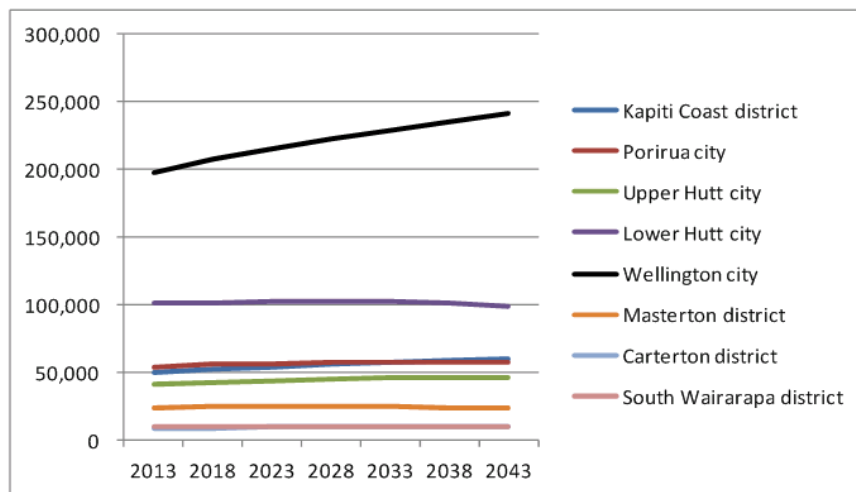


Figure 20: Number of Households



One key element of future demand is the demand for household services. As household numbers increase, this will precipitate a corresponding increase in the service requirement. The above chart shows that the numbers of households requiring service will increase steadily in Wellington City but remain essentially static in other parts of the region.

7.2 Future Demand – Gap Analysis

The aim of waste planning at a territorial authority level is to achieve effective and efficient waste management and minimisation. The following ‘gaps’ have been identified:

- Data quality and management of data
- Cleanfill numbers and tonnages
- Declining Council market share of kerbside refuse and recycling collections
- The amount of kerbside recycling per capita is relatively low compared to other TAs
- Recycling performance static or declining
- Biosolids management currently reliant on landfilling of all material
- Low diversion rate of organics, including both greenwaste and food waste
- Councils operate a range of different funding and management models, which is a barrier to greater collaboration. Despite this, there is potential for greater joint working in Council service delivery (e.g. more consistent approach to kerbside services)
- There is no food waste processing capacity
- Information about the amount and type of waste that is going to unregulated disposal (farm pits, cleanfill and burning) is scarce
- Rural areas have a number of recycling drop-off points but rural services are still somewhat limited

- Recycling services at public events (such as markets and sports events) are not promoted
- Provision of public place recycling bins is limited.

7.2.1 Waste Streams

Priority waste streams that could be targeted to further reduce waste to landfill would include:

- More kerbside recyclables both from domestic and commercial properties
- Organic waste, particularly food waste both from domestic and commercial properties
- Industrial and commercial plastic is a significant part of the waste stream which may be able to be recycled
- Farm waste is a relatively unknown quantity and increased awareness of the problems associated with improper disposal may drive demand for better services
- Construction and demolition waste in particular timber is a significant part of the waste stream which may be able to be recovered
- E-waste collection and processing capacity in the district, while better than many areas, has room for improvement
- Biosolids
- Waste tyres may not be a large proportion of the waste stream, however the effectiveness of the management of this waste stream is unknown. Issues with management of this waste stream have recently been highlighted nationally

Infrastructure to manage the increased quantities and new waste streams will be required.

7.2.2 Hazardous Wastes

Potentially hazardous household wastes such as paint, oil, and chemicals are collected at transfer stations. There is a need to review the provision of these services at the transfer stations to ensure proper storage and management procedures are followed, so as to protect the health of workers, the public and the environment.

Options for hazardous wastes include:

- Reviewing management procedures of hazardous wastes at transfer stations
- Undertaking more detailed monitoring and reporting of hazardous waste types and quantities, including medical waste
- Improving public information about correct procedures for managing hazardous wastes, including medical waste and asbestos
- Introducing a bylaw licensing collectors. This will improve information on hazardous waste movements and enable enforcement of standards

7.2.2.1 Asbestos Removal

Some commonly used products that contain asbestos include roof tiles, wall claddings, fencing, vinyl floor coverings, sprayed fire protection, decorative ceilings, roofing

membranes, adhesives and paints. The most likely point of exposure is during building or demolition work. All three Class 1 landfills in the region are consented to take asbestos, as is the Nursery Road cleanfill site in Masterton, and operators must comply with consent conditions and operational Health and Safety requirements.

7.2.2.2 Medical Waste

The Pharmacy Practice Handbook³⁰ states:

4.1.16 Disposal of Unused, Returned or Expired Medicines

Members of the public should be encouraged to return unused and expired medicines to their local pharmacy for disposal. Medicines, and devices such as diabetic needles and syringes, should not be disposed of as part of normal household refuse because of the potential for misuse and because municipal waste disposal in landfills is not the disposal method of choice for many pharmaceutical types. Handling and disposal should comply with the guidelines in NZ Standard 4304:2002 – Management of Healthcare Waste.

Medical waste removal and disposal are currently adequately catered for in the region in respect of institutional wastes. Sources of medical waste from households have no special provision.

7.2.2.3 E-waste

Without a national product stewardship scheme, the e-waste treatment and collection system will continue to be somewhat precarious. Currently, companies tend to cherry-pick the more valuable items, such as computers and mobile phones. As a result, the more difficult or expensive items to treat, such as CRT TVs and domestic batteries, will often still be sent to landfill.

There are a limited number of collection points in the region at the transfer stations and resource recovery facilities and there is no consistent region-wide approach to e-waste management.

³⁰ <https://nzpharmacy.wordpress.com/2009/06/09/disposal-of-unwanted-medicines/>

8.0 Initial Review of the 2011 Waste Management and Minimisation Plan

An initial review of the 2011 WMMP was undertaken to inform the current Waste Assessment, and to help identify potential improvements to the effectiveness of a new WMMP. The key points emerging from the initial review are noted below.

8.1 Data

The data contained in the 2011 WA and WMMP is of variable quality and there are substantial gaps in the data, in particular around privately managed wastes, cleanfill, and quantities of materials recovered.

8.2 Key Issues

The 2011 WA and WMMP correctly identified many of the key issues facing the region including:

- Poor quality data
- Inconsistency in service provision
- Inconsistency in regulation
- High quantities of biosolids disposed of at some landfills
- Large quantities of organic material disposed of to landfill.

8.3 Other Issues Not Addressed

There are a number of issues that either were not addressed in the previous WMMP or have since emerged. These include:

- **Council market share.** Many of the Councils have a relatively small share of the kerbside refuse collection market and, in most cases, it is declining. This reflects a move towards private operators' wheeled bin services and away from the bag-based services that the Councils offer. This issue was not addressed in the 2011 WA or WMMP.
- **Declining recycling rates.** The quantities of material being recycled by households is relatively low across the region and is continuing to decline
- **Lack of recovery of C&D materials.** There is a lack of infrastructure to recover construction and demolition-type materials such as concrete, brick, wood, metal, and plasterboard. Much of this material is likely to be currently going to Class 2-4 landfills.

8.4 New Guidance

New Guidance from MfE on Waste Management and Minimisation Planning was released during the development of this Waste Assessment. The 2011 WA and WMMP, while consistent with the guidance at the time they were written, do not fully align with the new (2015) MfE Guidance. The new guidance places more emphasis on funding of plans, inclusion of targets and how actions are monitored and reported. The 2011

documents did not provide data in accordance with the National Waste Data Framework, as suggested by the new guidance.

8.5 Actions

The current WMMP proposes 19 regional actions. While each of these actions may be justified, there is no priority assigned to the actions and no structure provided to guide how they might best work together and be implemented. A Governance Committee was formed in November 2015 to establish formal reporting and accountability on the WMMP.

8.6 Implementation Plan

The 2011 WMMP does not contain a clear plan for implementation of the proposed actions that includes assignment of responsibilities, allocation of resources, and delivery timeframes.

8.7 Limited Progress

Potentially as a result of the last two points, limited progress has been made on implementing the actions contained in the 2011 WMMP. Only four of the 19 actions have been taken forward, with only the education strategy having so far been completed. Work on a regional solid waste bylaw is in progress, there has been some progress on biosolids investigation, and development of a subsequent WMMP is underway.

9.0 Statement of Options

This section sets out the range of options available to the Councils to address the key issues that have been identified in this Waste Assessment. An initial assessment is made of the strategic importance of each option, the impact of the option on current and future demand for waste services, and the Council's role in implementing the option. Options presented in this section would need to be fully researched, and the cost implications understood before being implemented.

9.1 Key Issues to Be Addressed by WMMP

The key issues identified in this Waste Assessment that have the greatest effect on the Councils' ability to meet their statutory obligations are:

- 1. Increasing quantities of levied waste to Class 1 landfills** - The tonnage of levied waste to Class 1 landfills increased 5.4% between 2012/13 and 2014/15. Population in the region increased 2.1% during this period.
- 2. Poor data quality** - A lack of data, particularly on the activities of the private waste and recycling sector, limits Councils' ability to effectively manage waste in the region. This constrains ability to plan for and respond to future demand
- 3. Disposal of unknown quantities of waste to Class 2-4 landfills** - While the data on Class 2-4 landfills that is available to the Councils is very limited, it is likely that considerable quantities of recoverable materials are disposed of to these facilities.
- 4. Declining Council kerbside refuse market share** – Available tonnage data suggests that the share of the market attributed to council user pays bag collections is declining. Households instead are increasingly choosing private services, in particular large wheeled bins. Evidence suggest use of wheeled bins leads to greater quantities of waste disposed of including more organic material and items that could be recycled.
- 5. Suboptimal overall recycling performance.** The Wellington region has a below average level of recycling performance compared to other centres in NZ.
- 6. Recycling performance static/declining.** Not only is recycling performance weak overall, but data suggests it is static or declining in most areas. This may be related to the increasing market share of large wheeled bins for rubbish.
- 7. Sewage sludge/biosolids management.** The primary disposal pathway for biosolids is landfill. Where this material has high moisture content it can create landfill management issues. It also represents a high fraction of organic waste that could potentially be recovered for beneficial use.
- 8. Low diversion rate on organics.** While a large proportion of meat processing waste is recovered through rendering and a reasonable fraction of garden waste is composted, there is very little diversion of food waste and there is further room to capture and compost more garden waste. Food and green waste represent the largest fractions of material being landfilled and so this is potentially the biggest opportunity to improve diversion.
- 9. Councils operate a range of different funding and management models.** Perhaps the greatest barrier to enhanced collaboration is that waste is managed

in divergent ways among the constituent councils and each council responds primarily to the particular drivers within their area. Differing ownership of assets, service delivery expectations, and rates funding levels all create differing imperatives.

- 10. Unrealised potential for greater joint working in Council service delivery.** The locally focused approach to waste management has resulted in a range of systems, many of which have evolved over time, and are not necessarily configured to deliver optimum results in terms of cost and waste minimisation performance. There are likely to be gains from a more consistent approach that utilises best practice (e.g. more consistent approach to kerbside services)

In general, despite having a joint WMMP since 2011, waste management in the region has been quite disjointed. This is partly a function of geography and the different drivers within each area, but it may also reflect that potential benefits of closer working have not been fully realised.

9.2 Regulation

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
R1	Maintain existing bylaw regimes	Maintaining bylaw status quo would not have a positive effect on any the key issues.	<p><i>Social/Cultural:</i> uneven understanding of the waste flows in the district</p> <p><i>Environmental:</i> variable ability to guard against environmental degradation through illegal disposal, variable ability to require environmental performance standards are met (e.g. recyclable material is separated)</p> <p><i>Economic:</i> No change to current systems.</p> <p><i>Health.</i> Limited ability to monitor and enforce actions of current providers and ensure public health is protected</p>	A lack of data and controls on private operators limits Councils' ability to effectively manage waste in the region. This constrains ability to plan for and respond to future demand	<p>Councils would implement and enforce existing bylaws; monitoring and reporting on waste quantities and outcomes.</p> <p>Minor changes will be required to align with the National Waste Data Framework.</p>
R2	Review Solid Waste Bylaws and implement Regional Solid Waste Bylaw. The regional bylaw would look to provide	<p>1 Increasing quantity of waste to landfill</p> <p>2 Data quality and management of data</p> <p>3 Cleanfill numbers and</p>	<p><i>Social/Cultural:</i> better understanding of the waste flows in the district, wider range of services offered to residents</p> <p><i>Environmental:</i> would</p>	Improved bylaws would, as a minimum, require reporting of waste material quantities. Collecting waste data is imperative to planning how to increase	<p>Councils would develop and enforce the bylaws; monitoring and reporting on waste quantities and outcomes</p> <p>The solid waste bylaw must</p>

