Asset Management Plan

Resource Recovery

PAPAIOEA
PALMERSTON
NORTH
CITY


MT. CLEESE
ALT: 45.2m A.S.L
GREEN WASTE DROP-OFF
AWAPUNI EDUCATION CENTRE
AWAPUNI MATERIALS RECOVERY FACILITY
GREEN WASTE DROP-OFF

Our full Asset Management Plan outlines how we manage our Resource recovery activity, what our challenges are and our investment plan for the next 30 years.

Asset Management Plan
Executive Summary

Resource Recovery

Manaaki whenua, manaaki tangata, haere whakamua. Tihei mauri ora!

No reira, e te haukainga Rangitāne, nei rā te mihi nui ki a koutou e pupuri nei i te mauri o te whenua me ngā wai e rere atu e rere mai.

Tēnā koutou, tēnā koutou, tēnā tātou katoa.

Most of the things we do, buy, and consume generates some form of waste. This not only costs money when we throw things away but, if we do not manage the waste properly, it causes problems for the environment and for people's health.

We provide rubbish collection and recycling services for the City to:

- Ensure the city's solid waste is adequately and affordably managed;
- Maximise the amount of waste diverted from landfill (such as through recycling and composting); and
- Manage hazardous waste in an environmentally responsible manner.

Our waste management and minimisation plan guides our work

We are required by the Waste Minimisation Act 2008 to adopt a Waste Management and Minimisation Plan (WMMP) that sets out our objectives, policies and methods for achieving effective and efficient waste management and minimisation, and how the plan is to be funded. We reviewed and updated the WMMP in 2019 and identified four priority actions, three of which are likely to require infrastructure.

We also receive funds from the national waste disposal levy to spend on promoting or achieving the waste minimisation activities set out in our WMMP.

We are also guided by the Resource Recovery Plan which is our tactical response to the Goal 4: A Sustainable and Resilient City.

We want to be a leader in waste diversion

In 2017, Palmerston North sent just over 45,000 tonnes of waste to landfill. Nearly half of this was potentially divertible. While we cannot be directly responsible for the City's waste, we can promote effective and efficient waste management and minimisation.

There are opportunities for us to invest in new services to increase the proportion of waste diverted from landfill from 38 percent to 48 percent by 2025 as identified in our WMMP. **We could save nearly 20,000 tonnes of material from going into the landfill each year.**

Scope of this plan

This Plan informs our 10 Year Plan, Financial Strategy and 30 Year Infrastructure Strategy. It supports us in the management of our Resource recovery activity to:

- Achieve our strategic outcomes as set by Goal 4: A Sustainable and Resilient City;
- Meet the levels of service we have committed to;
- Plan for growth and adjust to other drivers such as climate change and new legislation;
- Improve asset knowledge and monitor performance;
- Minimise risk; and
- Plan operations.

We partner with Rangitāne o Manawatū

We have a strong relationship with our Te Tiriti o Waitangi partner and tangata whenua, Rangitāne o Manawatū. Together we set out to provide services in a way that supports iwi aspirations. These aspirations include diverting food waste from landfill, doing our best to keep our waterways free from litter and fly tipping, and by continually educating and encouraging our people to make better choices when it comes to waste, so that it does not impact the environment.

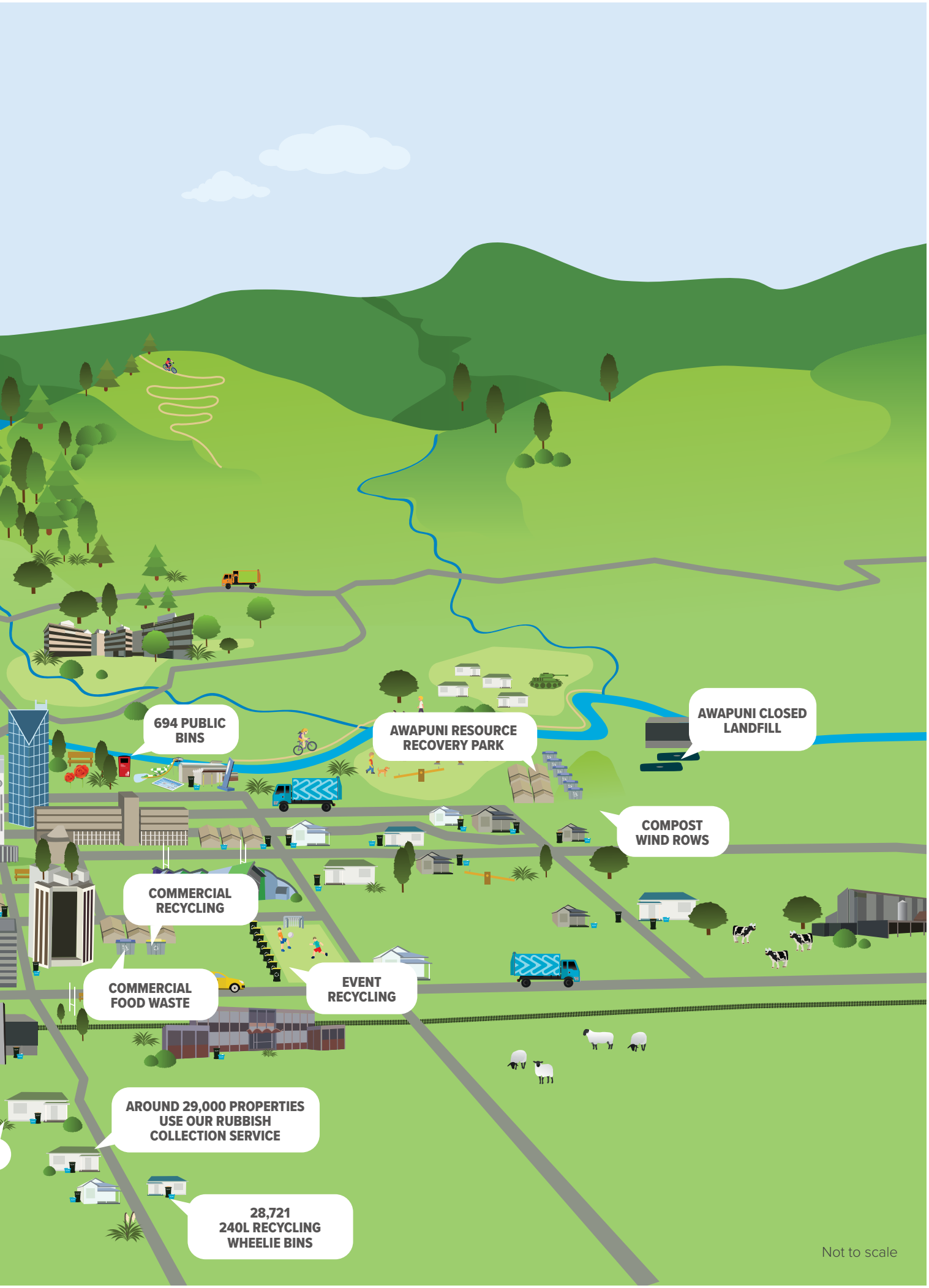
It's important to note we are reviewing our WMMP in mid 2024 which may see changes to our plan.

What we provide

We provide waste minimisation (recycling), waste management (rubbish) and closed landfill management services.

In addition to the services listed below we promote waste diversion through behaviour change campaigns and education.

Service	Typical Usage [Tonnes per year]
Kerbside comingled recycling collections	3340
Kerbside rubbish bag collection	3410
Organic and green waste drop off points	2700
Kerbside glass recycling collections	1702
Three recycling drop-off points	1000
Public space bins	257
Rubbish transfer station	118
Illegal dumping response	42
Events recycling	1
Household chemical drop off	1
E waste	53


694 PUBLIC BINS
AWAPUNI RESOURCE RECOVERY PARK
AWAPUNI CLOSED LANDFILL
COMPOST WIND ROWS
COMMERCIAL RECYCLING
COMMERCIAL FOOD WASTE
EVENT RECYCLING
AROUND 29,000 PROPERTIES USE OUR RUBBISH COLLECTION SERVICE
28,721 240L RECYCLING WHEELIE BINS
Not to scale

Everyone is a customer


Residents


Families


Rural


Education


Community Groups


Council


Event/Sport Organisers


Commercial

- About a third of our residents use our rubbish bag service and these customers are less likely to throw out material that could be recycled or re-used.
- 10 percent of recyclable materials are being dropped off by businesses and residents to our centres.
- On the other hand, waste from the city centre has gone up by 25% in the last few years, and we have seen growth in our commercial food waste, glass and recycling services.
- Although we are collecting less waste from our public space bins, we have noticed a significant increase in illegal dumping.
- We have been working hard to educate residents on the importance of keeping rubbish separate from recycling, and we continue to introduce new recycling services each year, with liquid paperboard (such as Tetra Pak products) being one of the newest items accepted at drop-off centres.
- We continue to provide recycling services for many events in and around the city, including the Festival of Cultures which is our biggest event of the year.
- According to our 2022 Annual Residents survey, our residents are generally satisfied with all aspects of waste management, including kerbside rubbish and recycling collection, but slightly less than in previous years.

Our stakeholders also include: Ministry for the Environment, Ministry of Health, Horizons Regional Council, Neighbouring Local Authorities, Other Waste Collection Providers, Environment Network Manawatū and environmental groups.

We have some challenges and risks

Our community can do better in sorting its waste

The 2022 Waste Assessment provided data on nearly all waste streams for Palmy. This data was analysed and identified some key areas where we could improve our effectiveness in waste diversion.

- A significant proportion of waste going to landfill is organic waste, with food waste present across all kerbside rubbish collection services.
- We lack the facilities to recycle or otherwise divert construction and demolition waste (apart from some timber and concrete) with a predicted increase in construction activity.
- More recyclables could be diverted from commercial properties.
- Community engagement, understanding and awareness of waste issues could be improved somewhat, although Council has been working hard in this space.

Government changes will heavily impact us

Significant changes continue to be made around the way that waste is managed in New Zealand. From 2024, all councils will accept the same materials in their kerbside collections, which thankfully, we already comply with. By 2030, all councils will also need to provide households with a food scraps collections service, to make it easier for people to divert food scraps from landfills. There will also be new and more comprehensive waste legislation coming our way, which will replace the current Waste Minimisation Act 2008 and the Litter Act 1979.

Rubbish disposal will cost us more

The Waste Disposal Levy has increased from $10 a tonne prior to 2020 to $50 a tonne in July 2023. This will reach $60 per tonne in July 2024. This means we continue to pay more for disposing of rubbish in the Bony Glen landfill. Council will be considering all elements of its kerbside rubbish collection service as part of its next WMMP.

Our closed landfill will continue to play a role

From 1950 to 2007, 2.5 million tonnes of rubbish went to the Awapuni Landfill. Now closed, we have the ongoing responsibility to maintain its integrity. The current consent expires in 2029 and soon we will need to start the process of reconsenting it, which gives us tools to minimise environmental impacts of a closed landfill.

What's our plan?

Being a part of Aotearoa New Zealand's Waste Strategy

By taking part in the development of an Action and Investment Plan (AIP) we'll be teaming up with other councils to create more places and services that recycle and reuse things all over the country. Working with national behaviour change programmes will enable us to help more people make the right choices when it comes to waste.

We plan to provide new services to divert more waste from landfill

Our target is to increase the proportion of waste diverted from landfill from 36 percent to 48 percent by 2025. This will require a reduction in waste being sent to the landfill and an increase in material being diverted.

Kerbside food waste service (+ 4 percent diversion rate)

We have rolled out a food scraps collection trial with 14 streets in Palmy. The findings and learnings from the trial will ensure we're ready to roll this out to the entire city, as the Government has recently announced that this be a mandatory service offered by all councils by 2030.

Citywide Recycling Services to Non-Residential Properties (+ 2 percent Diversion Rate)

Provide additional recycling collection services to non-residential customers to accommodate their needs; such as variety in containers, types of materials, frequency of collection and location of collection. These would be provided on a user pays basis.

Diversion of New Materials from Landfill (+ 2.7 percent Diversion Rate)

This could include investigating the establishment of a construction and demolition waste processing service (with associated collections), aiming to divert at least one third of this waste currently going to landfill. Implementation would be subject to investigation and detailed financial analysis.

Our response to growth

The city has grown further away from our existing recycling drop-off points. We need to investigate establishing a new drop off site for recycling and green waste in the north east of the city to better service this growth.

We will continue to investigate and pilot new services

We will continually adapt to the changing markets and legislative environment and to do this we plan to be:

- Investigating the possibility of recycling difficult materials.
- Continuing education to change behaviour and promote awareness.
- Continuing to take enforcement action against those that dump rubbish illegally, and work in partnership with community group to identify and address problem spots.
- Continuing to support a community led Zero Waste Action Group.

Maintain existing levels of services

We plan to keep operating the existing services at the same level and continue to look for ways to improve operational efficiency.

Climate change is at the forefront of our work

Our resource recovery activities go together with combatting climate change, with our focus and purpose being directed at promoting sustainability and cutting back on waste. We continue to educate residents on the importance of recycling and composting, and we encourage them to reduce their reliance on single-use plastics. By introducing a food scraps collection service, we will be further reducing greenhouse gases.

We have and continue to invest in infrastructure upgrades to improve the resilience of waste management systems, such as upgrading our recycling facilities to withstand extreme weather events.

Overall, we are taking a proactive approach to addressing the impacts of climate change on our resource recovery activity, and we're committed to promoting sustainability and reducing our carbon footprint in the long term.