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	<p>consistency and provide a wider range of regulatory powers. This could include:</p> <ul style="list-style-type: none"> • Licensing of operators and facilities • Restrictions on material that is collected and landfilled • Events • Tyres and other difficult wastes • Controls over private collectors of residual wastes • Container restrictions (e.g. 240L wheeled bin bans, colours) • Multi-unit dwellings, rural waste • Cleanfills. 	<p>tonnages</p> <p>5 Suboptimal overall recycling performance</p> <p>6 Recycling performance static/declining</p> <p>8 Poor diversion rate on organics</p>	<p>increase diversion from landfill and information about disposal practices and could potentially guard against environmental degradation through illegal disposal</p> <p><i>Economic:</i> increase cost for operators; additional resources will be required to monitor and enforce the regulatory system</p> <p><i>Health.</i> greater monitoring of providers to ensure no adverse health risks occur</p>	<p>waste minimisation across Council provided services and commercial waste streams</p> <p>The bylaw could also be used to require minimum performance standards. This could be a key mechanism for addressing waste streams currently controlled by the private sector and how they provide their collection services.</p> <p>Requiring provision of a recycling collection to all customers, and preventing the use of large bins for refuse collection, could decrease the amount of waste sent to landfill. The amount of recyclables requiring processing would increase.</p>	<p>not be an unreasonable hindrance on private business seeking to take advantage of opportunities to take part in waste minimisation and waste management activities. This includes how waste, recovery, diversion, recyclables and disposal is defined within the document.</p> <p>In considering a licensing approach, the Councils should seek to liaise with the other initiatives (e.g. BoP/Waikato regional project, Auckland Council). Consistency across regions would help reduce unnecessary administrative burden for private operators, and unintended consequences such as less well-regulated areas becoming a target for undesirable practices, such as clean filling, and poorly managed waste facilities.</p>

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9.3 Measuring and Monitoring

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
M1	Status Quo	Maintaining data status quo would not have a positive effect on any the key issues	<p><i>Social/Cultural:</i> uneven understanding of the waste flows in the district in particular in respect of recovered material and material to other than Class 1 disposal facilities</p> <p><i>Environmental:</i> Limited ability to monitor and report on environmental outcomes</p> <p><i>Economic:</i> Limited understanding of waste flows restricts ability to identify waste recovery opportunities and creates risk around waste facility and service planning which increases costs.</p> <p><i>Health.</i> Lack of data on potentially harmful wastes and their management</p>	A lack reliable information to monitor and plan for waste management in the region	Councils currently gather data on waste streams they manage or facilities or services they own as well as information supplied by the private sector through licensing or similar
M2	Implement National Waste Data Framework	2 Data quality and management of data	<i>Social/Cultural:</i> improved knowledge of waste flows	The Waste Data Framework would enhance the ability	Councils would implement the Waste Data Framework

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			<p>and better information available to the public on waste and recovery performance</p> <p><i>Environmental:</i> Improved ability to monitor and manage waste collection and disposal information and make appropriate planning and management decisions</p> <p><i>Economic:</i> improved understanding of waste flows resulting in better targeted waste and recovery services and facilities.</p> <p><i>Health.</i> Potential for improved data on hazardous and harmful wastes</p>	to share and collate information improving overall knowledge of waste flows. It currently only covers material to disposal however.	by putting standard protocols in place for the gathering and collation of data. This would enable sharing and consolidation of data at a regional level
M3	Audit waste stream at transfer stations and kerbside every 4-6 years and before and after significant service changes and monitoring of waste flows through contract for	2 Data quality and management of data	<p><i>Social/Cultural:</i> Identifying material streams for recovery could lead to job creation</p> <p><i>Environmental:</i> Ability to identify materials and waste streams for potential</p>	Would not impact on the status quo prediction of demand directly, but would assist in identifying recovery opportunities which could impact facility	<p>Councils would maintain existing service arrangements</p> <p>Minor changes would be required to align with the National Waste Data</p>

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
	kerbside refuse collections and licensing conditions.		<p>recovery and reduction</p> <p><i>Economic:</i> Ability to identify materials and waste streams for potential recovery and reduction, giving rise to new business opportunities and reduction of disposal costs</p> <p><i>Health.</i> Potential for improved data on hazardous and harmful wastes</p>	provision	Framework.
M4	Increase monitoring to gather more information in strategic areas, such as commercial waste composition; waste management in rural areas; cleanfill, construction and demolition waste. Audit cleanfill waste streams wherever possible to understand composition of waste.	<p>2 Data quality and management of data</p> <p>3 Cleanfill numbers and tonnages</p>	<p><i>Social/cultural:</i> could raise awareness of waste management in areas where currently very little is known; enable greater monitoring of providers to ensure no adverse health effects occur. Identifying material streams for recovery could lead to job creation.</p> <p><i>Environmental:</i> increased ability to identify additional/altered services to increase diversion of waste from landfill.</p>	<p>Analysis of available data has shown that there are gaps in knowledge and understanding of waste streams.</p> <p>Availability of more data, and tailoring of services accordingly, could increase demand for recycling services and reduce waste to landfill.</p>	<p>Councils should initiate and oversee research, studies and audits; and feed results into future iterations of waste assessments and WMMP.</p> <p>Councils may need to develop bylaw and licensing systems to gather more data.</p>

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			<p><i>Economic:</i> there may be additional costs for new programmes put in place. Ability to identify materials and waste streams for potential recovery and reduction, giving rise to new business opportunities and reduction of disposal costs.</p> <p><i>Health.</i> Potential for improved data on hazardous and harmful wastes</p>		

9.4 Communication and Education

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
CE1	Continue existing education programmes including application of the Regional Waste Education Strategy	1 Increasing quantity of waste to landfill 5 Suboptimal overall recycling performance 6 Recycling performance static/declining	<i>Social/Cultural:</i> community will be aware of options, engaged in the waste management process, and take a level of ownership of waste issues. <i>Environmental:</i> education programmes aim to establish and support positive behaviours that reduce environmental impact. <i>Economic:</i> currently funded. <i>Health.</i> Public informed of health risks of waste materials and appropriate disposal pathways	Awareness of waste issues and behaviour would not change significantly from current situation.	Councils would continue to fund and coordinate a wide range of education programmes.
CE2	Extend existing communication programme to focus on additional target audiences e.g. farmers, new mothers, retired people, businesses, less engaged sectors of the community.	1 Increasing quantity of waste to landfill 5 Suboptimal overall recycling performance 6 Recycling performance static/declining	<i>Social/cultural:</i> community will be more aware of options and more engaged in the waste management process, taking a higher level of ownership of the issue. <i>Environmental:</i> education programmes would seek to	Expanding the target audience may improve results in increased recycling and decreased unwanted behaviour such as landfilling and other land disposal.	Councils would fund and/or coordinate education programmes.

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			<p>establish, support and extend positive behaviours that reduce environmental impact.</p> <p><i>Economic:</i> could potentially be funded through waste levy funding.</p> <p><i>Health.</i> Information regarding health risks of waste materials and appropriate disposal pathways would reach a wider audience. More vulnerable sectors of the public informed of health risks related to waste management. Messages better targeted to audiences needs</p>		
CE3	Extend existing communication programmes to support any new rates-funded services provided by the Councils (e.g. food waste collections)	<p>1 Increasing quantity of waste to landfill</p> <p>5 Suboptimal overall recycling performance</p> <p>6 Recycling performance static/declining</p>	<p><i>Social/cultural:</i> community will be more aware of options and more engaged in the waste management process, taking a higher level of ownership of the issue. Information regarding health risks of waste materials and appropriate disposal</p>	<p>Depending on the new rates-funded services that are provided, this could potentially contribute to a significant reduction in demand for landfill, and an increase in demand for recycling services and processing. Education alone will not support</p>	<p>Councils would fund and coordinate education programmes.</p>

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			<p>pathways would reach a wider audience</p> <p><i>Environmental:</i> education programmes would seek to establish, support and extend positive behaviours that reduce environmental impact</p> <p><i>Economic:</i> could initially be funded through waste levy funding when new services are introduced; subsequent communications would be rates-funded</p> <p><i>Health:</i> Information regarding health risks of relevant waste materials and appropriate management targeted to audiences needs</p>	<p>behaviour change. Pathways need to be provided for residents and businesses to take action on education messages.</p>	
CE4	Regional co-ordination and delivery of waste education programmes	<p>1 Increasing quantity of waste to landfill</p> <p>2 Data quality and management of data</p> <p>5 Suboptimal overall recycling performance</p> <p>6 Recycling performance static/declining</p>	<p><i>Social/cultural:</i> More consistent messaging and better leverage on education spend assisting community to be more aware of options and more engaged in the waste management process;</p>	<p>Analysis of data suggests there is significant potential to reduce, reuse and recycle more waste. Communities should reduce their reliance on residual waste collections and demand for recycling</p>	<p>Regional coordination and delivery would be undertaken on behalf of Councils (through a jointly funded position or structure). Local needs could be met by working more closely with specific councils and the</p>

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			<p><i>Environmental:</i> Enhanced ability to establish positive behaviours that reduce environmental impact.</p> <p><i>Economic:</i> consider funding through waste levy funds.</p> <p><i>Health:</i> Information regarding health risks of relevant waste materials and appropriate management able to be targeted to audiences needs</p>	services will increase.	community.

9.5 Collection Services

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
CS1	Status Quo. Different types of collection services and mechanisms for provision are continued throughout the region	Maintaining collections status quo would not have a positive effect on any the key issues.	<i>Social/Cultural:</i> Council and the collection contractor have a responsibility to mitigate the risks associated with kerbside bag collections. Private operators do not necessarily always provide the appropriate levels of	Would not impact on the status quo prediction of demand.	Each Council's role is varied depending on their service provision configuration.

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			<p>service, for example, at peak times.</p> <p><i>Environmental:</i> no new impacts.</p> <p><i>Economic:</i> no new impacts.</p> <p><i>Health.</i> Vulnerable sectors of the community may chose not to access waste services due to cost. In some areas there is limited capacity to reduce costs through recycling</p>		
CS2	<p>Enhanced Status Quo. Councils seek to standardise collection systems and methodologies and procure shared services where there are clear strategic advantages</p>	<p>1 Increasing quantity of waste to landfill</p> <p>2 Data quality and management of data</p> <p>4 Declining Council kerbside refuse market share</p> <p>5 Suboptimal overall recycling performance</p> <p>6 Recycling performance static/declining</p> <p>10 Potential for greater joint working in Council service delivery</p>	<p><i>Social/Cultural:</i> The impacts will vary depending on the configurations of services that are implemented. In general, council and the collection contractor have a responsibility to mitigate the risks associated with kerbside bag collections. Private operators do not necessarily always provide the appropriate levels of service, for example, at peak times.</p> <p><i>Environmental:</i> The impacts will vary depending</p>	<p>The impacts will vary depending on the configurations of services that are implemented. It could be expected that standardising of services would lead to overall improved levels of diversion due to wider participation in recycling and the ability to present more consistent messages to the community</p>	<p>Currently each Council's role is varied depending on their service provision configuration. Varying roles would be expected to continue but each councils role could change – for example if one council takes a lead role in contract management for a shared service.</p> <p>Councils will need to consider shared service arrangements as part of their S17A reviews and this should inform future</p>

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
			<p>on the configurations of services that are implemented. It could be expected that standardising of services would lead to overall improved levels of service provision including recycling</p> <p><i>Economic:</i> The impacts will vary depending on the configurations of services that are implemented. Shared services should lead to more economically efficient outcomes and reduce total costs to the community.</p> <p><i>Health:</i> The impacts will vary depending on the configurations of services that are implemented. Vulnerable sectors of the community may chose not to access waste services due to cost. Where there is limited capacity to reduce costs through recycling this could be mitigated through improved service provision</p>		procurement programmes

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Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
CS3	Public sector exits collection service provision and licenses private sector operators to provide services to nominated service levels	<ul style="list-style-type: none"> 1 Increasing quantity of waste to landfill 2 Data quality and management of data 3 Cleanfill numbers and tonnages 4 Declining Council kerbside refuse market share 5 Suboptimal overall recycling performance 6 Recycling performance static/declining 	<p><i>Social/Cultural:</i> Private operators do not necessarily always provide the appropriate levels of service, for example, at peak times, or in more remote/less economic areas.</p> <p><i>Environmental:</i> Potential for increased waste to disposal/less recycling if the licensing regime does not contain appropriate measures.</p> <p><i>Economic:</i> Rates would reduce for households but private user pays charges would increase for households.</p> <p><i>Health.</i> Vulnerable sectors of the community may chose not to access waste services due to cost.</p>	<p>Could impact on the status quo prediction of demand slightly if private provision leads to increased disposal (e.g. through larger waste containers.) or reduced recycling (e.g. through reduced levels of service)</p>	<p>Councils would (individually or collectively) have responsibility for licensing operators, and monitoring and enforcing license provisions. Provisions could include supply of data, restrictions on container size, requirement to provide recyclables collections etc.</p> <p>A number of councils are currently faced with declining market share (particularly for waste collection services). This option acknowledges this reality and sees councils withdrawing from competition with private services</p>
CS4	The Councils in the region provide kerbside food waste collection services funded through rates.	<ul style="list-style-type: none"> 1 Increasing quantity of waste to landfill 2 Data quality and management of data 5 Suboptimal overall 	<p><i>Social/Cultural:</i> residents would be provided with an increased range of services. Collection services would not be provided to rural</p>	<p>This is likely have a significant impact on the amount of waste diverted; reducing the future demand for landfill, and increasing</p>	<p>Councils would provide food waste kerbside collection services through a contract or other type of service agreement.</p>

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		recycling performance 6 Recycling performance static/declining 8 Poor diversion rate on organics 10 Potential for greater joint working in Council service delivery	dwellings (these may or may not have access to private providers). <i>Environmental:</i> Food waste to landfill would be reduced which would lessen the environmental impact from landfills. <i>Economic:</i> residents would pay for the collections through rates, By providing an organic waste collection service, rubbish collection costs can be reduced (through container size and/or frequency of collection). <i>Health.</i> Households would be able to manage organic wastes safely through a regular collection	the future demand for organic waste processing. A facility/facilities would be required to process the collected organic waste. In the Wellington Region landfill pricing is an important variable/driver to consider in the business case for any new service or the regionalisation of existing services	Councils would manage and monitor service provision and collect full data on the collection service. Additional resource may be required to manage this new service. Councils would need to recover costs for this service through rates; either general rate or a targeted rate charged to those residents that are eligible for the service.
CS5	The Councils seek to provide a standardised recycling service across the region. This would not necessarily entail procuring a single service provider but adoption of	1 Increasing quantity of waste to landfill 2 Data quality and management of data 5 Suboptimal overall recycling performance 6 Recycling performance	<i>Social/Cultural:</i> residents would be provided with an more standardised range of services <i>Environmental:</i> Recycling rates could be expected to improve due to wider	The impacts will vary depending on the configurations of services that are implemented. It could be expected that standardising of services would lead to overall	Currently each Council's role is varied depending on their service provision configuration. Varying roles would be expected to continue but each council's role could change – for

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	an agreed methodology which was used as the basis for procurement of the service by Councils either on their own or in shared service arrangements	static/declining 10 Potential for greater joint working in Council service delivery	participation in recycling and the ability to present more consistent messages to the community. <i>Economic:</i> residents would pay for the collections through rates, By providing improved recycling services, rubbish collection costs can be reduced (through container size and/or frequency of collection). <i>Health.</i> More households would be able to manage recyclables through a consistent collection	improved levels of diversion due to wider participation in recycling and the ability to present more consistent messages to the community	example if one council takes a lead role in contract management for a shared service. Councils that do not currently provide a rates funded recycling service would need to enter into a contract management role (or have this done on their behalf by a shared service partner council) Councils will need to consider recycling service provision including shared service arrangements as part of their S17A reviews and this should inform future procurement programmes
CS6	The Councils in the region provide full kerbside collection services funded through rates. This service would enable recycling, organic waste and rubbish to be collected. By providing a comprehensive recycling and organic	1 Increasing quantity of waste to landfill 2 Data quality and management of data 4 Declining Council kerbside refuse market share 5 Suboptimal overall	<i>Social/Cultural:</i> residents would be provided with a much wider range of services. Communication would be based on a consistent system, resulting in a community that is more aware of options and engaged in the waste	This would likely have a significant impact on the amount of waste diverted; reducing the future demand for landfill significantly and reducing reliance on recycling drop-off points; and increasing the future demand for recycling and	Councils would provide three kerbside collection services, through a contract or other type of service agreement. Councils would manage and monitor service provision and collect full data on the collection service.