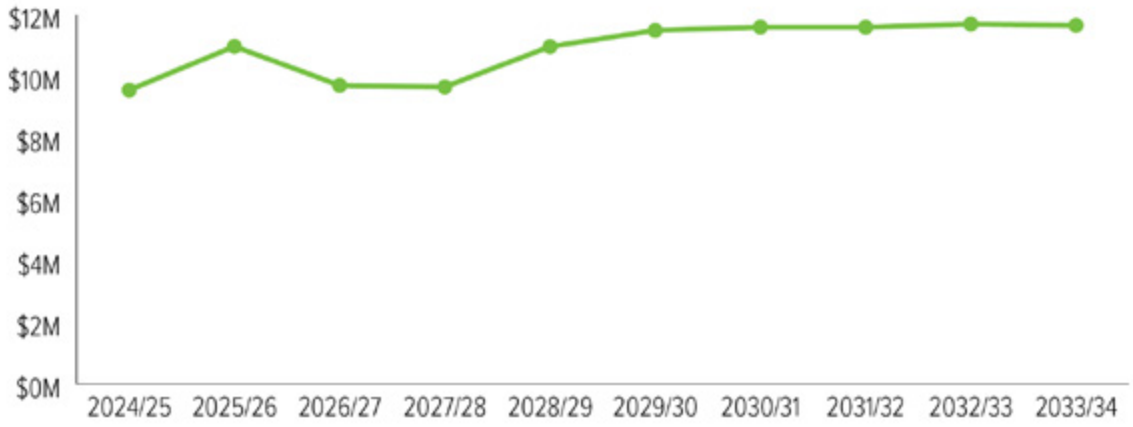
"The government has further incentivised waste reduction by including landfills in the New Zealand Emissions Trading Scheme so the more we can divert from landfill, the greater part we play in reducing green-house gases."

How much will it cost?

Operations and Maintenance

We have several new assets and additional resource recovery services being proposed. The graph above shows a forecast increase in investment occurring at year six (2029/30). This is primarily being driven by the proposed kerbside food waste collection and processing service which is likely to become a legislative requirement.

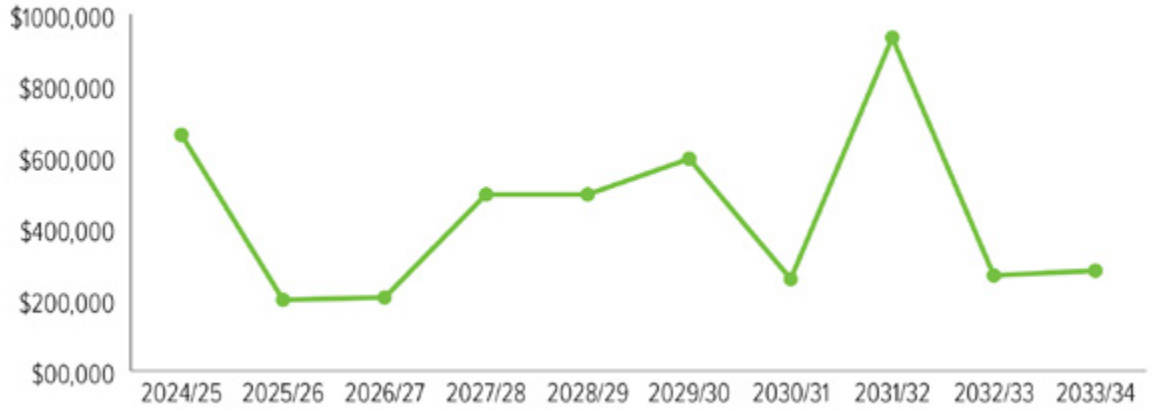
This investment would introduce a whole new recycling service and associated running costs. Other Operations and Maintenance costs are forecast to remain steady throughout the first ten years.



Year two has a substantial cost operating costs increase of around $730,000 and further proposed increases in outer years amounting to just over $1 million per year.

There will be an increase in operating costs associated with the development of our resource recycling facility and drop off facilities, potential new food waste collection service, additional wheelie bins and crates for new growth areas, safety improvements in our collection vehicles and transfer station sites, and improved contamination monitoring.

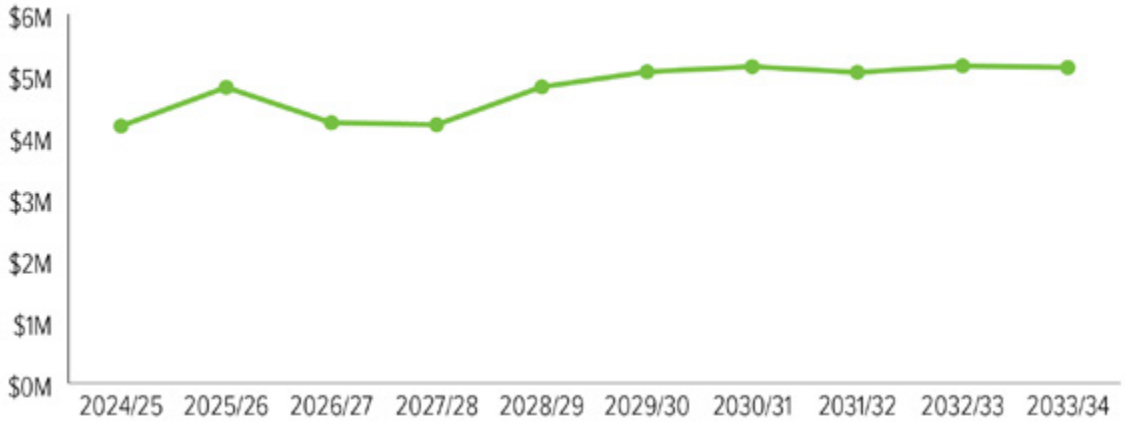
Renewals



Renewals will steadily increase over the ten years, with some spikes to accommodate individual asset renewals.

In 2031/32 there is an increase in renewals, which can be attributed to renewing our processing machinery for our composting service activity.

Capital new



The overall level of expenditure proposed varies throughout the ten years. The significant spike in years three and four is due to the costs associated with the implementation of the food scrap collection service i.e. additional trucks, collection bins etc.

A new recycling drop-off point is planned for 2025/26 and a major upgrade of the Material Recovery Facility, where we process the city's recycling, is proposed to occur in 2027/28. Every year there are minor new works associated with providing for growth (new bins and crates), landfill landscaping and public space bins.

This document was prepared by:

Palmerston North City Council | Infrastructure | Asset and Planning Division.

Version No.	Reason for Amendment	Date
0	DRAFT TO SUPPORT 10 YEAR PLAN CONSULTATION	14 Apr 2021
1	FINAL	30 Jul 2021
1.1	DRAFT 2023 Version	13 Sep 2022
1.2	First DRAFT for Review	3 Apr 2023
1.3	Final 2023 Version	November 2023
1.4	Addendum Update	June 2024

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OASIS Document No.	17188991

Contents

1. Introduction

1.1 He Mihi

Manaaki whenua, manaaki tangata, haere whakamua. Tihei mauri ora!

No reira, e te haukainga Rangitāne, nei rā te mihi nui ki a koutou e pupuri nei i te mauri o te whenua me ngā wai e rere atu e rere mai.

Tēnā koutou, tēnā koutou, tēnā tātou katoa.

Our matawhānui Papaioea, vision for Palmerston North, is **"he iti rā, he iti pounamu | small city benefits, big city ambition"**, where our community enjoys the benefits of living in a small city yet has the advantages of a big city.

The Resource Recovery Activity is one of many services we provide to our community to support their cultural, social, environmental and economic wellbeing. The Resouce Recovery Activity is enabled by **$32M** of infrastructure assets and, as kaitiaki of these assets, we take account of the present and future needs of our community in order to provide these services in the most cost effective way.

The Resource Recovery Activity aims to:

- Ensure the city's solid waste is adequately and affordably managed;
- Maximise the amount of waste diverted from landfill (such as through recycling and composting);
- Manage hazardous waste in an environmentally responsible manner.

1.2 Our Patnership with Rangitāne o Manawatū

In our commitment to fostering and strengthening our partnership with Rangitāne o Manawatū, we aim to ensure:

- Rangitānenuiarawa[1] is reflected in the city's approach to Resource Recovery; and
- Rangitāne o Manawatū have opportunities for early involvement in all Resource Recovery projects and initiatives.

1.3 Our Asset Management Framework

We have adopted an Asset Management Framework, as shown in Figure 1, from the International Infrastructure Management Manual, in order to standardise our appraoch to Asset Management and grow it as an organisational practice.

Figure 1 shows that Asset Management Planning is not only an output of lifecycle planning processes but relies on having a clear understanding of our current and future requirements, and is enabled through leadership, continuous improvement and other asset management elements.

The Framework is based on best practice and therefore helps define both the scope of the Asset Management Plan and its structure.

This AMP documents the key outcomes of each step of our Asset Management process to provide better accountability, sustainability, risk management, service management and financial efficiency.

[1] Rangitānenuiarawa is the Rangitāne expression of kaitiakitanga, or customary authority and guardianship, and affirms their customary leadership in ensuring the health and regeneration of their tribal rohe.

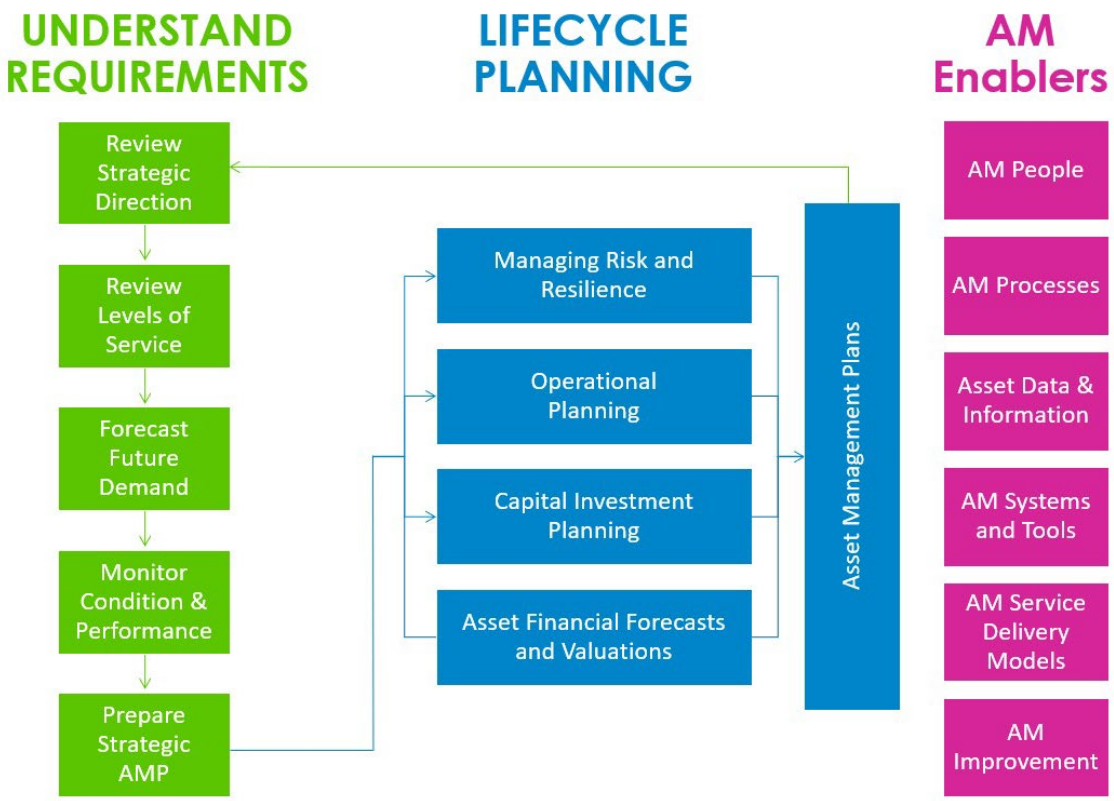


Figure 1: Asset Management Framework

1.4 Purpose and Scope of this Asset Management Plan

The purpose of this Asset Management Plan (AMP) is to document our intended programmes and budgets for the management of the Resource Recovery Activity based on our understanding of service level requirements, future demand, asset performance and risks.

This plan should be read in conjunction with the Strategic Asset Management Plan (SAMP).

The SAMP includes the overall strategic approach to managing our assets and overarching issues, practices and systems. The SAMP reflects our aspiration to lift the standard of asset management planning throughout the organisation and its purpose is threefold:

- To effectively define the Asset Management System (including giving effect to our Asset Management policy);
- To establish how Asset Management Objectives are linked to our organisational objectives; and
- To provide direction to our Asset Management Plans

This document, the Resource Recovery Asset Management Plan provides detail on how our Strategic Asset Management Planning is applied to the Resource Recovery Activity. In this context, the objective of the AMP is to translate our Strategic Vision and Goals into Activity strategies and action plans in order to provide supporting evidence for the Long Term Plan and 30 Year Infrastructure Strategy[2]. The AMP achieves this by:

- Explaining how our strategic direction impacts on the management of our infrastructure assets specific to this Activity;
- Summarising our services and customers including agreed levels of service and performance;
- Forecasting future demand for our services and associated need for assets;
- Reporting on asset condition and performance;
- Higlighting the key risks and how they are incorporated into investment decisions that ensure our infrastructure is resilient;
- Summarising the basis of operational and maintenance programmes, including how interventions (inspections, assessments and renewals) help optimise planned and reactive maintenance in the operational planning;
- Justifying the business cases for capital new and renewal programmes including prioritisation of projects;
- Proposing longterm financial forecasts that are used to inform the development of the draft Long Term Plan;
- Explain how asset management for this Activity is specifically enabled through people, processes, asset data and systems, and service delivery; and
- Demonstrate how the Activity is prioritising and improving its Asset Manaement maturity as part of its commitment to Operational Excellance.

1.5 Navigating this Document

Table 1 contains an outline of the AMP structure.

Table 1: Structure of this Document

Section	Description
Executive Summary	What is our proposed response to key issues and challenges?
1. Introduction	What is the purpose of this Asset Management Plan?
2. Strategic Context	Why we invest in the Activity?
3. Description of the Resource Recovery Activity	What are the services we provide? Who do we provide services to?
4. Levels of Service	What level of service do we provide? The desired future state of the service?
5. Future Demand and Impact of Drivers	What type of growth should we plan for? What are the trends affecting the Activity?
6. Our Assets, Condition and Performance	What are our assets? How are our assets performing?
7. Risk and Resilience	What are our risks? How do we plan for and recover from disruptive events?
8. Operational Planning	What are our operational performance requirements?
9. Lifecycle Management	What programmes of work do we need to do?