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	waste collection service, rubbish collections can be reduced (through container size and/or frequency of collection).	<p>recycling performance</p> <p>6 Recycling performance static/declining</p> <p>8 Poor diversion rate on organics</p> <p>10 Potential for greater joint working in Council service delivery</p>	<p>management process. Collection services would not be provided to rural dwellings (these may or may not have access to private providers).</p> <p><i>Environmental:</i> the new services would provide for positive behaviours that reduce environmental impact. Vehicle movements around the region would be reduced.</p> <p><i>Economic:</i> residents would pay for all collections through rates; however most residents would no longer need to pay a private collector for services. A small number of households might experience an increase in rates but not receive the service; unless the service is funded through a targeted rate. There would be an impact on the private sector as their customer base would be significantly</p>	<p>organic waste services and processing. Improvements to recycling processing facility/ies may be required, and a facility/facilities would be required to process the collected organic waste.</p>	<p>Additional resource may be required to manage this new service, which could be managed through a CCO, joint business unit or in-house.</p> <p>Councils would need to recover costs for this service through rates; either general rate or a targeted rate charged to those residents that are eligible for the service.</p>

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Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
			<p>reduced (there is the potential for some operators to go out of business); however there would conversely be the opportunity to provide services on behalf of the Councils.</p> <p><i>Health.</i> Vulnerable sectors of the community would have access waste and recovery services. Households would be able to manage organic wastes safely through a regular collection</p>		
CS7	<p>Wairarapa and Kāpiti councils provide farm waste and recycling collection services targeted at improving management of farm wastes. The exact nature of the services would need to be determined but could encompass on property on demand collections using skips/hiab bins or similar to accommodate large</p>	<p>1 Increasing quantity of waste to landfill 2 Data quality and management of data 3 Cleanfill numbers and tonnages 5 Suboptimal overall recycling performance 6 Recycling performance static/declining 10 Potential for greater joint working in Council</p>	<p><i>Social/Cultural:</i> All sectors of the community would be catered for.</p> <p><i>Environmental:</i> Rural waste is an issue that is receiving increasing attention, with particular concern around management of hazardous wastes. Provision of appropriate services could substantially improve local soil and groundwater</p>	<p>Most rural waste does not enter the formal waste management system, and so uptake of a service would increase demand for recycling and disposal capacity.</p>	<p>Council would provide a facilitation role for the service and would look to link with and leverage from work being done nationally and regionally on farm waste services. There is potential for this initiative to be supported by RMA rules and objectives in the Regional Plan</p>

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	quantities and reduce the frequency of collection (thus constraining costs).	service delivery	<p>quality.</p> <p><i>Economic:</i> It is proposed that the service would be user pays or part user pays. Farms are commercial enterprises and from that perspective should have the same expectations on them for managing their wastes. It would mean additional costs for farms some of whom would not be willing to pay, and whom would view traditional on farm means of disposal (burn or bury) as preferable.</p> <p><i>Health:</i> Hazardous wastes would be better managed and reduce risks of entry of these substances into the environment through land air and water contamination.</p>		

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9.6 Infrastructure

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
IN1	<p>Status Quo: Council owned Class 1 landfills and transfer stations. Council and private Class 2-4 disposal facilities Council organic waste processing Private recyclable processing Private organic waste processing</p>	Maintaining infrastructure status quo would not have a positive effect on any the key issues.	<p><i>Social/Cultural:</i> No change. Variable access to facilities for communities. Variable reuse opportunities.</p> <p><i>Environmental:</i> No change. Biosolids, and C&D waste still going to disposal</p> <p><i>Economic:</i> Economic impacts will vary across the region. Landfills can be valuable assets for the community and reduce the rates burden from waste management.</p> <p><i>Health.</i> Health impacts are managed through ensuring consent conditions are adhered to.</p>	Would not impact significantly on the status quo prediction of demand for	Councils owning landfills and facilities would continue to manage/oversee these
IN2	<p>Organic waste processing facility developed to manage biosolids and food waste streams.</p>	<p>1 Increasing quantity of waste to landfill</p> <p>7 Sewage sludge/biosolids management</p> <p>8 Poor diversion rate on organics</p> <p>10 Potential for greater joint working in Council</p>	<p><i>Social/Cultural:</i> Potential for some cultural issues relating to the use of biosolids-derived compost on land.</p> <p><i>Environmental:</i> improved management of landfills through removal of biosolids and food waste.</p>	Would result in reduced demand for landfill and would increase demand for recovery processing facilities.	<p>Councils would oversee the development of a processing facility, but the technical specifications and management could be contracted out.</p> <p>Councils could fund the new facility(s) in a variety of ways: capital funding</p>

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Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
		service delivery	Improved landfill life. Potential for beneficial use of organic wastes to improve soil fertility <i>Economic:</i> Capital and operations implications from development of a facility <i>Health.</i> Health impacts are managed through ensuring consent conditions are adhered to and national guidelines on the application of biosolids to land are followed.		(potentially partly through waste levy funds) could be provided; or it could be developed through a BOOT contract or similar
IN3	A Resource Recovery Network is developed. The RRN could include: A Resource recovery park hosting a range of facilities including organic waste processing, C&D waste processing and extensive reuse operations A network of 'Community Recycling Centres' (building on and adding to existing Transfer Stations	1 Increasing quantity of waste to landfill 2 Data quality and management of data 5 Suboptimal overall recycling performance 6 Recycling performance static/declining 7 Sewage sludge/biosolids management 8 Poor diversion rate on organics	<i>Social/Cultural:</i> enhanced services enabling separation of materials and access to low-cost used goods. <i>Environmental:</i> improvement to waste recovery depending on exactly which expanded/additional services are introduced. <i>Economic:</i> Councils will need to invest funding in improving existing facilities	Would have an impact on demand for landfill and would increase demand for recycling/recovery services and processing facilities.	Councils' key role would be in overseeing and planning the development and implementation of the network. Councils could fund any new facility(s) in a variety of ways: capital funding (potentially partly through waste levy funds) could be provided; or it could be developed through a BOOT contract or similar. The application of funding

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Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
	and community facilities) Standardised branding and material acceptance	10 Potential for greater joint working in Council service delivery	and extending the network. <i>Health.</i> Enhanced services enabling separation of materials such as hazardous waste would facilitate appropriate disposal and reduce health impacts.		should ideally recognise the wider value of initiatives, including potential social and economic benefits. Councils would provide capital funding (potentially partly through waste levy funds) to significantly upgrade and improve the current RRP and drop-off facilities. This could be done through a direct service arrangement, or by sub-leasing space to the private or community sectors.

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9.7 Leadership and Management

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
LM1	Each Council responsible for own jurisdiction. Appoint regional Coordinator	A regional coordinator will assist in progressing closer working in a number of areas including solid waste bylaws, education, and data	<i>Social/Cultural/Environmental/Economic/Health</i> no new impacts	No significant impact on status quo forecast of future demand	Councils continue to develop strategic documents, such as the WMMP, through the joint committee.
LM2	Collaborate with private sector and community groups to investigate opportunities to enhance economic development through waste minimisation.	1 Increasing quantity of waste to landfill 5 Suboptimal overall recycling performance	<i>Social/Cultural:</i> potential for downstream job creation. <i>Environmental:</i> potential enhancement through waste minimisation. <i>Economic:</i> could result in benefits for the local economy. <i>Health.</i> Health impacts dependent on the nature of the collaboration.	Councils use contractors to provide a range of cost effective waste management services. There are other waste minimisation activities such as reuse shops that are marginally cost effective in strictly commercial sense, but provide a great opportunity for a social enterprise/charitable community group. Having all three sectors working together can provide mutual benefits for all.	Councils to lead and facilitate. Councils recognise the importance of diversity in the mix of scales of economy and localised solutions. Councils will support a mix of economic models to target best fit solutions depending on the situation.
LM3	Councils enter into shared service or joint procurement arrangements where there is mutual benefit	1 Increasing quantity of waste to landfill 2 Data quality and management of data 4 Declining Council	<i>Social/Cultural:</i> some improved consistency in approach. <i>Environmental:</i> impacts depend on the	No significant impact on status quo forecast of future demand. The Wairarapa councils currently have a shared	Councils make a joint formal approach to neighbouring authorities to form collaborative partnerships on various

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Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
		kerbside refuse market share 5 Suboptimal overall recycling performance 6 Recycling performance static/declining 9 Range of different funding and management models 10 Potential for greater joint working in Council service delivery	implementation of collaborative strategies and projects. <i>Economic:</i> shared services could reduce costs and enable access to better quality services. <i>Health:</i> Enhanced services enabling separation of materials such as hazardous waste would facilitate appropriate disposal and reduce health impacts.	service contract, there may be opportunity for other areas (e.g. Hutt Valley) or if a new service is introduced (e.g. food waste collection)	strategic or operational projects, particularly those already highlighted as collaborative opportunities in the Waste Assessment. Where services are to be shared there will a need to align service provision and contract dates
LM4	Establish a jointly held CCO or similar to manage assets and contracts	2 Data quality and management of data 9 Range of different funding and management models 10 Potential for greater joint working in Council service delivery	<i>Social/Cultural:</i> Significantly improved consistency in approach. <i>Environmental:</i> Impacts depend on the implementation of projects. <i>Economic:</i> shared services could reduce costs and enable access to better quality services. Assets able to be leveraged to develop new needed infrastructure	The jointly held organisation would be able to leverage existing assets to develop new needed infrastructure and provide a consistent coordinated approach across the region. This could dramatically improve the ability to plan and manage waste across the region and respond to future demand requirements If landfills were jointly held then pricing at landfills	Councils would provide governance of the entity and ensure it was meeting its agreed objectives and performance measures Councils would also assign assets and contracts to the new entity for management on their behalf. Shareholding in the entity could be in some proportion to the value of assets, income, and

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Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Councils' Role
			<i>Health</i> : Impacts depend on the implementation of projects.	could be configured to incentivise recovery and optimise asset life	contracts provided by each Council. There is also the possibility for public private partnerships in relation to the development of assets and/or service provision
LC5	Lobby for enhanced product stewardship programmes	1 Increasing quantity of waste to landfill 2 Data quality and management of data 5 Suboptimal overall recycling performance 6 Recycling performance static/declining	<i>Social/Cultural</i> : product take back will require behaviour change; potentially better management of hazardous materials. <i>Environmental</i> : improved resource efficiency. <i>Economic</i> : potential for producer pays schemes.	Product stewardship is specifically enabled in the WMA. Fully enacting this principle will help ensure true costs of products are reflected.	Promote current schemes and lobby Government for priority products such as tyres and e-waste.

9.8 Summary Table of Potential Scenarios

The above options can form an almost infinite number of combinations. To simplify consideration of the options, high level scenarios with logical combinations of the above options are laid out in the table below. The scenarios are for illustration and can be amended.