[2] AMP demonstrates regulatory compliance with section 93(7) & 94(1) of the Local Government Act (LGA) 2002 which in summary requires the Long-Term Plan (LTP) to be supported by the information required by Part 1 of Schedule 10

Section	Description
10. Financial Summary	What will it cost? How will we pay for it?
11. How We Manage the Resource Recovery Activity	How do we deliver the Activity? Are we getting value? (Section 17A Review)
12. Plan Monitoring and Improvements	How do we get better? How do we track progress?

1.6 Relationship to the Waste Management and Minimisation Plan

We have a statutory requirement under the Waste Minimisation Act 2008 (WMA) to promote effective and efficient waste management and minimisation within Palmerston North. We do this by adopting a Waste Management and Minimisation Plan (WMMP). We also have obligations under the Health Act 1956 to ensure that our waste management systems protect public health.

Our WMMP was revised in 2019 and spans the period 2019 to 2025. It sets the priorities and strategic framework for managing waste in the city. In the WMMP we have set a target to increase the proportion of waste diverted from landfill from 38% to 48% by 2025. The WMMP outlines the strategies which Council are proposing to meet this target. Some actions will require new assets, and these have been identified in this AMP (see Section 5.2).

We will be reviewing our WMMP after the Resource Recovery Plan and Resource Recovery Asset Management Plan are adopted as part of the 2024-2034, 10 Year Plan. Please see section 5.2 for more detail.

1.1 Relationship with other plans

This section outlines the relationships between the Property AMP, other Council AMPs, and other strategic plans. These other plans are accessible at: https://www.pncc.govt.nz/council-city/official-documents/plans/

AMPs are a key component of the Council planning process, linking with the following plans and documents:

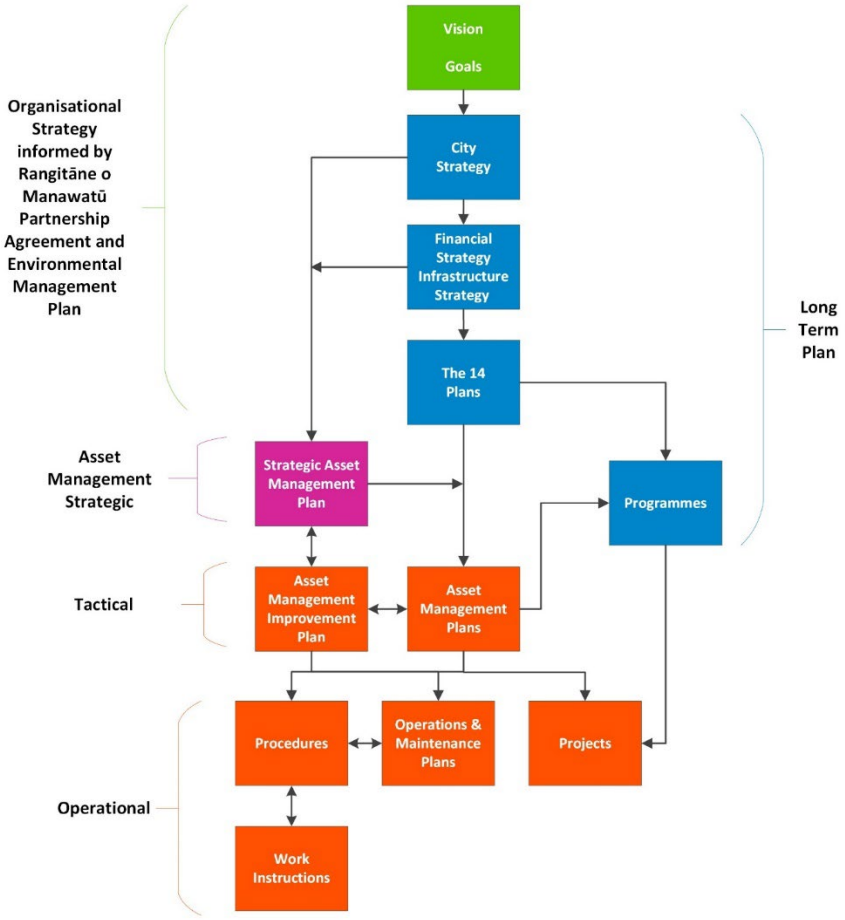


Figure 2: Relationship of Asset Management Plan (AMP) to Other Plans

1.2 Relationship to Other Asset Management Plans

This section outlines the relationships between the Resource Recovery AMP, WMMP and other Council AMPs. These other plans are available on our website.

This plan should be read in conjunction with Part A 'Palmerston North City Council Strategic Asset Management Plan (SAMP)'. The SAMP includes the overall strategic approach to managing council assets and overarching issues, practices, and systems.

The following relationships between this AMP and other AMPs have been identified:

- **Stormwater AMP:** Illegal dumping in urban waterways.
- **Transport AMP:** Illegal dumping and street litter.
- **Parks and Reserves AMP:** Illegal dumping and litter.
- **Property AMP:** The Property activity manages all the Resource Recovery buildings as a specialist support function. The Property AMP covers the strategies and work programmes needed to identify the required management and investment in property to support the Resource Recovery activities.
- **Water AMP:** In particular, water supply and firefighting service to the Materials Recovery Facility.
- **Wastewater AMP:** This activity provides sewer connections to Resource Recovery property.

1.3 Key Partners and External Stakeholders

We play a central role in promoting waste minimisation and making sure that waste is disposed of safely. However, waste management is a complex societal problem and hence there is very high engagement with us from both the community and government agencies.

Table 2 contains a summary of stakeholders that we regularly engage with on waste management issues. The level of engagement (whether we inform, consult, involve, co-operate with or empower) depends on how significant the issue is and who is ultimately responsible for resolving the issue.

Table 2: External Partners and Stakeholders

Name	Description
Rangitāne o Manawatū	We work in partnership with Rangitāne o Manawatū and Rangitānenuiarawa is reflected in the city's approach to Resource Recovery.
Ratepayers	People who own properties within the Palmerston North City Council boundaries but may or may not reside in the city.
Commercial Service Users	Businesses can subscribe to any of our commercial services: food waste and/or glass and/or mixed recycling. Alternatively, businesses can opt-in to the rated kerbside recycling service
Residents	People who live within the Palmerston North City Council boundaries but may or may not live in the rubbish and recycling collection areas.
Other Businesses	Individuals or organisations who carry out their business in the city.
Visitors to Palmerston North	Palmerston North and the Manawatū District represent the 13th largest domestic visitor spend.
Education and Research Institutes	Early Child Centres, Primary and Secondary Schools Massey University, including the Zero Waste Academy
Environmental Groups	As represented by the Environmental Network Manawatū
Manawatū-Whanganui Regional Council, trading as Horizons	The environmental, regulatory, and monitoring body under the Resource Management Act for the natural resources in the Manawatū-Whanganui region. We hold consents with Horizons for our two closed landfills and composting operations.
Lease holders (at ARRP)	Currently (Reclaimed Timber, Higgins Family Holdings, Macauly Metals, Waste Management & OJI)
Media	Manawatū Standard
Contractors	Contractors and tradespeople who assist in the delivery of Council activities (plant maintenance and green waste shredding etc)
Other waste collection providers	Waste Management, Envirowaste, Low-Cost Bins, Lucy's Bins, JJ's Waste
Waste disposal	Midwest Disposals Ltd operates the Bonny Glen landfill, near Marton.
WasteMINZ	WasteMINZ is considered "the authoritative voice on waste, resource recovery and contaminated land in New Zealand and seeks to achieve ongoing and positive development of the industry through strengthening relationships, facilitating collaboration, knowledge sharing and championing the implementation of best practice standards".[3] We are an active member of WasteMINZ.
Ministry for the Environment	Government`s key advisor in New Zealand and international matters for the environment. Coordinate and provision of guidance on the implementation of the Waste Minimisation Act (WMA) 2008. Monitoring responsibility to ensure local authorities meet their responsibilities such as levy expenditure.
Ministry of Health	Overall responsibility in New Zealand for public health, including issues relating to the rubbish and recycling services. Council is required to consult with regards to the content of the Waste Management and Minimisation Plan (WMMP).
Commodity traders	Companies that purchase our sorted recyclable commodities.

[3] www.wasteminz.org.nz

Name	Description
Neighbouring local authorities	Manawatū, Horowhenua and Tararua districts adjoin Palmerston North City, and we are within the boundary of Horizons Regional Council. Council has a contract with Manawatū District Council for illegal dumping investigations. Council maintains relationships with other Councils for the exchange of information and management practices.
Community gardens	Community gardens, including school gardens, can receive free compost.

2. Internal and External Strategic Context

2.1 Our Strategic Direction and Priorities

Our vision is He Iti Rā, He Iti Pounamu | Small City Benefits, Big City Ambition. While the challenge of mitigating climate change is a global one, Palmerston North needs to play its part in reducing emissions. The task of lowering the city's carbon footprint forces everybody to identify inefficiencies and improve the way they do things. Understandably, one of our goals, therefore, is to reduce waste.

To achieve our City's vision, we have aligned the Resource Recovery Asset Management Plan with:

- Resource Recovery Plan (formerly Waste Plan and Waste Management and Minimisation Plan)

Error! Reference source not found. below outlines our strategic priorities and high-level approaches relevant to the Resource Recovery Activity.

2.2 Iwi Aspirations and Values

We work in partnership with Rangitāne o Manawatū and Rangitānenuiarawa is reflected in the city's approach to Resource Recovery. Many of the following Iwi aspirations are also shared by us:

- Reduce landfill load;
- Waste Minimisation and Management Plan needs clear goals and accountability for reducing waste;
- Urban streams are no longer impacted by littering and fly-tipping;
- Council needs to support people who have a waste problem so that it doesn't get into the environment;
- Need for a Waste Minimisation strategy;
- Divert green waste and food waste from landfill.

2.3 Aotearoa New Zealand Waste Strategy | Te Rautaki Para

Te Rautaki Para|Waste Strategy is Central Government's "roadmap for the next three decades for a low-emissions, low-waste society built upon a circular economy" and lays out:

- The vision for 2050 and guiding principles, which set the direction and tone for the changes ahead;
- The broad pace and phasing for the changes;
- Goals for the strategy's three phases between now and 2050;
- Targets for the first phase, to achieve by 2030;
- The work priorities to focus on to achieve the 2030 goals and targets; and
- The approach to measuring and assessing progress.

The strategy has three implementation phases:

- Phase 1 (Now to 2030): Embedding circular thinking into our systems
- Phase 2 (2030-2040): Expanding to make circular normal
- Phase 3 (2040- 2050): Helping others do the same

The waste strategy will be supported with an Action and Investment Plan (AIP), government will work with local authorities, the waste management sector, and others to develop the AIP.

The AIP will then govern planning and activity across central and local government. The Ministry will regularly assess, and publicly report on, progress against the Waste Strategy and the AIP.

Figure 3 shows an overview of the vision, principles and implementation phases outlined in the strategy.

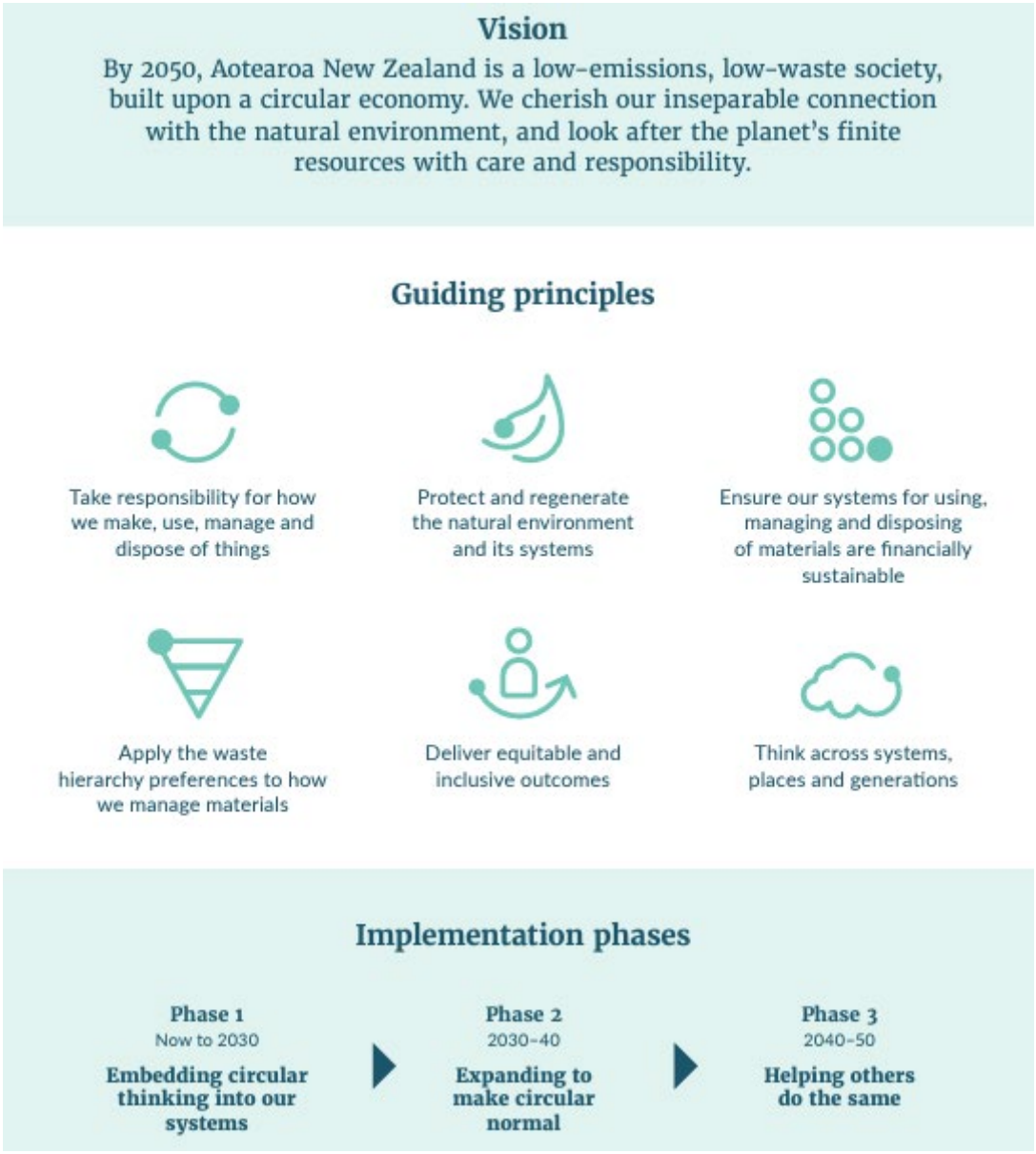


Figure 3: Overview of Aoteroa New Zealand Waste Strategy (2023)

Government changes to waste collection

To support a low-emissions, low-waste circular economy, government are introducing three main changes:

- From February 2024, all Councils across Aotearoa will accept the same materials in their household collections (PNCC complies with this already). Materials for kerbside collection are: glass bottles and jars, paper and cardboard, plastic bottles and containers 1,2 and 5, Aluminium and steel tins and cans.
- By 2027, recycling collections will be available to households in all urban areas (i.e. towns of 1,000 people or more) (PNCC complies with this already)
- By 2030, food scraps collections will be available to households in all urban areas
- Kerbside food scraps collections will be a new service for many households.
- In urban areas with food processing facilities already available, some households will have this service in place earlier (by 2027).