Scenario Name	Collections	Infrastructure	Regulation	Monitoring & Measuring	Education	Leadership & Management
Status Quo	Council user pays refuse Private refuse Private recycling Council Recycling	TA owned landfills TA & Private RTS Private MRF TA & Private composting	Regional bylaw with: operator and facility licensing, Data provision, recycling service standards, container restrictions etc.	Each Council gathers own data in line with National Waste Data Framework (no regional collation)	Regional Education Strategy, Specific regional programmes	Each Council responsible for own jurisdiction. Appoint regional Coordinator
Scenario 1: Expanded Status Quo	Private refuse Private recycling Council user pays refuse Council recycling Council food waste Shared services where advantageous	TA owned landfills TA & Private RTS Private MRF TA & Private composting Joint Council food / biosolids facility	Regional bylaw with: operator and facility licensing, Data provision, recycling service standards, container restrictions etc.	Regional collation and analysis of data	Regional Education Strategy Coordinated regional programmes Standardised branding and signage	Each Council responsible for own jurisdiction. Appoint regional Coordinator
Scenario 2: Full Resource Recovery	Council rates funded refuse Council recycling Council food waste Facilitate farm waste collection services	CCO owned landfills CCO & Private RTS Private MRF TA & Private Composting CCO food / biosolids facility Resource Recovery Network and Park with C&D processing, Reuse, etc Community Recycling Centres/Drop off	Regional bylaw with: operator and facility licensing, Data provision, recycling service standards, container restrictions etc.	Regional collation and analysis of data	Regional Education Strategy Regional communication programme Standardised branding and signage	Jointly held CCO or similar to manage assets and contracts

10.0 Statement of Councils' Intended Role

10.1 Statutory Obligations and Powers

Councils have a number of statutory obligations and powers in respect of the planning and provision of waste services. These include the following:

- Under the WMA each Council “must promote effective and efficient waste management and minimisation within its district” (s 42). The WMA requires TAs to develop and adopt a Waste Management and Minimisation Plan (WMMP).³¹
- The WMA also requires TAs to have regard to the New Zealand Waste Strategy 2010. The Strategy has two high levels goals: ‘Reducing the harmful effects of waste’ and ‘Improving the efficiency of resource use’. These goals must be taken into consideration in the development of the Councils’ waste strategy.
- Under the Local Government Act 2002 (LGA) the Councils must consult the public about their plans for managing waste.
- Under the Resource Management Act 1991 (RMA), TA responsibility includes controlling the effects of land-use activities that have the potential to create adverse effects on the natural and physical resources of their district. Facilities involved in the disposal, treatment or use of waste or recoverable materials may carry this potential. Permitted, controlled, discretionary, non-complying and prohibited activities and their controls are specified within district planning documents, thereby defining further land-use-related resource consent requirements for waste-related facilities.
- Under the Litter Act 1979 TAs have powers to make bylaws, issue infringement notices, and require the clean-up of litter from land.
- The Health Act 1956. Health Act provisions for the removal of refuse by local authorities have been repealed by local government legislation. The Public Health Bill is currently progressing through Parliament. It is a major legislative reform reviewing and updating the Health Act 1956, but it contains similar provisions for sanitary services to those currently contained in the Health Act 1956.
- The Hazardous Substances and New Organisms Act 1996 (the HSNO Act). The HSNO Act provides minimum national standards that may apply to the disposal of a hazardous substance. However, under the RMA a regional council or TA may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances.
- Under current legislation and the new Health and Safety at Work Act the Council has a duty to ensure that its contractors are operating in a safe manner.

³¹ The development of a WMMP in the WMA is a requirement modified from Part 31 of the LGA 1974, but with even greater emphasis on waste minimisation.

The Wellington region Councils, in determining their role, need to ensure that their statutory obligations, including those noted above, are met.

10.2 Overall Strategic Direction and Role

The overall strategic direction and role is presented in the Waste Management and Minimisation Plan.

11.0 Statement of Proposals

Based on the options identified in this Waste Assessment and the Councils' intended role in meeting forecast demand a range of proposals are put forward. Actions and timeframes for delivery of these proposals are identified in the Draft Waste Management and Minimisation Plan.

It is expected that the implementation of these proposals will meet forecast demand for services as well as support the Councils' goals and objectives for waste management and minimisation. These goals and objectives will be confirmed as part of the development and adoption of the Waste Management and Minimisation Plan.

11.1 Statement of Extent

In accordance with section 51 (f), a Waste Assessment must include a statement about the extent to which the proposals will (i) ensure that public health is adequately protected, (ii) promote effective and efficient waste management and minimisation.

11.1.1 Protection of Public Health

The Health Act 1956 requires the Councils to ensure the provision of waste services adequately protects public health.

The Waste Assessment has identified potential public health issues associated with each of the options, and appropriate initiatives to manage these risks would be a part of any implementation programme.

In respect of Council-provided waste and recycling services, public health issues will be able to be addressed through setting appropriate performance standards for waste service contracts and ensuring performance is monitored and reported on, and that there are appropriate structures within the contracts for addressing issues that arise.

Privately-provided services will be regulated through local bylaws.

Uncontrolled disposal of waste, for example in rural areas and in cleanfills, will be regulated through local and regional bylaws.

It is considered that, subject to any further issues identified by the Medical Officer of Health, the proposals would adequately protect public health.

11.1.2 Effective and Efficient Waste Management and Minimisation

The Waste Assessment has investigated current and future quantities of waste and diverted material, and outlines the Councils' role in meeting the forecast demand for services.


It is considered that the process of forecasting has been robust, and that the Council's intended role in meeting these demands is appropriate in the context of the overall statutory planning framework for the Council.

Therefore, it is considered that the proposals would promote effective and efficient waste management and minimisation.

A.1.0 Medical Officer of Health Statement

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Regional Public Health
Better Health For The Greater Wellington Region

13 October 2016

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New Zealand

Tēnā koe Duncan

**Re: Wellington Region Waste Assessment April 2016
Medical Officer of Health Comments under Section 51 - Waste Minimisation Act 2008**

This letter is a summary of my review of the Draft Wellington Region Waste Assessment dated 22 April 2016. Specific comments were also provided within the draft document that I reviewed.

Overall I think this is a comprehensive waste assessment which highlights some gaps in information to inform planning for waste minimisation and provides guidance for council activities to be included in a Waste Minimisation and Management Plan (WMMP).

In terms of public health, the biggest risk is the lack of information regarding quantities and fate of hazardous wastes and I support recommendations around improving this information, e.g. via a strengthened bylaw.

Public health can be protected long term by minimising the impact of waste on our environment and therefore actions that minimise waste production should be supported. For this reason, I support actions that reduce waste to landfill and use of best practice for recycling and re-use of materials.

To support behaviour change will require more than education and communication strategies, and will involve ensuring the best choice around waste management is the easiest choice. This includes reviewing accessibility and price for doing the right thing, so certain populations are not disadvantaged (e.g. rural or low socioeconomic groups, or elderly residents).

Utilisation of an approach to involve a wide representation of consumers can help councils understand any barriers to doing the "right thing" and what the community believe would work best. This is a more proactive response than asking for public input on a draft WMMP and could involve focus groups or actively seeking input from community groups that might not normally engage in formal submission processes, to inform a draft WMMP. Such an approach is one way to ensure any decisions made around changes to waste management services do not have unintended consequences for some groups.

Other focuses I support include regional actions where this enhances efficiencies and a focus on reducing the amount of organic waste going to landfill.

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Regional Public Health looks forward to being involved in the update of the Wellington Region WMMP, as informed by this Waste Assessment. The WMMP review will be strengthened by aligning with the current Ministry for the Environment guidance that includes more emphasis on funding of plans, inclusion of targets and how actions are monitored and reported.

Ngā mihi



Dr Jill McKenzie
Medical Officer of Health
Regional Public Health

A.2.0 Glossary of Terms

Cleanfill	A cleanfill (properly referred to as a Class 4 landfill) is any disposal facility that accepts only cleanfill material. This is defined as material that, when buried, will have no adverse environmental effect on people or the environment.
C&D Waste	Waste generated from the construction or demolition of a building including the preparation and/or clearance of the property or site. This excludes materials such as clay, soil and rock when those materials are associated with infrastructure such as road construction and maintenance, but includes building-related infrastructure.
Diverted Material	Anything that is no longer required for its original purpose and, but for commercial or other waste minimisation activities, would be disposed of or discarded.
Domestic Waste	Waste from domestic activity in households.
ETS	Emissions Trading Scheme
ICI	Industrial, Commercial, Institutional
Landfill	A disposal facility as defined in S.7 of the Waste Minimisation Act 2008, excluding incineration. Includes, by definition in the WMA, only those facilities that accept 'household waste'. Properly referred to as a Class 1 landfill.
LGA	Local Government Act 2002
Managed Fill	A disposal site requiring a resource consent to accept well-defined types of non-household waste, e.g. low-level contaminated soils or industrial by-products, such as sewage by-products. Properly referred to as a Class 3 landfill.
MfE	Ministry for the Environment
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
NZ	New Zealand

NZWS	New Zealand Waste Strategy
Putrescible, garden, greenwaste	Plant based material and other bio-degradable material that can be recovered through composting, digestion or other similar processes.
RRP	Resource Recovery Park
RTS	Refuse Transfer Station
Service Delivery Review	As defined by s17A of the LGA 2002. Councils are required to review the cost-effectiveness of current arrangements for meeting the needs of communities within its district or region for good-quality local infrastructure, local public services, and performance of regulatory functions. A review under subsection (1) must consider options for the governance, funding, and delivery of infrastructure, services, and regulatory functions.
TA	Territorial Authority (a city or district council)
Waste	Means, according to the WMA: <ul style="list-style-type: none"> a) Anything disposed of or discarded, and b) Includes a type of waste that is defined by its composition or source (for example, organic waste, electronic waste, or construction and demolition waste); and c) To avoid doubt, includes any component or element of diverted material, if the component or element is disposed or or discarded.
WA	Waste Assessment as defined by s51 of the Waste Minimisation Act 2008. A Waste Assessment must be completed whenever a WMMP is reviewed
WMA	Waste Minimisation Act 2008
WMMP	A Waste Management and Minimisation Plan as defined by s43 of the Waste Minimisation Act 2008
WWTP	Wastewater treatment plant

A.3.0 National Legislative and Policy Context

A.3.1 The New Zealand Waste Strategy 2010

The New Zealand Waste Strategy 2010 provides the Government's strategic direction for waste management and minimisation in New Zealand. This strategy was released in 2010 and replaced the 2002 Waste Strategy.

The New Zealand Waste Strategy has two goals. These are to:

- reduce the harmful effects of waste
- improve the efficiency of resource use.

The strategy's goals provide direction to central and local government, businesses (including the waste industry), and communities on where to focus their efforts to manage waste. The strategy's flexible approach ensures waste management and minimisation activities are appropriate for local situations.

Under section 44 of the Waste Management Act 2008, in preparing their waste management and minimisation plan (WMMP) councils must have regard to the New Zealand Waste Strategy, or any government policy on waste management and minimisation that replaces the strategy. Guidance on how councils may achieve this is provided in section 4.4.3.

A copy of the New Zealand Waste Strategy is available on the Ministry's website at www.mfe.govt.nz/publications/waste/new-zealand-waste-strategy-reducing-harm-improvingefficiency.

A.3.2 Waste Minimisation Act 2008

The purpose of the Waste Minimisation Act 2008 (WMA) is to encourage waste minimisation and a decrease in waste disposal to protect the environment from harm and obtain environmental, economic, social and cultural benefits.

The WMA introduced tools, including:

- waste management and minimisation plan obligations for territorial authorities
- a waste disposal levy to fund waste minimisation initiatives at local and central government levels
- product stewardship provisions.

Part 4 of the WMA is dedicated to the responsibilities of a council. Councils "must promote effective and efficient waste management and minimisation within its district" (section 42).

Part 4 requires councils to develop and adopt a WMMP. The development of a WMMP in the WMA is a requirement modified from Part 31 of the Local Government Act 1974, but with even greater emphasis on waste minimisation.

To support the implementation of a WMMP, section 56 of the WMA also provides councils the ability to:

- develop bylaws
- regulate the deposit, collection and transportation of wastes
- prescribe charges for waste facilities
- control access to waste facilities
- prohibit the removal of waste intended for recycling.

A number of specific clauses in Part 4 relate to the WMMP process. It is essential that those involved in developing a WMMP read and are familiar with the WMA and Part 4 in particular.

The Waste Minimisation Act 2008 (WMA) provides a regulatory framework for waste minimisation that had previously been based on largely voluntary initiatives and the involvement of territorial authorities under previous legislation, including Local Government Act 1974, Local Government Amendment Act (No 4) 1996, and Local Government Act 2002. The purpose of the WMA is to encourage a reduction in the amount of waste disposed of in New Zealand.

In summary, the WMA:

- Clarifies the roles and responsibilities of territorial authorities with respect to waste minimisation e.g. updating Waste Management and Minimisation Plans (WMMPs) and collecting/administering levy funding for waste minimisation projects.
- Requires that a Territorial Authority promote effective and efficient waste management and minimisation within its district (Section 42).
- Requires that when preparing a WMMP a Territorial Authority must consider the following methods of waste management and minimisation in the following order of importance:
 - Reduction
 - Reuse
 - Recycling
 - Recovery
 - Treatment
 - Disposal
 - Put a levy on all waste disposed of in a landfill.

- Allows for mandatory and accredited voluntary product stewardship schemes.
- Allows for regulations to be made making it mandatory for certain groups (for example, landfill operators) to report on waste to improve information on waste minimisation.
- Establishes the Waste Advisory Board to give independent advice to the Minister for the Environment on waste minimisation issues.

Various aspects of the Waste Minimisation Act are discussed in more detail below.

A.3.3 Waste Levy

From 1st July 2009 the Waste Levy came in to effect, adding \$10 per tonne to the cost of landfill disposal at sites which accept household solid waste. The levy has two purposes, which are set out in the Act:

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

This levy is collected and managed by the Ministry for the Environment (MfE) who distribute half of the revenue collected to territorial authorities (TA) on a population basis to be spent on promoting or achieving waste minimisation as set out in their WMMPs. The other half is retained by the MfE and managed by them as a central contestable fund for waste minimisation initiatives.

Currently the levy is set at \$10/tonne and applies to wastes deposited in landfills accepting household waste. The MfE published a waste disposal levy review in 2014.³² The review indicates that the levy may be extended in the future:

“The levy was never intended to apply exclusively to household waste, but was applied to landfills that accept household waste as a starting point. Information gathered through the review supports consideration being given to extending levy obligations to additional waste disposal sites, to reduce opportunities for levy avoidance and provide greater incentives for waste minimisation.”