New Food Scraps Service in 2030

Kerbside food scraps collections will be a new service for many households.Staff have rolled out a trial to understand what a food scraps collection service would look like to Palmy, and we have started conversations to collaborate on food processing systems if Council were to introduce a food scraps collection service.

As well as providing households with food scraps collections, government is looking to get businesses ready to separate food scraps from general waste by 2030.

Minimum standards for Councils to divert waste from landfill

Government is also introducing minimum standards for Councils to divert waste from landfill and requiring waste companies to collect and report more of their waste data. Revenue from the expanded waste levy will support the roll out of these changes.

Waste companies will be required to collect and report more data on the waste they collect from households in regular kerbside services.

The container return scheme (CRS) decision has been deferred until the next term of government.

For further details visit Te Rautaki Para | Waste Strategy (external link).

Phase 1 Targets for Embedding Circular Thinking into our Systems

The Waste Strategy sets three national targets for us to help achieve by 2030. The targets focus on the three most important changes we need to help make:

- Waste generation: reduce the amount of material entering the waste management system, by 10 per cent per person.
- Waste disposal: reduce the amount of material that needs final disposal, by 30 per cent per person.
- Waste emissions: reduce the biogenic methane emissions from waste, by at least 30 per cent.

Our Role as a Territorial Authority

As local government, we are expected to:

- Get involved in implementing this strategy and the process to develop an action and investment plan. Use the strategy as the starting point for your next waste management and minimisation plan.
- Look for opportunities to work with other councils on new, or expanded, facilities and services that will contribute to a national network for circular management of resources.
- Support local community groups and non-governmental organisations with their initiatives to reduce waste.
- Link with national behaviour change programmes to support and expand the reach of your local activity.
- Make sure that planning and consenting processes take account of the need for waste management infrastructure and services.
- Plan and resource the work needed to identify and manage vulnerable landfills and other contaminated sites.

2.4 Resource Recovery Plan / WMMP

Resource Recovery Plan / Waste Management and Minimisation Plan

The Resource Recovery Plan outlines how we want to minimise waste and its impact on the environment

To achieve our purpose, we will:

1) Promote waste reduction
2) Divert waste from landfill
3) Support for-purpose organisations and local communities to recover, reuse, repurpose or regenerate products
4) Provide recycling collection services, including kerbside recycling, drop-off centres and public space recycling bins
5) Provide waste collection services, including kerbside collection, the Ashhurst transfer station, and public space rubbish bins

Each objective noted above has actions with work programmes and timings to give effect to the objectives. Please see - Resource Recovery Plan and WMMP, it contains timelines for actions to be completed. This AMP has work programmes that relate to the actions noted in the Resource Recovery Plan.

What we Achieved under the Waste Management and Minimisation Plan 2019

We have a statutory requirement under the Waste Minimisation Act 2008 (WMA) to promote effective and efficient waste management and minimisation within Palmerston North. We do this by adopting a Waste Management and Minimisation Plan (WMMP). We also have obligations under the Health Act 1956 to ensure that our waste management systems protect public health.

The previous WMMP, adopted in 2019, meets the requirements set out in the Waste Minimisation Act to:

- Consider the 'Waste Hierarchy' which sets priorities for how we should manage waste;
- 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'; and
- Follow the Special Consultative Procedure set out in the Local Government Act (2002).

2.5 Horizons Regional Council

In the One Plan, Horizons states that it recognises "the need to focus on the full life cycle of waste from generation to disposal, and that waste is a wasted resource." The One Plan goes on to discuss specific requirements with respect to hazardous substances and contaminated land.

The waste management objective included in the One Plan is:

> "The Regional Council and Territorial Authorities must work together in a regionally consistent way to:
>
> (i) Minimise the quantity of waste generated in the Region and ensure it is disposed of appropriately,
>
> (ii) Manage adverse effects from the use, storage, disposal, and transportation of hazardous substances, and
>
> (iii) Manage adverse effects from contaminated land.

The One Plan includes four policies intended to give effect to the objective above. These policies are as follows:

- Policy 3-8 Waste policy hierarchy
- Policy 3-9 Consent information requirements – waste policy hierarchy and hazardous substances
- Policy 3-10 Cleanfills, composting and other waste reduction activities
- Policy 3-11 Landfill management

2.6 Regulatory Context

New waste legislation is being developed to replace the current Waste Minimisation Act 2008 and the Litter Act 1979. The new legislation will support delivery of many significant initiatives including the waste strategy and waste elements of the emissions reduction plan. New legislation will allow government to fix the gaps in the current legislation, give effect to the new waste strategy and enable Aotearoa to catch up with the rest of the world.

The new waste legislation will:

- Improve consistency in waste management – clear roles and responsibilities for central and local government;
- Strengthen the waste levy - broaden the scope of what the waste disposal levy can be spent on and mean the portion local government receives will be distributed more fairly across all TA's. This will be through a flat-rate allocation alongside the existing population-based calculation;
- Increase regulatory powers to control products and materials – product bans, landfill bans, mandatory recycling, environmental performance standards, provision of information on environmental performance, extended producer responsibility;
- Improve how the waste industry operates – though national licencing scheme, electronic tracking system and national waste standards;
- Change how we all treat waste; and
- Change how the Act is monitored and enforced.

Cabinet has made decisions on the content of the new legislation with a raft bill expected to be introduced into the house in late 2023 or early 2024. Following this there will be an opportunity for feedback during the select committee process, with the aim to have new legislation enacted in 2025.

Table 3 summarises the existing major Acts of Parliament that govern the Resource Recovery Activity.

Table 3: Existing Acts of Parliament that Govern the Resource Recovery Activity

Statutory Requirement	Description
Waste Minimisation Act 2008	The Waste Minimisation Act encourages a reduction in the amount of waste we generate and dispose of in New Zealand. This to protect the environment from harm and provide environmental, social, economic and cultural benefits.
Local Government Act 2002	The Local Government Act empowers councils to promote the well-being of communities. The purpose of local government is to: • enable democratic local decision-making and action by, and on behalf of, communities • promote the social, economic, environmental, and cultural well-being of communities in the present and for the future. Solid waste collection and disposal is identified as a core service to be considered by a local authority.

Statutory Requirement	Description
Resource Management Act 1991	Requires Council to: • Sustain the potential of natural and physical resources to meet the reasonably foreseeable needs of the future generation • Comply with the District and Regional Plan • To avoid, remedy, or mitigate any adverse effect on the environment • Take into account the principles of the Treaty of Waitangi in exercising functions and powers under the Act relating to the use, development, and protection of natural and physical resources.
Litter Act 1979	The Litter Act was established to make better provision for the abatement and control of litter. The Act is a basic mechanism for local government to prevent littering. The functions of the Act include: establishing enforcement officers and litter wardens who may issue fines and abatement notices for litter offences allowing territorial authorities to force the removal of litter allowing public authorities to make by-laws according to the provisions of the Act.
Health and Safety at Work Act 2015	Provision of a framework to secure the health and safety of workers and work. Sets out the principles, duties, and rights concerning workplace health and safety.
Climate Change Response Act 2002	Legal framework for New Zealand to ratify Kyoto Protocol and meet obligations under United Nations Framework Convention. The Act also enables the Emissions Trading Scheme.
Basel Convention	The Basel Convention is an international treaty that aims to reduce the movement of hazardous waste between different nations. New Zealand raitifed this convention in 1994. The 1989 Basel Convention on the Control of Transboudary movements of hazardous wastes and their diposal aims to reduce the amount of waste produced by signatories and regulates the international traffic in hazardous wastes.
Health Act 1956	The Health Act 1956 places obligations on TAs 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). Where the Ministry of Health considers that a local authority is not taking the necessary action to meet these obligations and protect public health, it can require a local authority to do so.
Hazardous Substances and New Organisms Act 1996	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.

Statutory Requirement	Description
Climate Change Response Act 2002	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. In 2022 the Minister of Climate Change published the first Emissions Reduction Plan. This lays out targets and actions we will take to meet those targets. These will be across every part of government and every sector of the economy from transport, energy, building and construction, waste, agriculture, and forestry. Note that we are involved in every sector directly or as a partner.
Biosecurity Act 1993 Radiation Protection Act 1965 Ozone Layer Protection Act 1996 Agricultural Chemicals and Veterinary Medicines Act 1997	Other legislation that relates to waste management and/or reduction of harm, or improved resource efficiency from waste products
National Environmental Standard for the Outdoor Storage of Tyres	The standards provide nationally consistent rules for the responsible storage of tyres. Its purpose is: • To ensure the risks of harm to the environment, human health and local communities from outdoor tyre storage are appropriately managed. • To support more consistent management practices across New Zealand, filling gaps in regulatory settings that create incentives to move tyres between regions.

3. Description of the Resource Recovery Activity

3.1 Scope of Our Services

The delivery of the Resource Recovery activity is undertaken to:

- Maintain the quality of the service to protect the health of the community;
- Ensure the service is accessible to the community within the service area;
- Ensure the service is reliable with minimal service disruptions;
- Ensure the activity is operated safely to minimise the risks to the public and operational staff;
- Operate to maximise the sustainability of the activity; and
- Operate to minimise the overall cost of the activity.

Currently, those living and working in Palmerston North or visiting have access to a range of options to minimise and manage their waste as shown in Figure 4 below.

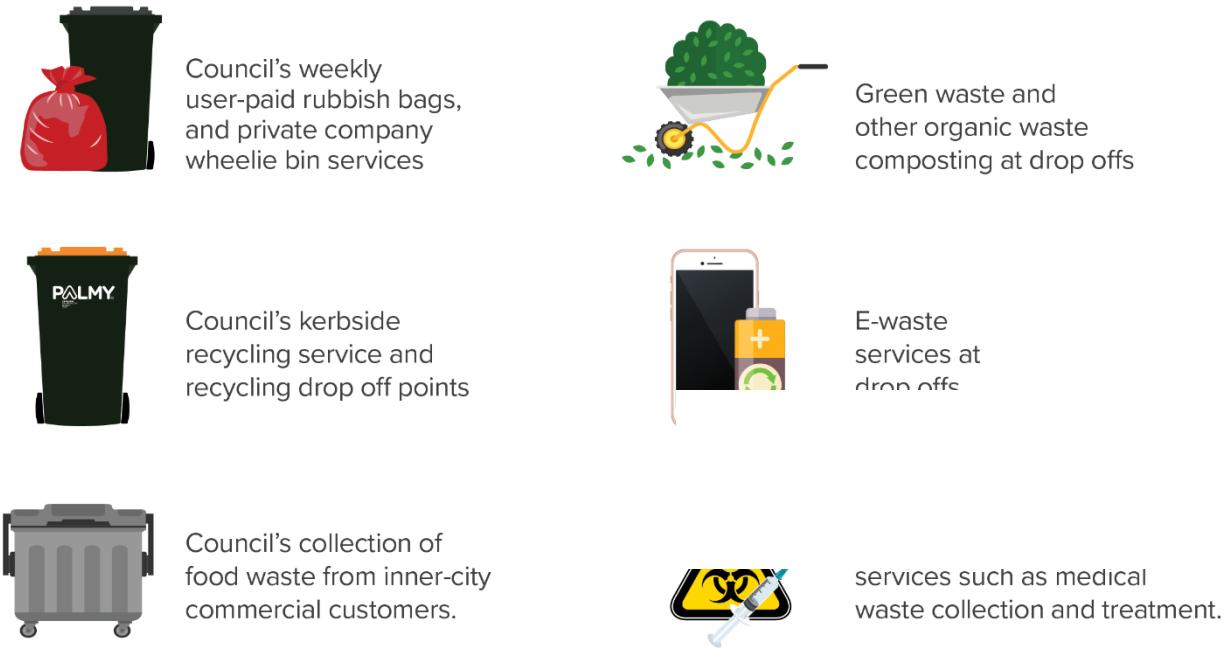


Figure 4: Overview of Services

Broadly, these services are arranged under three sub-activity areas:

- Waste minimisation;
- Waste management; and
- Landfill management.

The activities are complemented by waste minimisation and public education services, planning, policy development and advocacy.

A summary of where our customers can use our services to recycle different materials or dispose of waste is contained in Table 4 below.

Table 4: Summary of the Services our Customers can Access and Where

Location	Rubbish	Comingled Recycling	Glass Recycling	Organic Waste[4]	E-Waste	Hazardous Waste
Kerbside Collections	Households CBD	Households CBD Commercial	Households CBD Commercial	Commercial Food Waste	-	-
Illegal Dumping	All	-	-	-	-	-
Ashhurst RDOP	All	All	All	All (Green Waste only)	-	-
Awapuni RDOP and Resource Recovery Park	-	All	All	All	-	-
Ferguson Street RDOP[5]	-	All	All	-	All	All (Oil)
Public Event	Attendees	Attendees	Attendees	Attendees	-	-
Public Spaces	All	All	All	-	-	-

3.2 Update on Progess Towards Diversion Target

Overall Diversion Trends for our City

Our strategic target, adopted from the 2019 WMMP, was based on diverted waste. The baseline was set according to the best data available relating to the 2017/18 year (refer to the 2017 Waste Assessment), which suggested a diversion achievement of 36%.

The action plan was analysed and the potential contribution to waste diversion estimated, and on that basis a target of increased diversion was calculated. By the conclusion of the plan, the target was to increase diversion to 48% (by 2025).

In 2022 a second Waste Assessment was carried out and identified a few significant changes. The overall proportion of the waste stream that could potentially be recovered has reduced from 34.3% in 2017 to 31.3% in 2022. Overall, this shows an improving picture for general waste going to landfill, and suggests that diversion measures for waste other than kerbside-collected waste are succeeding in diverting more from landfill.

The estimated level of diversion in 2022 was 39%, which represents a significant gap in meeting the target.

Diversion Trends for our Services

Figure 5 below shows the annual amount of materials collected for the last seven financial years. There has been an overall upwards trend in the amount of material diverted from landfill but when calculated on a per capita basis for the two waste assessment periods (2017 and 2022) result in no change at just over 186 kg per capita per year.

Further details of the trends for each service are given in the following sections.

[4] Includes food waste, green waste, process waste and wastewater treatment plant sludge

[5] E-waste, batteries, car batteries, motor oil & filters, cooking oil, liquid paperboard, car seats, fluorescent bulbs. The public can also drop off plastic plant pots there for others to take.

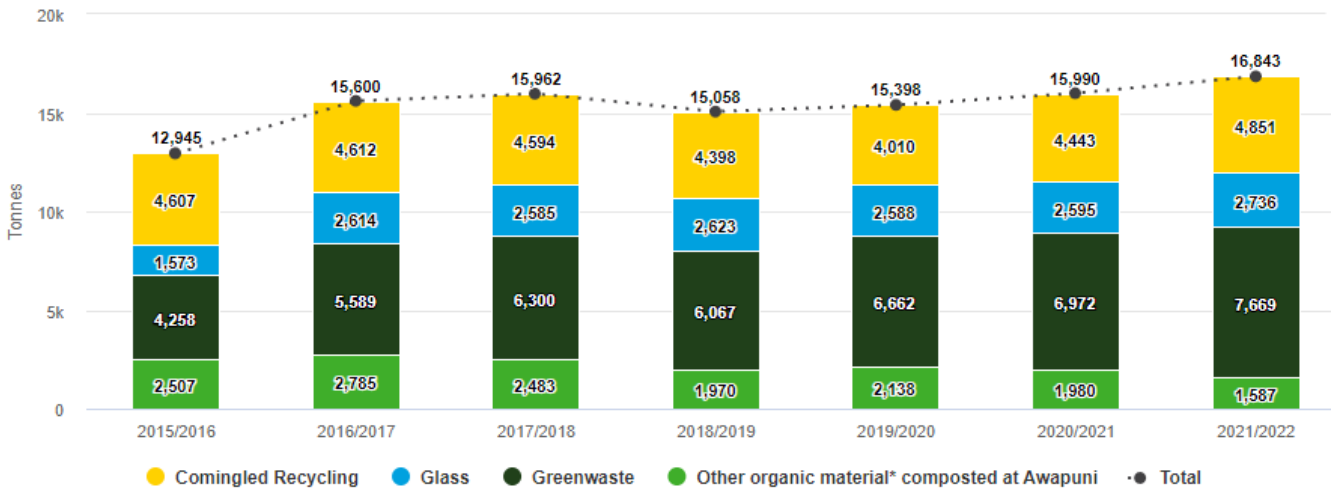


Figure 5: Waste Diverted from Landfill (2015/16 – 2021/22)

3.3 Major Challenges

Significant capacity and resourcing constraints for long term service delivery

We are facing challenges with:

- Resourcing enough staff, especially in collections.
- Our collections and processing areas are almost peak capacity, constraining our ability to grow and enable regional collaboration.
- Facilities are unable to become more efficient without further investment.
- Processing infrastructure requires a full strategic replacement programme to position function for the future, this will be costly and disruptive to services.
- Across the resource recovery activity our current staff and equipment are at capacity regarding service delivery. We currently do not have enough staff to adequately deliver the Resource Recovery activity. An investigative programme is needed to identify the quantum of staff, resources and equipment needed for long term service delivery. If we do not undertake a full strategic replacement programme of the MRF assets there is a risk that we might not always be able to meet our levels of service for our customers in the future.

Insufficient Services to Achieve our Waste Diversion Target

With respect to the waste heirarchy shown in Figure 6 below, our services predominantly target the middle level downwards through collecting, recovering and reprocessing a range of materials, as well as waste disposal.

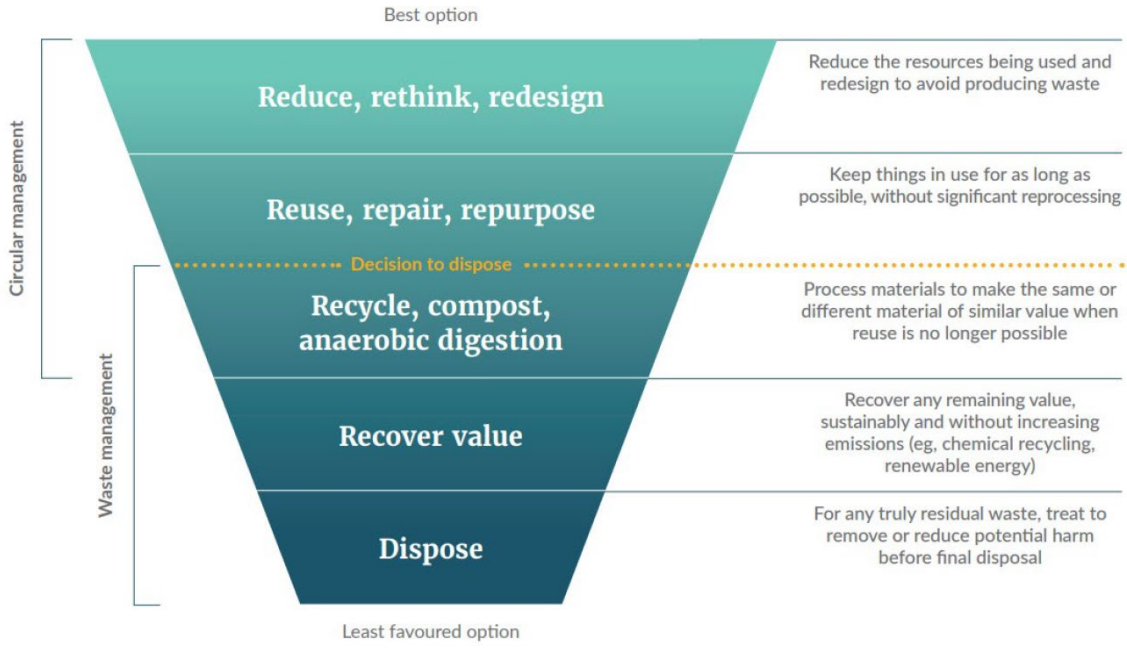


Figure 6: Waste Heirarchy in a Circular Economy Context

Whilst we have seen an increase in the level of waste being diverted from landfill in the city, there is still more to do to meet our targets. The 2017 Waste Assessment provided data on nearly all waste streams for Palmerston North. This data was analysed and identified the main areas where we could improve our effectiveness in waste diversion. Based on this analysis, the WMMP was updated to include three priority issues that require new services and infrastructure:

- A significant proportion of waste going to landfill is organic waste, with food and green waste present across all kerbside rubbish collection systems.
- Lack of facilities to recycle or otherwise divert construction and demolition waste, with a predicted increase in construction activity.
- More recyclables could be diverted from commercial properties.

Other Service Delivery Challenges

Table 5: Service Delivery Challenges contains a description of the other challenges and their impact on the Service.

Table 6: Service Delivery Challenges

Challenge	Challenge Description	Impact on Service
Rubbish Collection		
Inconvenience	The inconvenience for some of a bagged kerbside collection service leads to the take up of private bin collection services. Retaining the current participation of those using the service ensures a continuation of the current price.	If there is a decrease in the participation rate, a review of the bag price may be required.
Incorrect use of public litter bins	The use of public litter and recycling bins for the disposal of household produced rubbish.	More frequent collections from bins required.
Contamination of Kerbside Recycling	The Cost of Living crisis has resulted in a significant increase in contamination of wheelie bins meant for recylcing.	Increased disposal costs and recyclable material needing to be instead sent to landfill.
Illegal dumping is increasing	The Cost of Living crisis has resulted in a significant increase in illegal dumping.	Increased disposal costs
External Factors Not Specific to the Delivery of One Service		

Challenge	Challenge Description	Impact on Service
Changeable markets for recyclables in New Zealand and overseas	A volatile and unstable market and price return for recyclables, due to dependence on a small number of local re-processers and requirement for seeking processing abroad, to which quality constraints are also in place.	Reduced revenue from sales and a net increase in costs. Increased rating impact.

3.4 Significant Negative Effects

Table 7 contains a summary of the significant negative effects of the Activity and how we mitigate them.

Table 7: Mitigation of Significant Negative Effects of the Resource Recovery Activity

Significant Negative Effect	Description of Effect	Mitigation
Waste to Landfill	Landfilling of rubbish presents an adverse effect on the receiving environment.	Council has set goals through its WMMP 2019 to increase the proportion of waste diverted from landfill from 38% to 48% by 2025. The WMMP outlines the strategies which Council are proposing to meet this target. We have a long-term contract to dispose of our waste at a Class 1 Landfill ensuring we are using the best facility available.
Gas Emissions from the Awapuni Closed Landfill	Decomposition of organic material placed into landfill over time generates various gases including methane, ammonia, hydrogen sulphide and nitrogen, which are released into the atmosphere.	A grid of collection wells has been established on the closed Awapuni landfill, with the collected gas being used for energy generation at the Totara Road Wastewater Treatment Plant. This brings a reduction in the release of emissions.
Leachate	Leachates discharging and sediment eroding from the landfill can result in degradation of the environment if not contained.	Mitigation of these effects is undertaken through a system of leachate and stormwater collection which is returned to the wastewater treatment plant. Groundwater monitoring for potentially toxic substances is required per the operative resource consent.
Odour and noise from composting operations	Composting equipment creates noise and the decomposition of organic waste also produces odour.	Odour and noise are managed and monitored through the day to day operations. Some processing operations for example turning are required to comply with the conditions set out within the resource consent.
Windblown Recycling Materials	Paper and other lightweight recycling material are prone to wind displacement, particularly at the exposed Awapuni site.	Mitigation through the presence of a perimeter fence that intercepts windblown materials which are periodically cleaned, ensuring visual presentation of the site.

3.5 What the Activity Currently Costs

Costs associated with this activity have been shown in w for operational, capital renewal and new. Operational expenses are around $7.5M and are increasing slightly in the waste minimisation area. The cost of renewing assets is increasing and allocated budgets have been matched well to these needs. In the last ten years we have not invested in any significant new assets but have made safety and security improvements recently.

Figure 7: Activity Expenses for the Last 10 Years

3.6 Waste Minimisation Services

Overview of our Waste Minimisation Services

We offer our customers a range of services in order to achieve our strategic goals to divert waste from landfill. Table 8 contains a summary of the services our customers can access and how. Note that we also receive Levy Funding from MfE that goes towards some of our waste minisation initiatives.

Table 8: Summary of Waste Minimisation Services

Services	Customers	Revenue Source	Location	Frequency
Promote waste diversion	All	Rates	Education room	Adhoc
Organic and green waste drop-off	All	Rates and Charges	Awapuni Resource Recovery Park Ashhurst Transfer Station	Adhoc
Food waste collection	Commercial	Charges	PNCC	Various
Kerbside comingled recycling collection	Households	Rates	Collection Area	Fortnightly
	CBD	Rates	CBD	Weekly
	Commercial	Charges	PNCC	Various
Kerbside glass recycling collection	Households	Rates	Collection Area	Fortnightly
	CBD	Rates	CBD	Weekly
	Commercial	Charges	PNCC	Various
Recycling drop-off	All	Rates	Awapuni RDOP Ferguson Street RDOP Ashhurst RDOP	Daily
Events recycling	Public Event Organisers	Charges	PNCC	Adhoc
Chemical drop-off	Households	Rates and Charges	Ferguson Street RDOP (oil only) Hazardous Waste Day Event (all chemicals)	Daily Bi-annual Event

Organic and Green Waste Drop-Off

Our customers can drop off their green waste at the Ashhurst Transfer Station (same site as the Ashhurst RDOP) or the Awapuni Resource Recovery Park.

The Ashhurst Transfer Station's open days are limited to Tuesdays and Saturdays but the Awapuni location is open daily. Note that green waste that is dropped off at the EnviroWaste Transfer Station is then usually sent to our composting operations at the Awapuni site.

Figure 8 below shows the annual and seasonal trends for green waste dropped off at the Ashhurst Transfer Station. The main reason for the decline in usage was an increase in user charges to align them with the Awapuni site. Before the increase, customers were travelling from Palmerston North to make the most of the cheaper fees.