A.3.4 Product Stewardship

Under the Waste Minimisation Act 2008, if the Minister for the Environment declares a product to be a priority product, a product stewardship scheme must be developed and accredited to ensure effective reduction, reuse, recycling or recovery of the product and

³² Ministry for the Environment. 2014. Review of the effectiveness of the waste disposal levy, 2014 in accordance with section 39 of the Waste Minimisation Act 2008. Wellington: Ministry for the Environment

to manage any environmental harm arising from the product when it becomes waste³³. No Priority Products have been declared as of May 2015.³⁴

The following voluntary product stewardship schemes have been accredited by the Minister for the Environment:³⁵

- Agrecovery rural recycling programme
- Envirocon product stewardship
- Fonterra Milk for Schools Recycling Programme
- Fuji Xerox Zero Landfill Scheme
- Holcim Geocycle Used Oil Recovery Programme (no longer operating)
- Interface ReEntry Programme
- Kimberly Clark NZ's Envirocomp Product Stewardship Scheme for Sanitary Hygiene Products
- Plasback
- Public Place Recycling Scheme
- Recovering of Oil Saves the Environment (R.O.S.E. NZ)
- Refrigerant recovery scheme
- RE:MOBILE
- Resene PaintWise
- The Glass Packaging Forum

Further details on each of the above schemes are available on:

<http://www.mfe.govt.nz/waste/product-stewardship/accredited-voluntary-schemes>

A.3.5 Waste Minimisation Fund

The Waste Minimisation Fund has been set up by the Ministry for the Environment to help fund waste minimisation projects and to improve New Zealand's waste minimisation performance through:

- Investment in infrastructure;
- Investment in waste minimisation systems and
- Increasing educational and promotional capacity.

Criteria for the Waste Minimisation Fund have been published:

³³ Waste Management Act 2008 2(8)

³⁴ MfE, Priority waste streams for product stewardship intervention: Consultation Feedback Publication date: April 2015

³⁵ <http://www.mfe.govt.nz/waste/product-stewardship/accredited-voluntary-schemes>

- 1. Only waste minimisation projects are eligible for funding. Projects must promote or achieve waste minimisation. Waste minimisation covers the reduction of waste and the reuse, recycling and recovery of waste and diverted material. The scope of the fund includes educational projects that promote waste minimisation activity.*
- 2. Projects must result in new waste minimisation activity, either by implementing new initiatives or a significant expansion in the scope or coverage of existing activities.*
- 3. Funding is not for the ongoing financial support of existing activities, nor is it for the running costs of the existing activities of organisations, individuals, councils or firms.*
- 4. Projects should be for a discrete timeframe of up to three years, after which the project objectives will have been achieved and, where appropriate, the initiative will become self-funding.*
- 5. Funding can be for operational or capital expenditure required to undertake a project.*
- 6. For projects where alternative, more suitable, Government funding streams are available (such as the Sustainable Management Fund, the Contaminated Sites Remediation Fund, or research funding from the Foundation for Research, Science and Technology), applicants should apply to these funding sources before applying to the Waste Minimisation Fund.*
- 7. The applicant must be a legal entity.*
- 8. The fund will not cover the entire cost of the project. Applicants will need part funding from other sources.*
- 9. The minimum grant for feasibility studies will be \$10,000.00. The minimum grant for other projects will be \$50,000.00.*

Application assessment criteria have also been published by the Ministry.

A.3.6 Local Government Act 2002

The Local Government Act 2002 (LGA) provides the general framework and powers under which New Zealand's democratically elected and accountable local authorities operate.

The LGA contains various provisions that may apply to councils when preparing their WMMPs, including consultation and bylaw provisions. For example, Part 6 of the LGA refers to planning and decision-making requirements to promote accountability between local authorities and their communities, and a long-term focus for the decisions and activities of the local authority. This part includes requirements for information to be included in the long-term plan (LTP), including summary information about the WMMP.

More information on the LGA can be found at ww.dia.govt.nz/better-local-government.

A.3.7 Resource Management Act 1991

The Resource Management Act 1991 (RMA) promotes sustainable management of natural and physical resources. Although it does not specifically define 'waste', the RMA addresses waste management and minimisation activity through controls on the environmental effects of waste management and minimisation activities and facilities through national, regional and local policy, standards, plans and consent procedures. In this role, the RMA exercises considerable influence over facilities for waste disposal and recycling, recovery, treatment and others in terms of the potential impacts of these facilities on the environment.

Under section 30 of the RMA, regional councils are responsible for controlling the discharge of contaminants into or on to land, air or water. These responsibilities are addressed through regional planning and discharge consent requirements. Other regional council responsibilities that may be relevant to waste and recoverable materials facilities include:

- managing the adverse effects of storing, using, disposing of and transporting hazardous wastes
- the dumping of wastes from ships, aircraft and offshore installations into the coastal marine area
- the allocation and use of water.

Under section 31 of the RMA, council responsibility includes controlling the effects of land-use activities that have the potential to create adverse effects on the natural and physical resources of their district. Facilities involved in the disposal, treatment or use of waste or recoverable materials may carry this potential. Permitted, controlled, discretionary, noncomplying and prohibited activities, and their controls, are specified in district planning documents, thereby defining further land-use-related resource consent requirements for waste-related facilities.

In addition, the RMA provides for the development of national policy statements and for the setting of national environmental standards (NES). There is currently one enacted NES that directly influences the management of waste in New Zealand – the Resource Management (National Environmental Standards for Air Quality) Regulations 2004. This NES requires certain landfills (e.g., those with a capacity of more than 1 million tonnes of waste) to collect landfill gases and either flare them or use them as fuel for generating electricity.

Unless exemption criteria are met, the NES for Air Quality also prohibits the lighting of fires and burning of wastes at landfills, the burning of tyres, bitumen burning for road maintenance, burning coated wire or oil, and operating high-temperature hazardous waste incinerators.

These prohibitions aim to protect air quality.

A.3.8 New Zealand Emissions Trading Scheme

The Climate Change Response Act 2002 and associated regulations is the Government's principal response to manage climate change. A key mechanism for this is the New Zealand Emissions Trading Scheme (NZ ETS) The NZ ETS puts a price on greenhouse gas emissions, providing an incentive for people to reduce emissions and plant forests to absorb carbon dioxide. Certain sectors are required to acquire and surrender emission units to account for their direct greenhouse gas emissions or the emissions associated with their products. Landfills that are subject to the waste disposal levy are required to surrender emission units to cover methane emissions generated from landfill. These disposal facilities are required to report the tonnages landfilled annually to calculate emissions.

The NZ ETS was introduced in 2010 and, from 2013, landfills have been required to surrender New Zealand Emissions Units for each tonne of CO₂ (equivalent) that they produce. To date however the impact of the NZETS on disposal prices has been very small. There are a number of reasons for this:

- The global price of carbon crashed during the GFC in 2007-8 and has never recovered. Prior to the crash it was trading at around \$20 per tonne. The price has been as low as \$2, but since in June 2015 the Government moved to no longer accept international units in NZETS the NZU price has increased markedly (currently sitting at around \$18 per tonne)³⁶.
- The transitional provisions of the Climate Change Response Act, which were extended indefinitely in 2013 (but have now been reviewed), mean that landfills have only had to surrender half the number of units they would be required to otherwise³⁷
- Landfills are allowed to apply for 'a methane capture and destruction Unique Emissions Factor (UEF). This means that if landfills have a gas collection system in place and flare or otherwise use the gas (and turn it from Methane into CO₂) they can reduce their liabilities in proportion to how much gas they capture. Up to 90% capture and destruction is allowed to be claimed under the regulations, with large facilities applying for UEF's at the upper end of the range.

Taken together (a low price of carbon, two for one surrender only required, and methane destruction of 80-90%) these mean that the actual cost of compliance with the NZETS has been negligible. Disposal facilities have typically imposed charges (in the order of \$5 per tonne) to their customers, but these charges currently reflect mainly the costs of scheme administration, compliance, and hedging against risk rather than the actual cost of carbon.

³⁶ <https://carbonmatch.co.nz/> accessed 19 July 2016

³⁷ The two for one transitional provisions are now to be phased out by the Government from 1 January 2017

The way the scheme has been structured to date also results in some inconsistencies in the way it is applied – for example class 2-4 landfills and closed landfills do not have any liabilities under the scheme. Further, the default waste composition (rather than a SWAP) can be used to calculate the theoretical gas production, which means landfill owners have an incentive to import biodegradable waste, which then increases gas production and which can then be captured and offset against ETS liabilities.

Despite these constraints on the impact of the ETS, there may be potential for the picture to change in the future (to a degree). The United Nations Climate Change Conference, (COP21) to be held in Paris France in November – December of 2015, established universal (but non-binding) emissions reduction targets for all the nations of the world. The outcomes could result in growing demand for carbon offsets and hence drive up the price of carbon. The other factor which is likely to come into play is the removal of the transitional provisions from 1 January 2017– meaning that landfills will need to surrender twice the number of NZUs they do currently. Even in a ‘worst case’ scenario however where the transitional provisions are removed and the price of carbon rises dramatically to say \$50 per tonne, the liability for a landfill that is capturing 80% of methane generated would only be \$13.10.³⁸ Therefore while the ETS could have an impact on disposal costs in the medium term this level of impact will likely not be sufficient to drive significant change in the waste sector.

More information is available at www.climatechange.govt.nz/emissions-trading-scheme.

A.3.9 Litter Act 1979

Under the Litter Act it is an offence for any person or body corporate to deposit or leave litter:

- In or on any public place; or
- In or on any private land without the consent of its occupier.

The Act enables Council to appoint Litter Officers with powers to enforce the provisions of the legislation.

The legislative definition of the term "Litter" is wide and includes refuse, rubbish, animal remains, glass, metal, garbage, debris, dirt, filth, rubble, ballast, stones, earth, waste matter or other thing of a like nature.

Any person who commits an offence under the Act is liable to:

- An instant fine of \$400 imposed by the issue of an infringement notice; or a fine not exceeding \$5,000 in the case of an individual or \$20,000 for a body corporate upon conviction in a District Court.

³⁸ Each tonne of waste is assumed under the NZETS to generate 1.31 tonnes of CO₂ equivalent. Therefore one tonne of waste requires 1.31 carbon offsets, which at \$50 a tonne would cost \$65.50. 20% of \$65.50 (the liability if 80% of methane is captured and destroyed) is \$13.10

- A term of imprisonment where the litter is of a nature that it may endanger, cause physical injury, disease or infection to any person coming into contact with it.

Under the Litter Act 1979 it is an offence for any person to deposit litter of any kind in a public place, or onto private land without the approval of the owner.

The Litter Act is enforced by territorial authorities, who have the responsibility to monitor litter dumping, act on complaints, and deal with those responsible for litter dumping. Councils reserve the right to prosecute offenders via fines and infringement notices administered by a litter control warden or officer. The maximum fines for littering are \$5,000 for a person and \$20,000 for a corporation.

Council powers under the Litter Act could be used to address illegal dumping issues that may be included in the scope of a council's waste management and minimisation plan.

A.3.10 Health Act 1956

The Health Act 1956 places obligations on TAs (if required by the Minister of Health) to provide sanitary works for the collection and disposal of refuse, for the purpose of public health protection (Part 2 – Powers and duties of local authorities, section 25). It specifically identifies certain waste management practices as nuisances (S 29) and offensive trades (Third Schedule). Section 54 places restrictions on carrying out an offensive trade and requires that the local authority and medical officer of health must give written consent and can impose conditions on the operation. Section 54 only applies where resource consent has not been granted under the RMA. The Health Act enables TAs to raise loans for certain sanitary works and/or to receive government grants and subsidies, where available.³⁹

Health Act provisions to remove refuse by local authorities have been repealed.

A.3.11 Hazardous Substances and New Organisms Act 1996 (HSNO Act)

The HSNO Act addresses the management of substances (including their disposal) that pose a significant risk to the environment and/or human health. The Act relates to waste management primarily through controls on the import or manufacture of new hazardous materials and the handling and disposal of hazardous substances.

Depending on the amount of a hazardous substance on site, the HSNO Act sets out requirements for material storage, staff training and certification. These requirements would need to be addressed within operational and health and safety plans for waste facilities. Hazardous substances commonly managed by TAs include used oil, household chemicals, asbestos, agrichemicals, LPG and batteries.

³⁹ From: MfE 2009: Waste Management and Minimisation Planning, Guidance for Territorial Authorities.

The HSNO Act provides minimum national standards that may apply to the disposal of a hazardous substance. However, under the RMA a regional council or TA may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances.⁴⁰

A.3.12 Health and Safety at Work Act 2015⁴¹

The new Health and Safety at Work Act, passed in September 2015 replaces the Health and Safety in Employment Act 1992. The bulk of the Act is due to come into force from 4 April 2016.

The Health and Safety at Work Act introduces the concept of a Person Conducting a Business or Undertaking, known as a PCBU. The Council will have a role to play as a PCBU for waste services and facilities.

The primary duty of care requires all PCBUs to ensure, so far as is reasonably practicable:

1. the health and safety of workers employed or engaged or caused to be employed or engaged, by the PCBU or those workers who are influenced or directed by the PCBU (for example workers and contractors)
2. that the health and safety of other people is not put at risk from work carried out as part of the conduct of the business or undertaking (for example visitors and customers).

The PCBU's specific obligations, so far as is reasonably practicable:

- providing and maintaining a work environment, plant and systems of work that are without risks to health and safety
- ensuring the safe use, handling and storage of plant, structures and substances
- providing adequate facilities at work for the welfare of workers, including ensuring access to those facilities
- providing information, training, instruction or supervision necessary to protect workers and others from risks to their health and safety
- monitoring the health of workers and the conditions at the workplace for the purpose of preventing illness or injury.