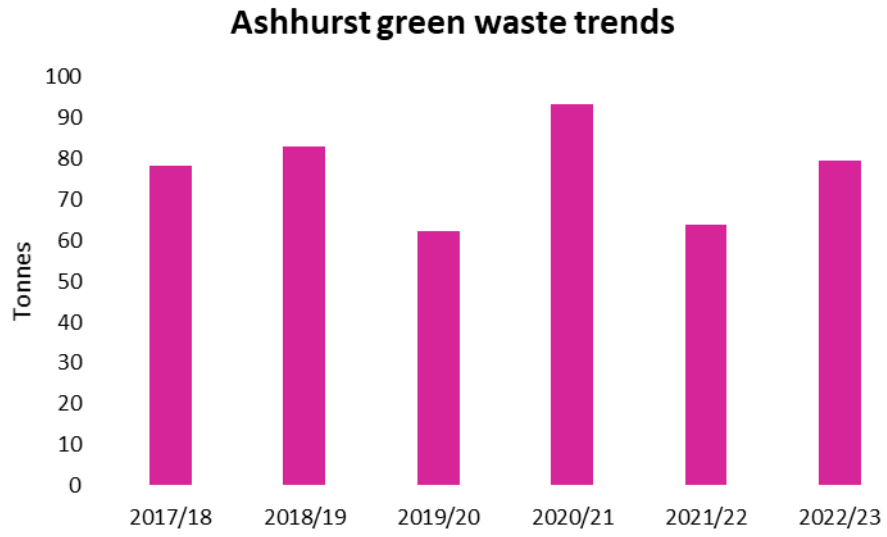


Figure 8: Ashhurst Green Waste Trends

Figure 9 below shows the annual and seasonal trends for green waste dropped off at the Awapuni Resource Recovery Park. The month after lockdown under Covid-19 was the busiest period on record.

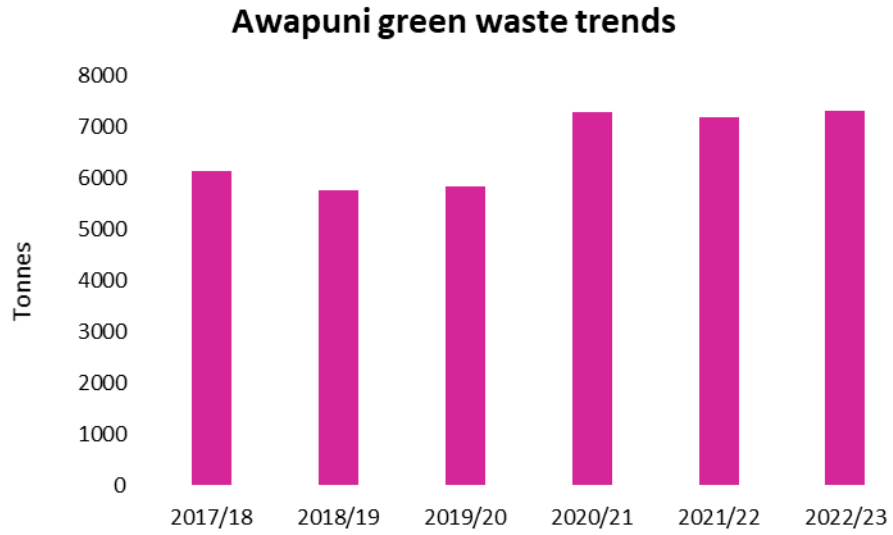


Figure 9: Awapuni Green Waste Trends

We also run a composting operation at the Resource Recovery Park and hence we also take other sources of organic wastes. Table 9 below contains a summary of the number of compost inputs we received for the last few financial years. The volumes of materials being composted at Awapuni have risen steadily year on year, assisted by static fees for green waste drop off and increasing promotion of commercial food waste collection services.

Table 9: Annual Compost Input Quantities in Tonnes

Compost input type	2018/19	2019/20	2020/21	2021/22	2022/23
Animal Bedding	13	20	10	6	15.5
Filter Cake	123	120	80	90	98
Stable Waste	993	1045	948	831	635
Commercial Food Waste Collection	306	344	512	598	650
Green Waste	5760	5833	7302	7203	7310
Wood Waste	489	573	454	419	443
Total tonnes	**7684**	**7935**	**9306**	**9147**	**9151.5**

Commercial Food Waste Collection

The commercial food waste collection service is available to businesses to sign up to and is funded by a “per bin lift” user charge. This service is flexible in terms of:

- Frequency and day of collection to suit the business; and
- The number of bins and size of bins. We offer two sizes of wheelie bins: 80 litres and 240 litres.

The food waste collection accepts:

- Food scraps, including meat bones and coffee grounds;
- Paper towels (to be the subject of a review of the presence of persistant inorganic compounds); and
- Certified compostable packaging, such as coffee cups and lids.

In 2019 we increased our business development focus, and this has seen a reversal in the decline in food waste collected as shown in Figure 10 below. Our customer retention rate for 2019/20 was 100%, and we welcomed seven new customers.

Our customers are required to maintain the cleanliness of the bins. Once collected food waste is taken to the Awapuni Resource Recovery Park for composting.

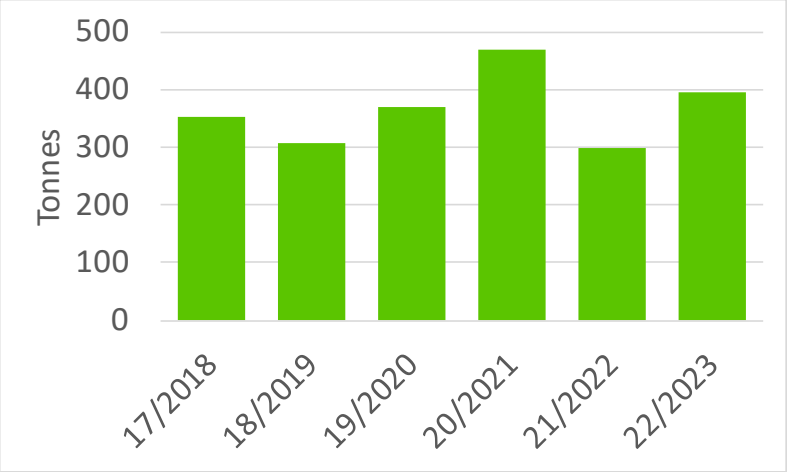


Figure 10: Commercial Food Waste Trends

Commercial Comingled Recycling Collection

Similarly, to the food waste collection, the commercial comingled recycling collection service is available to businesses to sign up to and is funded by a “per bin lift” user charge. This service is twice weekly but is flexible in terms of the number of bins and size of bins. We offer three sizes of wheelie bins: 80 litres, 240 litres and 660 litres.

There are currently 85 businesses signed up for the service (as of June 2020). In 2019 we increased our business development focus, and this has increased recycling collected as shown in Figure 11 below. Our customer retention rate for 2019/20 was 94% and we welcomed 17 new customers.

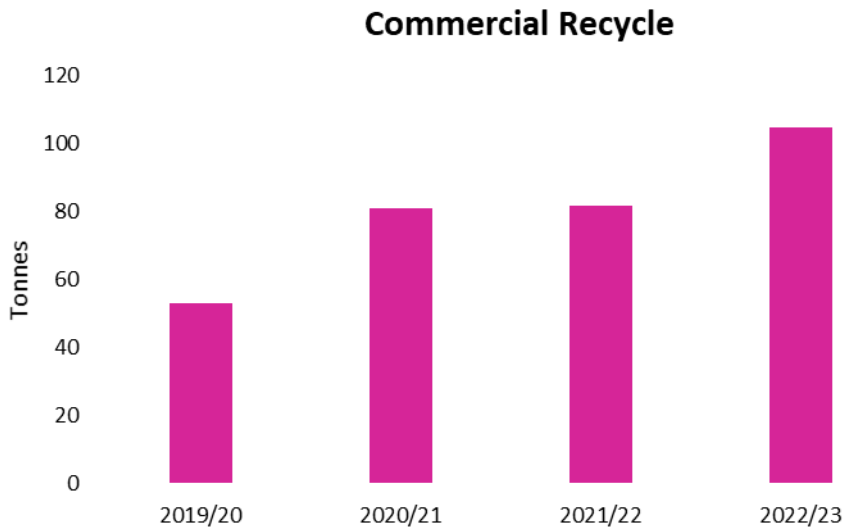


Figure 11: Commercial Comingled Recycling Trends

Commercial Glass Collection

The commercial glass collection service is available for businesses to sign up to and is funded by a "per crate lift" user charge. This is an on-call service and is flexible in terms of:

- Frequency and day of collection to suit the business; and
- The number of crates or bins, and size. We offer 45 litres, 80 litres and 240 litres crates/bins.

There are currently 63 businesses signed up for the glass collection service (as of June 2020). Our customer retention rate for 2019/20 was 96%, down from 98% for the previous financial year but overall, there was a net increase of 18 customers.

Kerbside Comingled Recycling Collections

A fortnightly kerbside collection of comingled recyclables is delivered using our plastic wheelie bins. The service is provided through targeted rates to:

- All residentially zoned properties in Palmerston North;
- Specified commercial properties; and
- Some rural lifestyle properties.

Our non-commercial customers can request a smaller wheelie bin or an extra wheelie bin from us. Additional charges apply to second or subsequent bins.

Kerbside comingled recycling is relatively stable as shown in Figure 12 below. Every year we empty more than half a million bins.

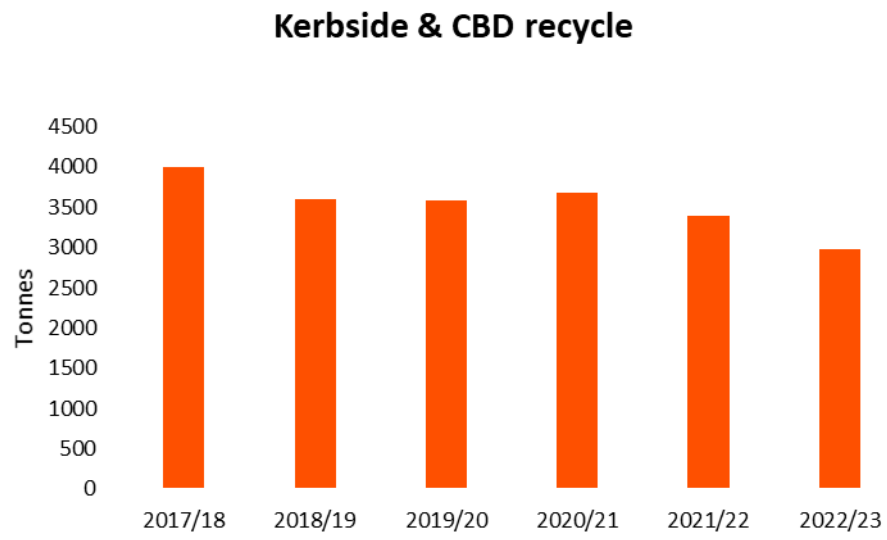


Figure 12: Kerbside Residential and CBD Comingled Recycling Trends

Kerbside Glass Collections

A fortnightly kerbside collection of glass is delivered on alternative weeks to the comingled recycling collection in the same area as shown in Figure 20 above. The service is provided through targeted rates using crates to:

- All residentially zoned properties in Palmerston North;
- Specified commercial properties; and
- Some rural lifestyle properties.

Our non-commercial customers can request one extra crate from us free of charge.

The amount of glass we collect from kerbside glass recycling is increasing year on year (household driven) as shown in Figure 13 below. CBD collections have increased in the last few years and would have increased last year even more if it had not been for restrictions under Covid-19. Last year we emptied more than 250,000 crates of glass.

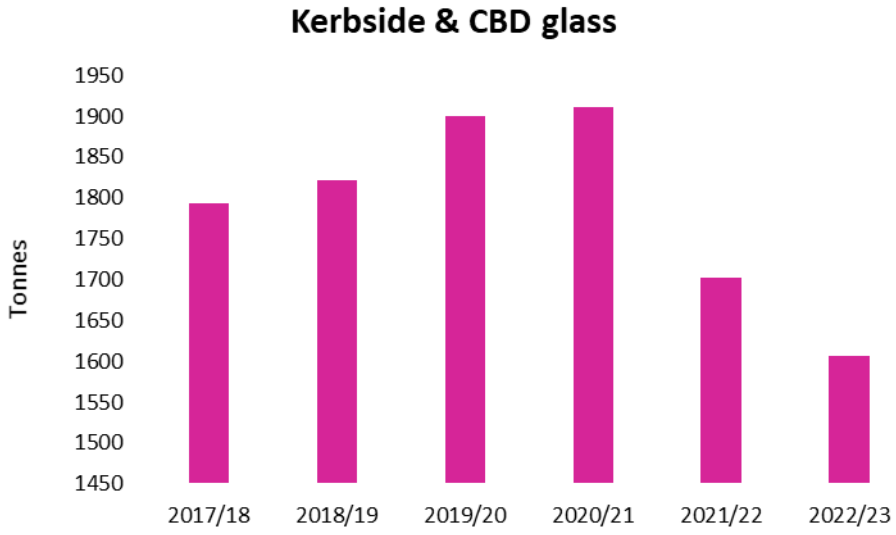


Figure 13: Kerbside Residential and CBD Glass Recycling Trends

Recycling Drop Off Points

Recycling Drop Off Points (RDOPs) are available for residents and businesses to use in addition to the collection services. There are three RDOPs located at Ashhurst, Awapuni and Ferguson Street.

Ashhurst Recycling Drop Off Point

The Ashhurst RDOP is located on the outside of the Ashhurst Transfer Station and residential customers can use it 24 hours a day, 7 days a week. Its location makes it vulnerable to contamination and this can result in low recovery of recyclables and relatively high costs to provide the service. Figure 14 below shows no real increase in recyclables collected.

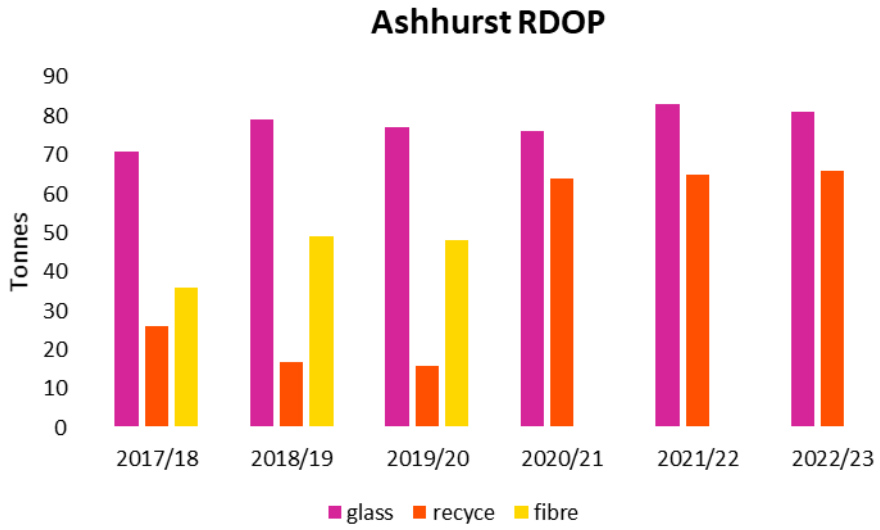


Figure 14: Glass and Comingled Recycling Trends for the Ashhurst RDOP

Awapuni Recycling Drop Off Point

Figure 15 below shows the usage trends, which are very similar to the Ashhurst RDOP, including the impact of Covid-19. We trialed the acceptance of polystyrene at this site in 2019/2020

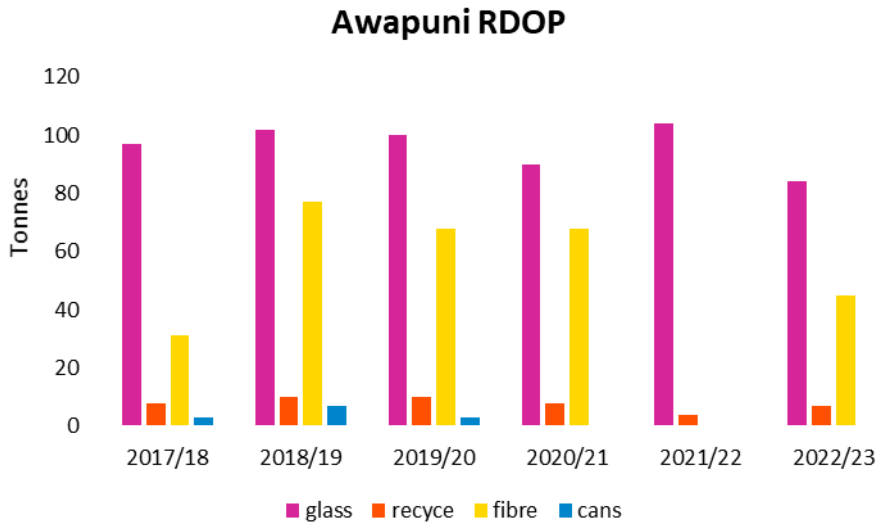


Figure 15: Glass, Comingled Recycling and Polystyrene Trial Trends for the Awapuni RDOP

The Awapuni RDOP is located within the Awapuni Resource Recovery Park (ARRP) site and is therefore available only during the opening hours of the ARRP:

- Monday – Saturday 7:30 am – 4:30 pm
- Sunday and Public Holidays 12:00 pm – 4:00 pm
- ANZAC Day 1:00pm – 4:00pm
- Closed Christmas Day and Good Friday

Ferguson Street Recycling Centre

The Ferguson Street RDOP is available 24 hours a day, 7 days a week for glass recycling but can only accept E-Waste, household motor oil, oil filters, cooking oil, child car seats, batteries, liquid paper board and CFC lightbulbs when staffed during the day. While the amount of glass dropped off has decreased slightly at this site, as shown in Figure 16, there have been increases in comingled recycling and E-Waste. The biggest increases in E-Waste are due to Council partially subsidising the recycling of e-waste. Note that customers can purchase our bagged compost product at this site too.

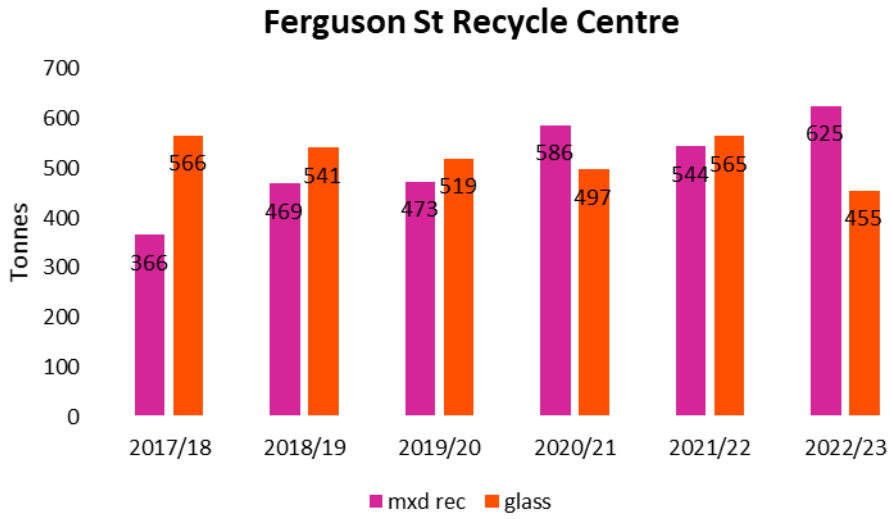


Figure 16: Glass, Comingled Recycling and E-Waste Trends for the Ferguson Street RDOP

Event Recycling

We actively promote the move towards zero waste events as it aligns with our strategic direction. This has resulted in the recent creation of an Events Recycling service where event organisers can hire a trailer from us that includes rubbish and recycling bins. This service is utilised the most in summer as shown in Figure 17 below. The Festival of Cultures and Rural Games have contributed the most recyclables.

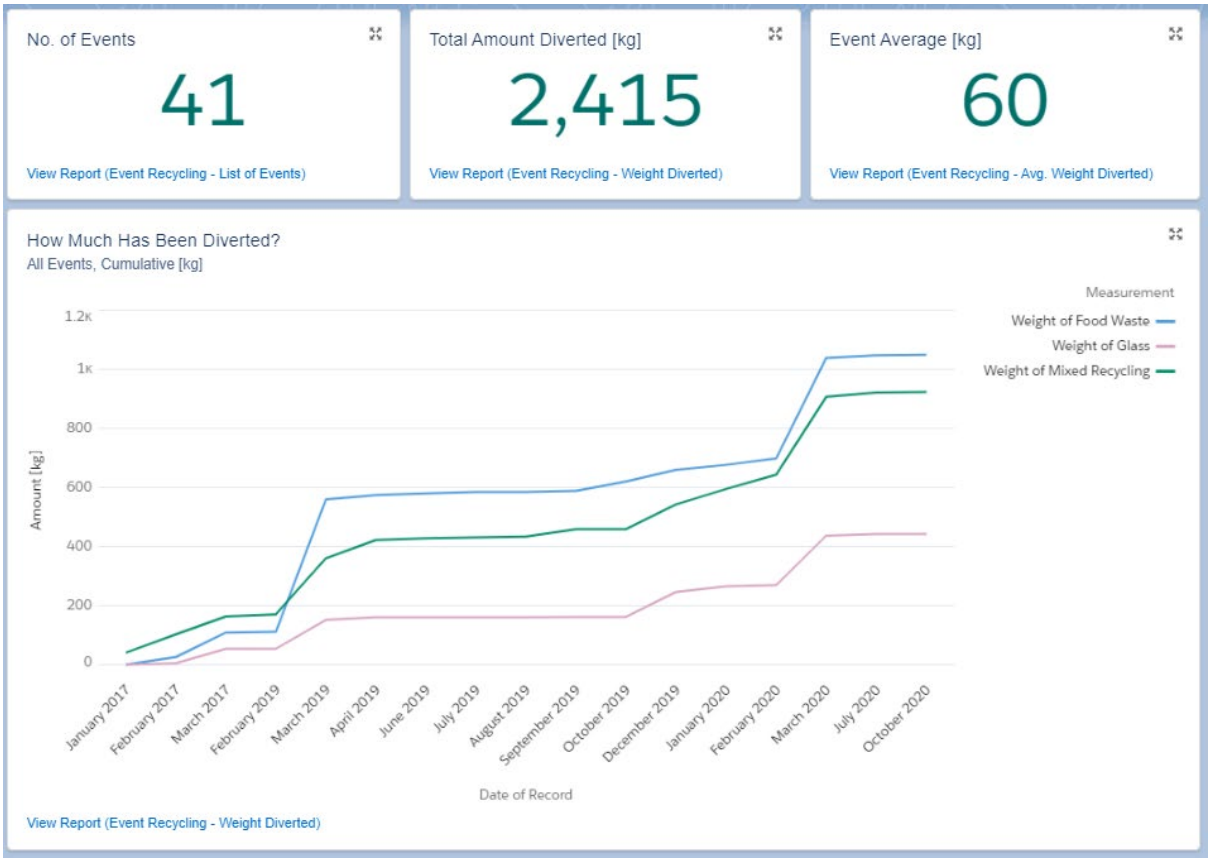


Figure 17: Event Recycling Trends

Household Chemical Waste Collection

As there is no dedicated facility to accept household chemicals and we know hazardous substances are ending up in the rubbish, so we have decided to provide this service. 3R was contracted in 2018 and 2019 to provide this service and nearly two tonnes of chemicals were diverted from landfill as shown in Figure 18 below. This event is now run bi-annually as the amount of stockpiled household checmicals is expected to decline over time.

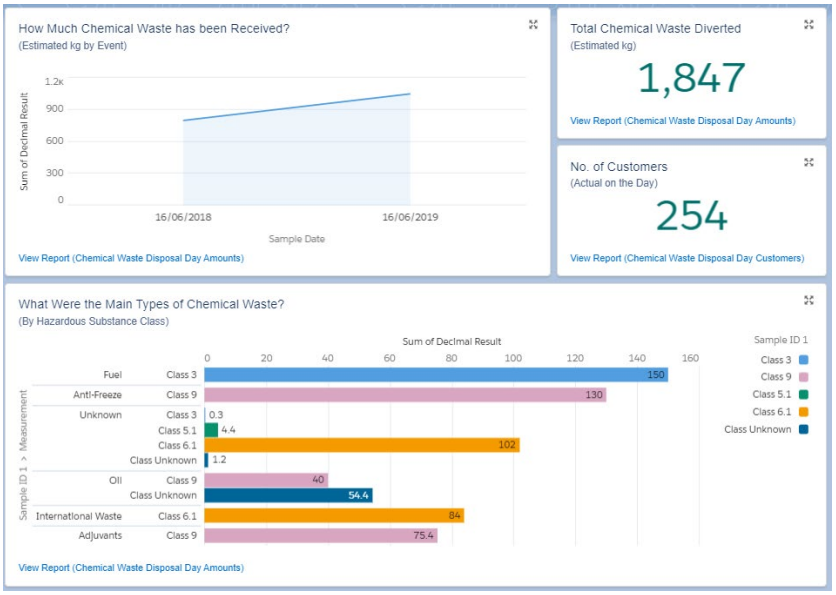


Figure 18: Household Chemical Waste Trends

Education and Behaviour Change Campaigns

We actively engage with our customers to ensure the community understands service decisions and can make the most of existing and any new or altered services. We carry out one-off campaigns where necessary such as for a new or significant service change, to reduce contamination of recyclables collected and/or increase diversion rates.

3.7 Waste Management

Overview of our Waste Management Services

Table 10 contains a summary of what services our customers can access, how they are paid for, where they can access them and how often.

Table 10: Summary of Waste Management Services

Services	Customers	Revenue Source	Location	Frequency
Kerbside rubbish bag collection	Households CBD	User pays (bags)	Collection Area	Weekly
Public Space Bins	All	Rates	Public Spaces	Adhoc
Response to Illegal Dumping	All	Fines Rates	PNCC	Adhoc
Rubbish Drop-off	All	Charges	Ashhurst Transfer Station	Adhoc

The rubbish we collect is about 30% of all materials collected. There has been little overall change in quantities in the last four years. Further details of trends are given for each rubbish collection service in the following sections.

Council Approved Rubbish Bag Collection and Disposal

We provide a weekly kerbside collection of rubbish bags from residential areas and the CBD, using Council official rubbish bags. The assets associated with this service (rubbish collection vehicles) are leased and do not form part of this AMP.

Kerbside bagged rubbish is an opt-in, user-pays service, which is currently utilised by approximately 8,000 to 9,500 households (based on an assumed market share of 25-30%). Those wanting to participate in the service can buy officially approved rubbish bags from our Customer Service Centre at Te Marae o Hine. We also have agreements with some retailers who have agreed to charge no more than $2.75 per bag to ensure the service is equitable and affordable. The cost of buying the bag covers the cost of us to collect and dispose of it.

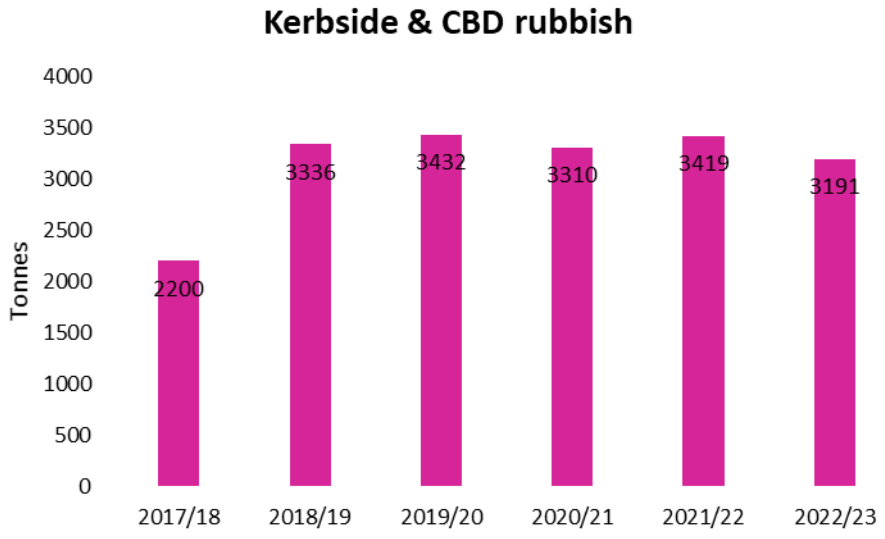


Figure 19: Kerbside Household and CBD Rubbish Bag Collection Trends

Figure 19 above shows the household and CBD kerbside rubbish bag collection trends. While the amount collected from households has remained constant, the amount from businesses in the CBD areas has increased substantially.