A key feature of the new legislation is that cost should no longer be a major consideration in determining the safest course of action that must be taken.

WorkSafe NZ is New Zealand's workplace health and safety regulator. WorkSafe NZ will provide further guidance on the new Act after it is passed.

⁴⁰ MfE 2009: Waste Management and Minimisation Planning, Guidance for Territorial Authorities

⁴¹ <http://www.legislation.govt.nz/act/public/2015/0070/latest/DLM5976660.html#DLM6564701>

A.3.13 Other legislation

Other legislation that relates to waste management and/or reduction of harm, or improved resource efficiency from waste products includes:

- Hazardous Substances and New Organisms Act 1996
- Biosecurity Act 1993
- Radiation Protection Act 1965
- Ozone Layer Protection Act 1996
- Agricultural Chemicals and Veterinary Medicines Act 1997.

For full text copies of the legislation listed above see www.legislation.govt.nz.

A.3.14 International commitments

New Zealand is party to international agreements that have an influence on the requirements of our domestic legislation for waste minimisation and disposal. Some key agreements are the:

- Montreal Protocol
- Basel Convention
- Stockholm Convention
- Waigani Convention
- Minamata Convention.

More information on these international agreements can be found on the Ministry's website at www.mfe.govt.nz/more/international-environmental-agreements.

A.4.0 Data Detail

A.4.1 Waste to Class 1 Landfills - by Facility

Carterton Dalefield Road transfer station - Tonnes/annum	2010/11	2011/12	2012/13	2013/14	2014/15
General	1,396	1,309	1,071	939	872
Special	0	0	0	0	0
Sludge	0	0	0	0	0
Levied waste	1,396	1,309	1,071	939	872
Cleanfill	0	0	0	0	0
TOTAL	1,396	1,309	1,071	939	872

Kāpiti Coast Otaihanga and Ōtaki Resource Recovery Facilities and Otaihanga closed landfill- Tonnes/annum	2010/11	2011/12	2012/13	2013/14	2014/15
General	20,737	21,315	23,320	27,833	27,825
Special (1)	41	1,308	570	157	24
Sludge (1)	1,293	1,293	2,635	1,557	2,166
Levied waste	22,071	23,916	26,525	29,547	30,015
Cleanfill (unlevied)	6,927	6,483	2,251	4,224	274
TOTAL	28,998	30,399	28,776	33,770	30,289

(1) Special waste and sludges disposed of at the closed Otaihanga landfill are levy exempt, but are included in "Levied waste" totals throughout this document.

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Martinborough transfer station - Tonnes/annum	2010/11	2011/12	2012/13	2013/14	2014/15
General	1,999	1,539	1,011	932	1,145
Special	0	0	0	0	0
Sludge	0	0	0	0	0
Levied waste	1,999	1,539	1,011	932	1,145
Cleanfill (unlevied)	0	0	0	0	0
TOTAL	1,999	1,539	1,011	932	1,145

Masterton transfer station - Tonnes/annum	2010/11	2011/12	2012/13	2013/14	2014/15
General	11,136	11,127	12,194	12,679	13,182
Special	0	0	0	0	0
Sludge	0	0	0	0	0
Levied waste	11,136	11,127	12,194	12,679	13,182
Cleanfill (unlevied)	16,740	30,188	26,564	11,454	964
TOTAL	27,876	41,315	38,758	24,134	14,146

Silverstream landfill - Tonnes/annum	2010/11	2011/12	2012/13	2013/14	2014/15
General	79,723	75,331	80,293	105,946	105,680
Special	10,896	8,527	6,932	7,202	13,302
Sludge	4,886	4,827	4,711	4,208	6,903
Levied waste	95,506	88,685	91,936	117,356	125,885
Cleanfill	0	0	0	0	0
TOTAL	95,506	88,685	91,936	117,356	125,885

Southern landfill - Tonnes/annum	2010/11	2011/12	2012/13	2013/14	2014/15
General	58,054	64,251	62,904	64,972	63,566
Special	5,626	5,726	4,589	2,333	3,020
Sludge	16,955	16,951	15,289	14,459	14,906
Levied waste	80,635	86,928	82,781	81,764	81,492
Cleanfill (unlevied)	39,855	30,657	15,175	3,959	2,532
TOTAL	120,490	117,585	97,956	85,723	84,024

Spicer landfill - Tonnes/annum	2010/11	2011/12	2012/13	2013/14	2014/15
General	51,249	49,021	47,913	42,973	40,266
Special	240	301	1,188	1,281	1,371
Sludge	7,863	6,965	7,853	6,968	7,848
Levied waste	59,353	56,287	56,954	51,222	49,485
Cleanfill (unlevied)	32,897	29,462	13,913	14,757	21,172
TOTAL	92,250	85,749	70,867	65,979	70,658

Wainuiomata landfill - Tonnes/annum	2010/11	2011/12	2012/13	2013/14	2014/15
General	25,706	25,630	14,143	0	0
Special	0	0	0	0	0
Sludge	0	0	0	0	0
Levied waste	25,706	25,630	14,143	0	0
Cleanfill	0	0	0	0	0
TOTAL	25,706	25,630	14,143	0	0

A.4.2 Composition of Waste to Class 1 Landfills

Composition of levied waste to Class 1 landfills from Wellington region 2014/15		General waste - excludes special waste and cleanfill		General waste and special waste - excludes cleanfill	
		% of total	Tonnes 2014/15	% of total	Tonnes 2014/15
Paper	Recyclable	10.8%	27,316	9.0%	27,316
	Non-recyclable	1.6%	4,084	1.4%	4,084
	Subtotal	12.4%	31,400	10.4%	31,400
Plastics	Recyclable	1.2%	2,925	1.0%	2,925
	Non-recyclable	12.5%	31,525	10.4%	31,525
	Subtotal	13.6%	34,449	11.4%	34,449
Putrescibles	Kitchen/food	15.8%	39,934	13.2%	39,934
	Comp. G'waste	11.1%	27,921	9.2%	27,921
	Non-comp G'waste	1.3%	3,273	1.1%	3,273
	Multi/other	3.7%	9,461	3.1%	9,461
	Subtotal	31.9%	80,589	26.7%	80,589
Ferrous metal	Primarily ferrous	1.1%	2,893	1.0%	2,893
	Multi/other	1.3%	3,290	1.1%	3,290
	Subtotal	2.5%	6,202	2.1%	6,202
Non-ferrous metal	Subtotal	0.6%	1,626	0.5%	1,626
Glass	Recyclable	3.4%	8,647	2.9%	8,647
	Glass multi/other	0.8%	1,969	0.7%	1,969
	Subtotal	4.2%	10,616	3.5%	10,616
Textiles	Clothing/textile	1.5%	3,768	1.2%	3,768
	Multi/other	4.0%	10,100	3.3%	10,100
	Subtotal	5.5%	13,868	4.6%	13,868
Sanitary	Subtotal	5.9%	14,818	4.9%	14,818
Rubble	Cleanfill	2.3%	5,712	1.9%	5,712
	Plasterboard	1.8%	4,516	1.5%	4,516
	Multi/other	5.0%	12,680	4.2%	12,680
	Subtotal	9.1%	22,908	7.6%	22,908
Timber	Untreated/unpainted	2.2%	5,660	1.9%	5,660
	Fabricated	2.7%	6,940	2.3%	6,940
	Multimaterial/other	8.0%	20,195	6.7%	20,195
	Subtotal	13.0%	32,795	10.9%	32,795
Rubber	Subtotal	0.5%	1,389	0.5%	1,389
Pot hazard	Subtotal	0.7%	1,878	17.0%	51,418
TOTAL		100.0%	252,536	100.0%	302,076

**A.4.3 Diverted Materials to Kerbside Recycling and
Drop-off Facilities - by area**

Kerbside recycling - includes council and private collections - tonnes per annum	2010/11	2011/12	2012/13	2013/14	2014/15
Carterton (1)	279	445	494	519	504
Hutt	5,286	5,229	5,266	5,111	5,149
Kāpiti Coast	3,362	3,357	3,417	3,275	3,297
Masterton	1,195	1,316	1,226	1,248	1,273
Porirua	3,091	2,875	2,803	2,751	2,508
South Wairarapa (1)	136	888	927	924	923
Upper Hutt	1,788	1,758	1,146	924	919
Wellington	11,639	12,718	11,681	11,909	11,802
TOTAL	26,776	28,587	26,960	26,659	26,375

(1) Includes transfer station drop-off tonnages

Recycling drop-off - excludes private drop-off facilities - tonnes per annum	2010/11	2011/12	2012/13	2013/14	2014/15
Carterton (1)	-	-	-	-	-
Hutt	2,384	2,812	2,639	2,697	2,435
Kāpiti Coast	730	299	256	297	472
Masterton	2,052	1,119	2,142	2,790	2,930
Porirua	549	394	343	328	412
South Wairarapa (1)	-	-	-	-	-
Upper Hutt (2)	-	-	-	-	-
Wellington	537	481	480	606	616
TOTAL	6,253	5,105	5,859	6,719	6,865

(1) Separate data for transfer station drop-off tonnages not available

(2) Included in Hutt figures

A.5.0 Private Service Providers

A.5.1 Carterton District

General Classification	Provider
Diverted Materials Collection	Browns Bins
	Wairarapa Environmental Ltd
Organics Collection	Rob's Miniskips
	Wairarapa Environmental Ltd
Waste Collection	Browns Bins
	Rob's Miniskips
	Wairarapa Environmental Ltd

A.5.2 Hutt City

General Classification	Provider
Diverted Materials Collection	General Metal Recyclers Ltd
	Kiwi Auto Wreckers
	Toyota Commercial Dismantlers
	Waste Tyre Solutions Ltd
	Woods Waste
	EnviroWaste Services Ltd
	Fullcircle/Oji
	Low Cost Bins
	Owyak Bin Hire Ltd
	Sims Pacific Metals
	Waste Management
Organics Collection	Organics Waste Management
	Al's Litta Bins
	Owyak Bin Hire Ltd
	Waste Management
	The Wheelibin Company Ltd

General Classification	Provider
Waste Collection	Bin Hire Wellington Ltd
	Daily Waste
	EnviroWaste Services Ltd
	Econowaste
	Gordies Bins
	Low Cost Bins
	Owyak Bin Hire Ltd
	Waste Management
	Woods Waste
	Al's Litta Bins
	The Wheelibin Company Ltd

A.5.3 Kāpiti Coast District

General Classification	Provider
Diverted Materials Collection	Kiwi Auto Wreckers
	Waste Management NZ Ltd
	Waste Tyre Solutions Ltd
	EnviroWaste Services Ltd
	Woods Waste
	Clean Green
	Low Cost Bins
	Lucy's Bins
Organics Collection	Waste Management NZ Ltd
Waste Collection	Clean Green
	EnviroWaste Services Ltd
	Low Cost Bins
	Waste Management NZ Ltd
	Woods Waste
	Budget Waste
	Lucy's Bins

A.5.4 Masterton District

General Classification	Provider
Diverted Materials Collection	Browns Bins
	Kiwi Auto Wreckers
	Wairarapa Environmental Ltd
Organics Collection	Rob's Miniskips
	Wairarapa Environmental Ltd
Waste Collection	Browns Bins
	Rob's Miniskips
	Wairarapa Environmental Ltd

A.5.5 Porirua City

General Classification	Provider
Diverted Materials Collection	The Information Management Group (NZ) Limited
	Waste Tyre Solutions Ltd
	Wellington Scrap Metals
	Woods Waste
	Waste Management
	EnviroWaste Services Ltd
	Owyak Bin Hire Ltd
Organics Collection	Organics Waste Management
	Owyak Bin Hire Ltd
	Waste Management
Waste Collection	Bin Hire Wellington Ltd
	Daily Waste
	EnviroWaste Services Ltd
	Econowaste
	Owyak Bin Hire Ltd
	Waste Management
	Woods Waste

A.5.6 South Wairarapa District

General Classification	Provider
Diverted Materials Collection	Browns Bins
	Kiwi Auto Wreckers
	Wairarapa Environmental Ltd
Organics Collection	Rob's Miniskips
	Wairarapa Environmental Ltd
Waste Collection	Browns Bins
	Rob's Miniskips
	Wairarapa Environmental Ltd

A.5.7 Upper Hutt City

General Classification	Provider
Diverted Materials Collection	Kiwi Auto Wreckers
	Waste Tyre Solutions Ltd
	Low Cost Bins
	Waste Management
Organics Collection	Waste Management
Waste Collection	Al's Litta Bins
	Econowaste
	EnviroWaste Services Ltd
	Low Cost Bins
	Waste Management

A.5.8 Wellington City

General Classification	Provider
Diverted Materials Collection	The Information Management Group (NZ) Limited
	Waste Tyre Solutions Ltd
	Wellington Scrap Metals
	Woods Waste
	EnviroWaste Services Ltd
	Waste Management
Organics Collection	Kaibosh
	Waste Management
	Kaicycle
	Organics Waste Management
Waste Collection	Bin Hire Wellington Ltd
	Daily Waste
	EnviroWaste Services Ltd
	Waste Management
	Owyak Bin Hire Ltd
	Woods Waste
	Dell

A.6.0 Transfer Station Detail

	Refuse per tonne	Green	Metal	Polystyrene	Wood	Inert	Tyres	TVs	Hazardous / Special	Recyclables	Reuse
Seaview Recycle & Transfer Station (Hutt City)	\$148/tonne \$30 per car, \$5 per rubbish bag	\$130 per tonne		\$1800 per tonne			\$320 per tonne	\$25 each	Not Accepted	Free	Not Accepted
Otaihanga Resource Recovery Facility (Kāpiti Coast)	\$161.50/tonne \$24 per car, \$4.70 bag	\$3/bag - \$15 per m ³	Whiteware – stoves/dishwashers \$18.50 each Whiteware – fridges/freezers \$36 each Car bodies – fully stripped \$36 Car bodies – unstripped (no rubbish) \$155	\$1900 per tonne		Demolition \$161.50 per tonne \$48.50 minimum charge	\$5.50 car tyres \$20 Truck tyres	\$20 each	Waste Oil \$1 per litre Hazardous waste - up to 1 litre \$35 per unit Asbestos (double wrapped) \$440 per tonne \$50 minimum charge	Free	
Waikanae Greenwaste and Recycling Centre (Kāpiti Coast)		\$3/bag - \$15 per m ³		Not Accepted							

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	Refuse per tonne	Green	Metal	Polystyrene	Wood	Inert	Tyres	TVs	Hazardous / Special	Recyclables	Reuse
Ōtaki Refuse Transfer Station (Kāpiti Coast)	\$148/tonne \$23.40 per car, \$4.20 per bag	\$3/bag - \$15 per m3	Fridge/Freezers (de-gassing and recycling fee) \$27.40 per item Clean car bodies \$23.60 Other car bodies \$74	Not Accepted		Not Accepted	Car tyres \$5.05 per tyre Truck/tractor tyres \$12.30 per tyre Bulk tyres \$358 per tonne	\$20 each	Waste Oil - (80c per litre). Other Hazardous Not Accepted	Free	Not Accepted
Martinborough Transfer Station (South Wairarapa District)	\$185 per tonne \$16 per car	Car Boot \$5.00 Van/Trailer Up to 250 kg \$10.00 Large Trailer / Small Truck Up to 2 tonne \$20.00 Large Truck Up to 6 tonne \$41.00		Not Accepted	Not Accepted		\$3 each. Bulk & Truct tyres \$500 per tonne	Not Accepted	Not Accepted	Free	
Greytown Recycling Station (South Wairarapa District)	Not Accepted	Car Boot \$5.00 Van/Trailer Up to 250 kg \$10.00 Large Trailer / Small Truck Up to 2 tonne \$20.00 Large Truck Up to 6 tonne \$41.01		Not Accepted	Not Accepted	Not Accepted	Not Accepted	Not Accepted	Not Accepted	Free	

	Refuse per tonne	Green	Metal	Polystyrene	Wood	Inert	Tyres	TVs	Hazardous / Special	Recyclables	Reuse
Featherston Recycling Station (South Wairarapa District)	Not Accepted	Car Boot \$5.00 Van/Trailer Up to 250 kg \$10.00 Large Trailer / Small Truck Up to 2 tonne \$20.00 Large Truck Up to 6 tonne \$41.02		Not Accepted	Not Accepted	Not Accepted	Not Accepted	Not Accepted	Not Accepted	Free	
Pirinoa Recycling Station (South Wairarapa District)	Not Accepted	Car Boot \$5.00 Van/Trailer Up to 250 kg \$10.00 Large Trailer / Small Truck Up to 2 tonne \$20.00 Large Truck Up to 6 tonne \$41.03		Not Accepted	Not Accepted	Not Accepted	Not Accepted	Not Accepted	Not Accepted	Free	

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	Refuse per tonne	Green	Metal	Polystyrene	Wood	Inert	Tyres	TVs	Hazardous / Special	Recyclables	Reuse
Castlepoint (Masterton District)	\$195/tonne Car \$20.00, \$6.00 per bag	Car \$5 \$63.25 per tonne		Not Accepted	\$170	\$6 tonne for Cleanfill	Tyres (more than 4 tyres) \$500.00/tonne plus GST Tyres (car & 4WD only) \$2.80 each (incl GST) Tyres (car & 4WD, on rims) \$3.80 each (incl GST) Tyres Truck \$6.00 each (incl GST)			Free	Free
Riversdale (Masterton District)	\$170/tonne Car \$20.00, \$6.00 per bag	Car \$5 \$55 per tonne		Not Accepted	\$170	\$6 tonne for Cleanfill	Tyres (more than 4 tyres) \$500.00/tonne plus GST Tyres (car & 4WD only) \$2.80 each (incl GST) Tyres (car & 4WD, on rims) \$3.80 each (incl GST) Tyres Truck \$6.00 each (incl GST)			Free	Free

	Refuse per tonne	Green	Metal	Polystyrene	Wood	Inert	Tyres	TVs	Hazardous / Special	Recyclables	Reuse
Masterton Masterton District	\$170/tonne Car \$20.00, \$6.00 per bag	Car \$5 \$55 per tonne		Not Accepted	\$170	\$6 tonne for Cleanfill	Tyres (more than 4 tyres) \$500.00/tonne plus GST Tyres (car & 4WD only) \$2.80 each (incl GST) Tyres (car & 4WD, on rims) \$3.80 each (incl GST) Tyres Truck \$6.00 each (incl GST)		Grease Trap & Special Waste (for burial)* \$170.00/tonne plus GST Sump \$47.50 /tonne plus GST Sawdust \$170.00/tonne plus GST Septic tank waste (to sewer) liquid \$62.00 /tonne plus GST	Free	Free
Dalefield Road Transfer Station (Carterton District)	\$195/tonne \$17 Car	Car Boot \$5.00 Small Trailer, ute \$10.00 Large Trailer/Medium Truck less than 2 tonne \$20.00 Large Truck up to 6 tonne \$42.00					Tyres (per tonne) \$510.00 Car & 4WD Tyres – up to 4 tyres on rims >\$3.50 each Truck Tyres – up to 4 tyres \$5.50 each			Free	Free
Woods Waste (Ngaio, Wellington City)	Not open to the public										

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	Refuse per tonne	Green	Metal	Polystyrene	Wood	Inert	Tyres	TVs	Hazardous / Special	Recyclables	Reuse
Southern landfill	\$121.80/tonne Cars minimum charge \$8.00, Commercial vehicles minimum charge \$60.90	\$56.40 per tonne Minimum charge for private cars: \$5.00 Minimum charge for commercial vehicles and trucks: \$28.20	Car bodies, stripped \$20.00 per car body Car bodies, containing seats or refuse \$40.00 per car body Fridge / freezer degassing \$25.00 per appliance			\$15.00 per tonne (only available when landfill requires more cover)	Car tyres: \$4.00 each Truck/tractor tyres: \$10.00 each Tyres only - car \$337.60 per tonne Tyres only - truck / tractor \$426.70 per tonne		Up to 20kg or 20L of household hazardous waste is accepted free of charge. Asbestos / fish / sewage or any other special burial. Prior approval required. \$148.60 per tonne Minimum charge: \$74.30	Free	Free
Spicers landfill	\$129.00/tonne Car \$18.50	Car \$10 \$98.90 per tonne	Car bodies, clean Per car body \$44.30 Car bodies, containing refuse Per car body \$129.00	\$2541.9 per tonne		\$5.80 - \$10.70 - \$18.50 By prior approval	Car tyres: \$5.50 each Truck/tractor tyres: \$11.00 each Tyres only - \$477.70 per tonne		Used Oil \$1.50 per litre Special waste \$197.80	Free	
Silverstream landfill	\$118.00/tonne Cars \$15.00		Cars \$118 per tonne	\$320 per tonne (\$160 minimum charge)			Disposal of more than 4 whole tyres regardless of vehicle type \$320.00		Price on application	Free	Free

A.7.0 Market Share Estimates

A.7.1 Wellington

Wellington City Council estimates that, based on an average set out of one bag per household per week, the number of bags sold, and resident surveys, the Council's bag service is used by over 40% of Wellington City households.

A.7.2 Porirua

Based on the number of households provided with the kerbside service and annual bag sales, Porirua City Council estimates that between 25% and 35% of Porirua households use Council's bags.

Attachment 3 – Statement of Proposal for the WMMP (2017-2023)

**The Joint Wellington Region Waste Management and Minimisation Plan (WMMP)
(2017–2023)
Statement of Proposal**

Proposal

Carterton District Council, Hutt City Council, **Kāpiti** Coast District Council, Masterton District Council, Porirua City Council, South Wairarapa District Council, Upper Hutt City Council and Wellington City Council are proposing to revoke their current Waste Management and Minimisation Plan (WMMP) 2011, and adopt the proposed Wellington Region Waste Management and Minimisation Plan (2017).

Have your say on the Wellington Waste Management and Minimisation Plan

In 2011 territorial authorities within the Wellington Region worked together to develop their first shared Waste Management and Minimisation Plan. This plan has recently been reviewed and a Waste Assessment for the Wellington Region has been undertaken. This review, alongside the Waste Assessment, has informed the development of a new Wellington Region Waste Management Plan. The councils of the Wellington Region now invite you to provide input on this plan.

Why we need a new plan

Territorial authorities are legally required to develop a Waste Management and Minimisation Plan for their district.

Based on the Waste Assessment undertaken in 2016, we know we can all improve on our waste management and minimisation performance. The Waste Assessment has highlighted that we are throwing out an increasing amount of waste, which ends up in our landfills. We also know that, compared to other councils around New Zealand, the quantity of recycling collected in the Wellington Region is relatively low.

As a region, we therefore have the ability to reduce the amount of waste we produce, to more effectively reuse our waste resources for other purposes, and to recycle more. The new Draft Waste Management and Minimisation Plan sets out how the councils within the Wellington Region intend to do this.

Our legal obligation to promote waste minimisation

The Waste Minimisation Act 2008 states that all territorial authorities must promote effective and efficient forms of waste management and minimisation. As part of this, the councils must adopt a Waste Management and Minimisation Plan that includes objectives and policies for achieving effective and efficient forms of waste minimisation.

WMMP summary

The draft WMMP proposes the regional vision of: “Waste Free, Together – for people, environment, and economy”.

By agreeing to the plan, councils agree to take a range of actions to promote effective and efficient forms of waste management. The plan sets an aspirational waste reduction target for the region, which is to reduce the total quantity of waste sent to landfill* from 600

* Specifically Class 1 landfills as defined under the Technical Guidelines for Disposal to Land (2016), prepared by the Waste Management Institute of New Zealand.

kilograms per person per annum to 400 kilograms per person by 2026. A number of other regional targets also provide aspirational benchmarks for the councils to work towards over a 10-year period.

Each council has set out a local action plan to achieve the objectives and policies of the plan. As a result, the WMMP includes a collection of district action plans (contained in Part B). Although each one is unique, they all incorporate a combination of regulatory and non-regulatory measures to support waste minimisation and a decrease in waste disposal. They also collectively recognise that education, communication and council leadership will be an essential part of the waste minimisation and reduction process.

In addition to local actions, the eight territorial authorities within the region have also jointly agreed on a set of regional actions. In summary, the proposed regional actions include the:

- potential development and implementation of a new regional waste bylaw, or a collection of regionally consistent waste bylaws
- implementation of the National Waste Data Framework
- regional communication, coordination and delivery
- optimisation of waste collection systems
- investigating the establishment of a resource recovery network
- exploring beneficial biosolids use
- potential shared governance and service delivery
- providing resourcing for regional actions
- collaborating and lobbying on management issues.

About WMMP implementation

The WMMP includes a range of actions to be implemented by each council. The implementation of these actions will be spread over the 6-year life of the plan, but may take longer than 6 years to complete. In some cases, the proposed actions involve the continuation of educational and community support programmes already under way. In other instances, however, implementation will involve the scoping and investigation of potential projects in order to determine the best local way forward. If, as a result of such investigation, the council decides to consider a significant change in waste or recycling service delivery, then further public consultation would be required. Similarly, if a council proposes a new waste bylaw, that bylaw would need to be publicly consulted on.

What's next?

You now have the opportunity to make a submission on the plan, and, if you wish, to present your views to your local authority.

We want to know what you think, and are particularly interested to know:

- whether you agree with the proposed Regional Targets
- what you think about the proposed Regional Actions
- whether you support your local territorial authority Action Plan.

You can provide feedback on both the regional and district specific provisions of the plan.

Each territorial authority will receive feedback on the proposed plan and hold a hearing to give you an opportunity to speak about your views. Your council will then consider all of the views received and make decisions about its local action plan. Councils will also work together with decision makers from the other territorial authorities within the region to make decisions on other regional waste management and minimisation matters.

How to make a submission

You can make a submission electronically or in writing. You can make a submission to the local authorities below during the following times:

Territorial authority	Consultation dates 2017
Carterton District Council	10 th March – 10 th April
Hutt City Council	28 March – 28 April
Kāpiti Coast District Council	4 – 28 April
Masterton District Council	7 April – 12 May
Porirua City Council	3 April – 1 May
South Wairarapa District Council	7 April – 12 May
Upper Hutt City Council	22 March – 28 April
Wellington City Council	5 April – 8 May

Electronic submission forms for each territorial authority are available through the Joint Wellington Region Waste Management and Minimisation Plan website at: <http://wgtregionwastepan.govt.nz>

A hard copy of the submission form is also available from your local territorial authority office, or from your local council library (please see below for postal and contact details).

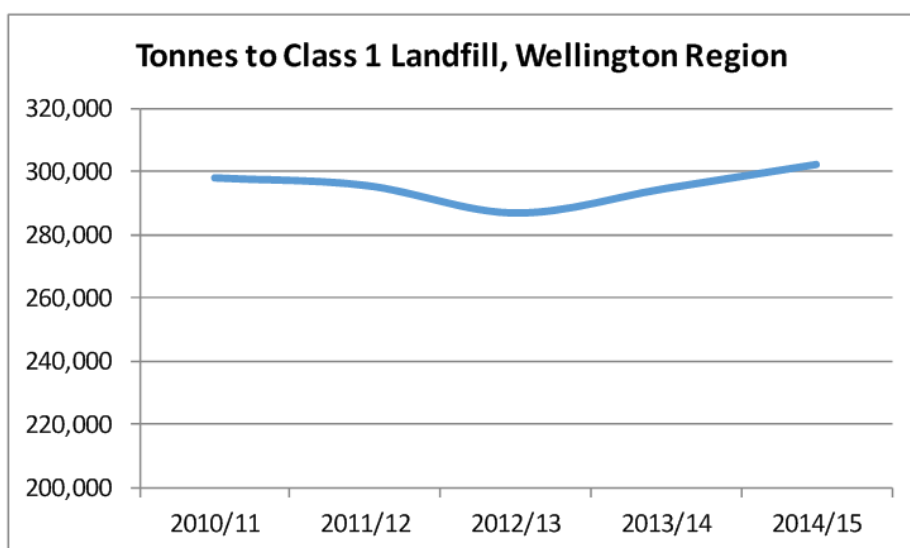
- Carterton District Council Administration Building, Holloway Street, PO Box 9, Carterton 5743: Phone 06 379 4030
- Hutt City Council Administration Building, 30 Laings Road, Private Bag 31912, Lower Hutt 5040: Phone 04 570 6666
- Kapiti Coast District Council Civic Building, 175 Rimu Road, Private Bag 60601, Paraparaumu 5254: Phone 04 296 4830
- Masterton District Council, 161 Queen Street, PO Box 444, Masterton 5840: Phone 06 370 6300
- Porirua City Council Administration Building, 16 Cobham Court, PO Box 50218, Porirua 5240: Phone 04) 237 5089
- Upper Hutt City Council Civic Administration Building, 838-842 Fergusson Drive, Private Bag 907, Upper Hutt: Phone 04 527 2169
- Wellington City Council Service Centre, ground floor, 101 Wakefield Street (Civic Square), PO Box 2199, Wellington 6140: Phone 04 499 4444

Attachment 4 – WMMP Issues Summary

[The following information is proposed to become publicly available through the regional WMMP website].

As part of our statutory requirement to review our Joint Waste Management and Minimisation Plan, the councils of the Wellington Region undertook a joint Waste Assessment. The Waste Assessment highlighted a number of issues. These are summarised below.

1. The quantity of waste we throw out is again increasing

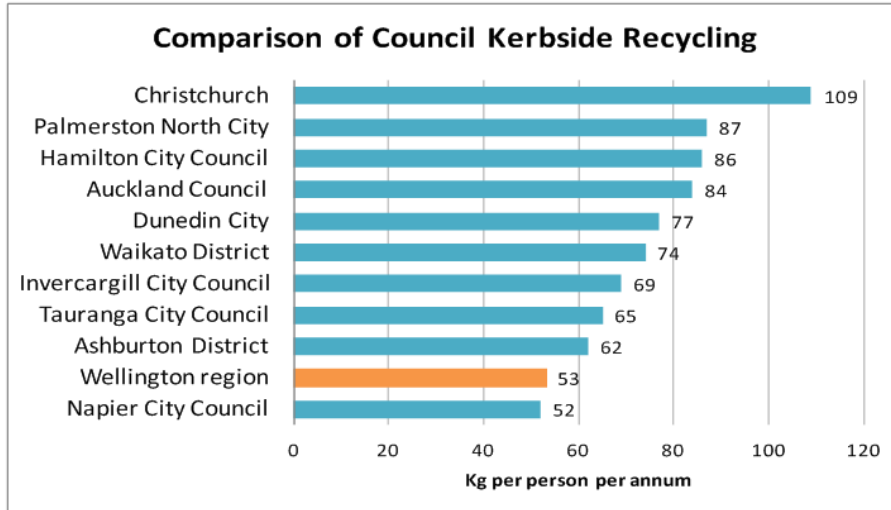


As signalled on the graph above, although the amount of waste to Class 1 landfills¹ within the Wellington Region declined between 2010 and 2012, recent data suggests that it is now increasing. This trend is consistent with national data that indicates waste to Class 1 landfills has increased by approximately 30% over the last three years. Also, this data only accounts for the material to Class 1 landfills. Our estimates suggest that we could be throwing out twice as much material into Class 2-4 landfill sites. While the waste being disposed of within Class 2-4 landfills is likely to be mostly soil, rock and concrete, this requires further investigation.

2. Council kerbside recycling is low and falling

Compared to other councils around New Zealand the quantity of recycling collected in the region is quite low. This is shown in the chart below. In addition, the quantity of recycling collected has been falling from 59kg per person back in 2011/12 to 53kg today. There may be several reasons contributing to the decline, including fewer newspapers being purchased and hence recycled.

¹ The Technical Guidelines for Disposal to Land (2016) prepared by the Waste Management Institute of New Zealand, define a Class 1 landfill as a site that accepts municipal solid waste. Class 1 landfill also generally accept construction and demolition waste, some industrial waste and contaminated soils. Class 1 landfills require rigorous assessment, must be engineered to meet strict environmental protection controls, and address landfill gas management. Class 2 and 3 landfills accept different and less hazardous types of waste, and therefore do not need to be designed to the same environmental standard.



3. Council kerbside rubbish market share is low and falling

All councils in the region, apart from Kapiti, provide a user pays bag service. Kapiti's user pays bag service is provided by a private collector. Data on the weight of this material sent to landfill is tracked over time. This shows that the proportion of household kerbside rubbish collected through council contracted services is very low (17% on average in 2014/15) and has been falling steadily in most council areas (from 24% in 2010-11).

One reason for the decline is due to households choosing to use private wheeled bin services. The data shows very clearly that households that use large wheeled bins throw out more rubbish than households that use bags (or small wheeled bins). This is true even when household size is taken into account. It is mainly because households with large wheeled bins throw out more garden waste and recyclables. The increasing use of large wheeled bins may be another reason why recycling rates are dropping.

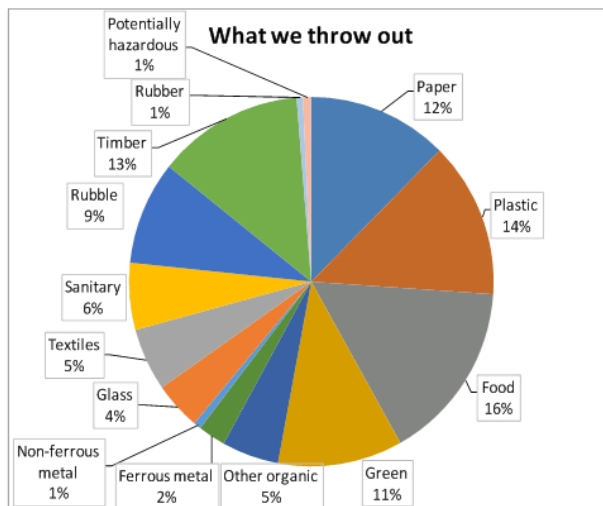
Another problem with declining council market share of waste services is that, as the services are user-pays, the income also declines and so the services are increasingly struggling to cover their costs. This is made worse by the fact that private services can 'cherry pick' the most profitable routes leaving the council contracted services to collect from the least profitable.

4. We throw out a lot of organic waste

The chart below shows that organic waste is the largest proportion of the waste we send to landfill. When organic waste is disposed of in landfills, the way they decompose generates significant quantities of methane which is a powerful greenhouse gas.

Even though a percentage of the methane gas emissions from landfills can be captured and used to generate energy, there is still a net contribution to NZ's emissions.

In contrast, organics like garden waste, food scraps and food processing waste can potentially be recovered and made into compost or other soil amendment products, or used as stockfood for example. The processes used to recover organic waste do not typically present the same issues as landfills in terms of greenhouse gas emissions or potential environmental harm.



5. Biosolids (sewage sludge) can be a problem

All landfills in the region accept biosolids for disposal. The landfilling of biosolids has the potential to cause issues in landfill management, including objectionable odour, leachate (potentially harmful liquid that 'leaches' from the landfill) and landfill instability. On the other hand, diverting biosolids from landfill could make a positive contribution to waste reduction and there is potential to recover value from the biosolids through various technologies and processes.

6. We can recover more resources

Although there are lots of things that people and businesses take to transfer stations that we do recycle, we can do an even better job with recycling, and there are lots more things we can recover. There is still a lot of cardboard, paper, and green waste we throw out, and we can recover building materials such as timber, concrete, brick, and plasterboard, as well as reusable items like furniture, bikes, appliances, carpet, and textiles. When we add all these things together this is our biggest opportunity to reduce what we send to landfill. To take advantage of this, we would need to develop our transfer stations and set up facilities to process some of this material.

7. There are opportunities to work better together

Councils operate a range of different funding, management, and service delivery models. This has meant that the level of alignment of services, and the use of shared service type approaches has been limited. The range of systems that have evolved over time are not necessarily configured to deliver optimum results in terms of cost and waste minimisation performance. There are likely to be gains from a more consistent approach that utilises best practice (e.g. more a consistent approach to kerbside services).

Attachment 5: Pre-Consultation Feedback Requests & Recommendations¹

Page no / Ref	Current Text	Proposed Text/Amendment Request	Request Rationale	Recommendation
p30, s9	<p>'This section sets out the actions that the councils in the region will collectively undertake or support to deliver on the vision, goals and objectives of this WMMP'.</p> <p>(UHCC)</p>	<p>'This section sets out the actions that the councils in the region will collectively undertake or support to deliver on the vision, goals and objectives of this WMMP – <u>the following actions will contribute to the primary target, being a reduction in the total quantity of waste sent to class 1 landfills from 600kg per person per annum to 400kg per person by 2026</u>'.</p>	UHCC seek a reminder that the target is a 30% reduction in waste to class 1 landfills.	Accept
p30, s9.1	<p>'Develop and implement a regional bylaw'.</p> <p>(ER)</p>	<p>'Develop and implement a regional bylaw, <u>or a suite of regionally consistent bylaws</u>'.</p>	To recognise the potential for either bylaw development option.	Accept
p31 (R.R.1)	<p>(Title) 'Develop and implement a regional bylaw'</p> <p>(UHCC)</p>	<p>'Develop and implement a <u>regionally consistent</u> bylaw'.</p>		<p>Accept in part:</p> <p>As requested, include reference for a regionally consistent bylaw, but also retain the ability to develop a regional bylaw. As follows:</p> <p>'Develop and implement a</p>

¹ Amendments to Local operational TA Actions Plans have also been incorporated into the draft WMMP, and have been highlighted in track changes for the interest of the Joint Committee.

				regional bylaw, or a suite of regionally consistent bylaws’.
p31 (R.R.1)	(Description) ‘Develop, implement and oversee monitoring and enforcement of the regional bylaw’. (UHCC)	‘ <u>Investigate and if feasible</u> , develop, implement and oversee monitoring and enforcement of a regionally consistent bylaw’	Like other actions, investigation and assessment will need to be made before committing to this action.	Accept in part: Consistent with the recommendations above, adopt the following: ‘ <u>Investigate and if feasible</u> , develop, implement and oversee monitoring and enforcement of a regional bylaw, <u>or a suite of regionally consistent bylaws</u> ’
p34 (R.LM.1)	‘Promote, investigate and, where appropriate, support the establishment of shared governance and service delivery arrangements...’. (UHCC)	‘Promote, investigate and, where appropriate <u>and cost-effective</u> , support the establishment of shared governance and service delivery arrangements...’.	Ensure cost-effectiveness is included specifically in the description of the action because this is a key determinant of whether shared services will be viable.	Accept
p35 (R.LM.3)	‘R.LM.3: Collaborate and lobby’ ‘The Councils will collaborate with other local government organisations, NGOs and other key stakeholders on undertaking research, lobbying and actions on various waste management issues such as (but not limited to) product stewardship, e-waste, tyres,	<u>R.LM.3: Collaborate</u> ‘ <u>The Councils will work collaboratively with local government organisations, non-government organisations and other key stakeholders to undertake research and actions to advance solutions to waste management issues such as, but not limited to, e-waste,</u>	To emphasise the importance of lobbying, it is proposed to break the existing action down into two separate actions.	Accept

	plastic bags, container deposit systems etc. (CDC)	<u>plastic bags, and the need for a container deposit system</u> . R.LM.3: Lobby <u>'The Councils of the region will work together to lobby for product stewardship for possible priority products such as, but not limited to, e-waste, tyres, plastic bags'</u> .		
All local action tables	(Header) 'Funding' (UHCC)	In the action lists, request amending 'Funding' column header, to read: 'Funding Options'.	A variety of potential funding sources may apply, this amendment provides for a variety of potential funding options.	Accept: 'Funding Options'
All Action Plan Headings	(Header) 'Communications' (WMMP Planner)	Change the header 'Communications', to 'Engagement'.	The term engagement better reflects the nature of the communications, and more effectively encompasses educational activities.	Accept: The header 'Engagement', and 'Regional Engagement'.
All Action tables	'New or existing action' (WMMP Planner)	It is proposed to remove reference to the column stipulating whether it is an existing or new action.	Currently in several cases an action has been listed as being both existing and new. This column is of limited use from an operational perspective. It is recommended that the column be removed to improve simplicity for operational use.	Accept
p14 Figure 4	Re. Figure 4 – reference to 'Organic'.	Insert a revised pie graph which distinguishes 'Greenwaste' and 'Food	To provide clarity to readers.	Accept

	(WMMP Planner)	waste' in contrast to the single 'Organic' portion.		
p20 s4.3, para 1	'These targets are informed by modelling that was done when the plan was being prepared'. WMMP Planner	'These targets are informed by <u>preliminary</u> modelling that was done when the plan was being prepared'.	Insert the word 'preliminary' before modelling, to signal to the reader that plan preparation modelling was high level.	Accept