We recently changed the minimum number of bags in a pack, from 10 to 5. The pack size was reduced to lower the upfront cost of buying bags for low-income families. In March 2020 we also introduced a 40 L bag priced at a maximum price of $1.80 each. This provides an alternative for those households who find the regular 60 L size too large for their needs. The price per bag is proposed to be increased to $2.90 from 1 July 2023.

The rubbish collection area is shown in Figure 20 below. Rubbish bags are taken to the EnviroWaste owned and operated transfer station at Matthews Avenue. Rubbish is consolidated here before being sent via bulk haulage to the Midwest owned Bonny Glen Landfill for disposal. All assets at the Matthews Avenue transfer station and Bonny Glen disposal facility are privately owned and operated and are therefore outside the scope of this AMP.

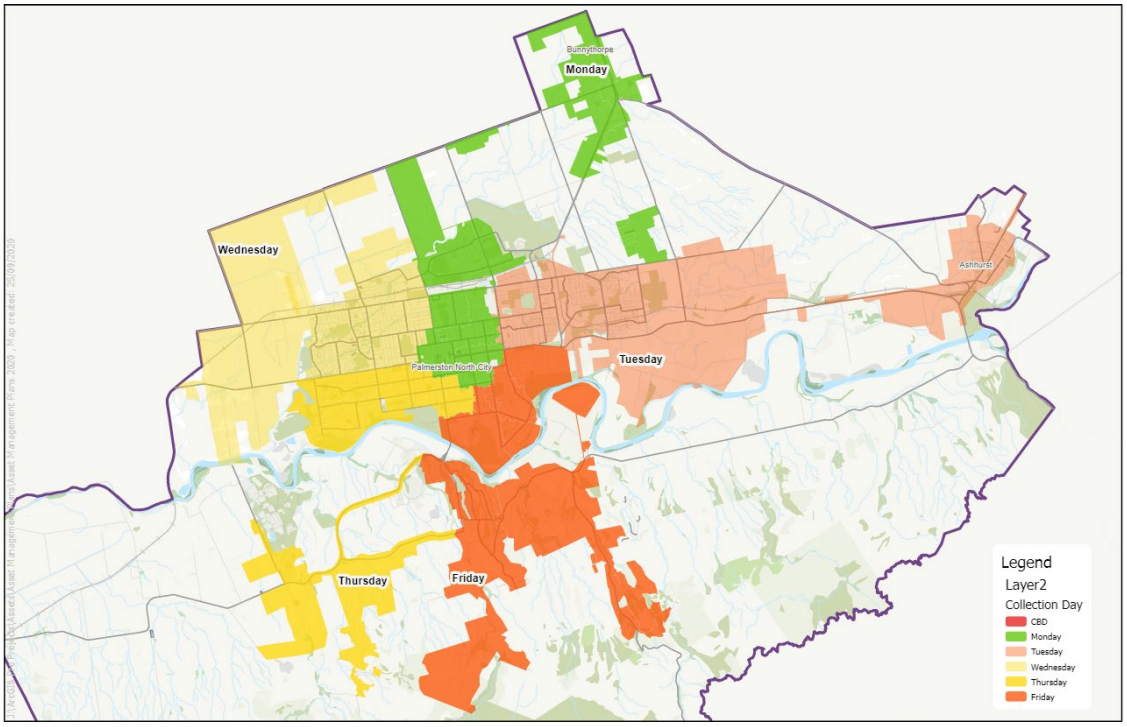


Figure 20: Rubbish Collection Areas

Public Space Bins

Council provides public rubbish and recycling services in parks, roads and other public spaces. The emptying of these bins is undertaken at varying regularity, depending on their usage, and can be emptied as often as each day. We process the recycling (but do not record quantities as it is collected with other sources) and take the rubbish to the Matthews Avenue Transfer Station. The assets associated with this service (collection vehicles) are leased and do not form part of this AMP.

Figure 21 below shows a significant increase in the amount of rubbish collected from public space bins in 21/2022.

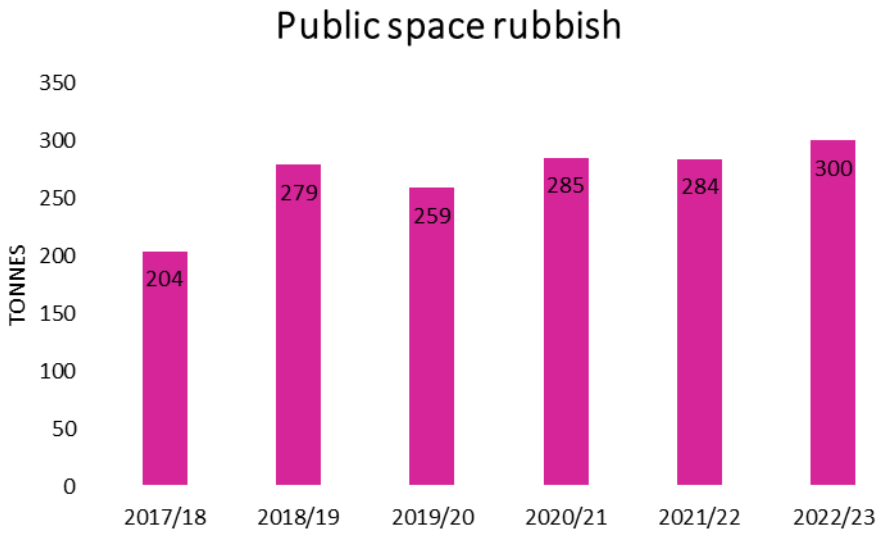


Figure 21: Public Space Rubbish Trends

Response to Illegal Dumping

Illegal dumping is regulated under the Litter Act 1979. Under this Act, we can:

- Include provisions within bylaws to give effect to the Act; and
- Enforce infringement notices.

We undertake active enforcement of illegal dumping, also known as fly-tipping, to try and recover the cost of sending this rubbish to landfill. Enforcement can help deter fly-tipping, but the issue is complicated and is caused by several factors. Illegal dumping can be reported to us or via Horizons Regional Council. The amount of illegally dumped rubbish is shown in Figure 22 below and has been increasing significantly in recent years. Illegal dumping was the focus of a behaviour change campaign in 2023 (see Palmy Ten 7).

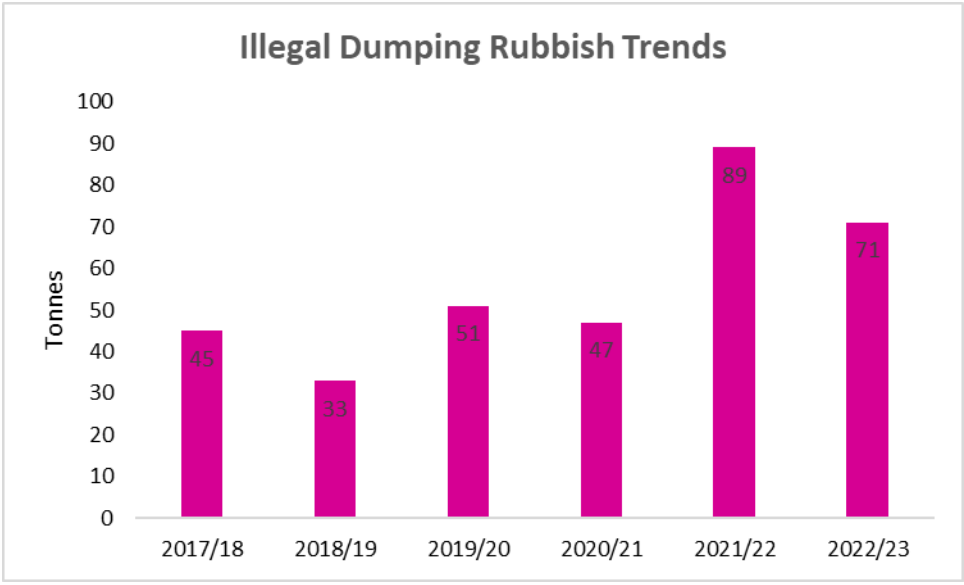


Figure 22: Illegal Dumping Rubbish Trends

Ashhurst Transfer Station

We own and operate a Transfer Station at Ashhurst that accepts rubbish for a charge, or our approved rubbish bags free of charge. The site opens twice a week on Tuesday and Saturday. Figure 23 shows a signficant increase in usage in 2012/22.

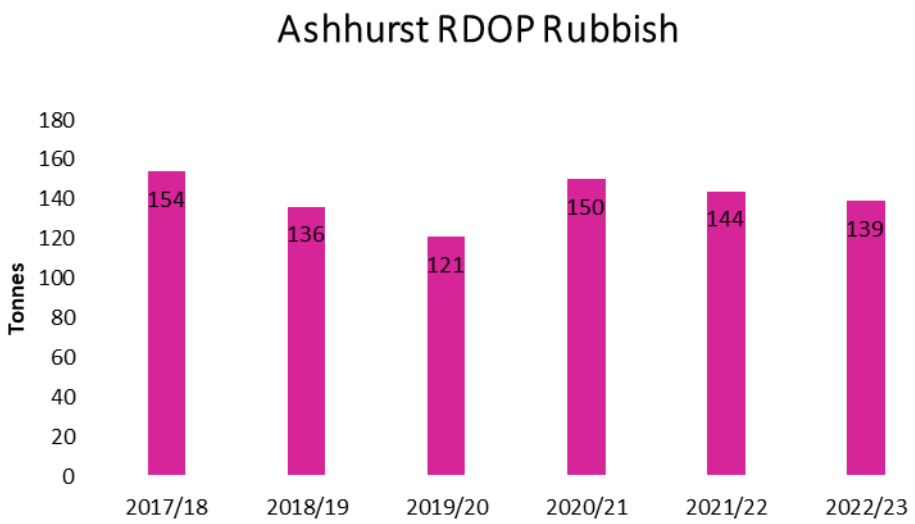


Figure 23: Public Space Rubbish Trends

3.8 Closed Landfill Management

Service Description

We continue to manage our two closed landfills, Ashhurst and Awapuni, in an environmentally and financially sustainable way. Both are managed primarily through resource consents with Horizons Regional Council.

Awapuni Closed Landfill

The Awapuni Closed Landfill stopped taking rubbish in 2007 and is now the home of our Resource Recovery Park, bike jump park and Material Recovery Facility. It is located on Tip Road as shown in Figure 24.

Figure 24: Aerial Photo of Awapuni Closed Landfill and Resource Recovery Park

Ashhurst Closed Landfill

The Ashhurst Closed Landfill is located on Fitzherbert East Road, as shown in Figure 25, and has been closed to the public since 1995.

Figure 25: Location of Ashhurst Closed Landfill

4. Levels of Service

A key objective of this AMP is to ensure that assets support the delivery of the agreed levels of service in the most cost-effective manner. This requires a clear understanding of levels of service performance, now and in the future.

4.1 Performance Against Existing Levels of Service

Table 11 summarises the customer performance measures and their rating for the last four financial years. In the 2021/22 financial year a new measure was introduced requiring a narrative on the annual decrease in per capita volume of waste sent to landfill and three previous measures were discontinued.

Our customer performance measures have been met in the last few years. In 2018/19 some minor issues occurred with delivery due to changes in project scope, contractor availability and earlier replacement than originally anticipated of a baler.

Other service attributes that are important to customers, but are not reported on, include:

- Rubbish disposal is safe, reliable, clean, convenient, affordable and protects the environment.
- Recycling is safe, reliable, clean, convenient, affordable and extensive.

Table 11: Performance Against Existing Levels of Service (2018/19 – 2022/23)

Levels of Service Statements	Performance Measures	2018/19	2019/20	2020/21	2021/22	2022/23
We provide: • a kerbside solid waste collection service • a kerbside recycling collection service • recycling drop-off points • a green waste drop-off service to manage waste in an environmentally responsible manner and maximise the amount of waste diverted from landfill.	Rubbish and recycling placed in our official bags or bins are collected on the stated day (at least 98%)				Dis-continued	
	Compliance (100 %) with resource consents for the Resource Recovery Activity measured by the number of: • abatement notices • infringement notices • enforcement orders • convictions					
	A 30-year Asset Management Plan is in place and major AMP projects approved in the 10 Year Plan are achieved.				Dis-continued	
	Decrease in per capita volume of waste sent to landfill (narrative).	Not Required	Not Required	Not Required		
We manage our Resource Recovery Activity in a financially sustainable way.	Major services and projects are provided within budget.				Dis-continued	

Key			
Not doing well		**Doing well**	

4.2 Customer Feedback

Residents Survey

We carry out an annual survey of residents to get an independent understanding of how residents view the Council and its services. The key findings from the 2023 survey for Resource Recovery were:

- Kerbside rubbish and recycling collection features in the top five services we offer for customer satisfaction (82% satisfied).
- Although Litter control has slighty improved (from 57% to 58%), it is still the area rated lowest overall.
- Satisfaction with Rubbish disposal services has slightly improved (from 69% to 0%), picking up from the significant decrease experienced during the Omicron outbreak last year.
- Most residents (82%) are highly satisfied with Kerbside rubbish and recycling collection, making it the highest valued metric in this area.
- Residents from Hokowhitu ward are most likely to be satisfied with the Council's rubbish disposal services than residents in other wards.

Figure 26 below shows a summary of the latest Residents' Survey results.

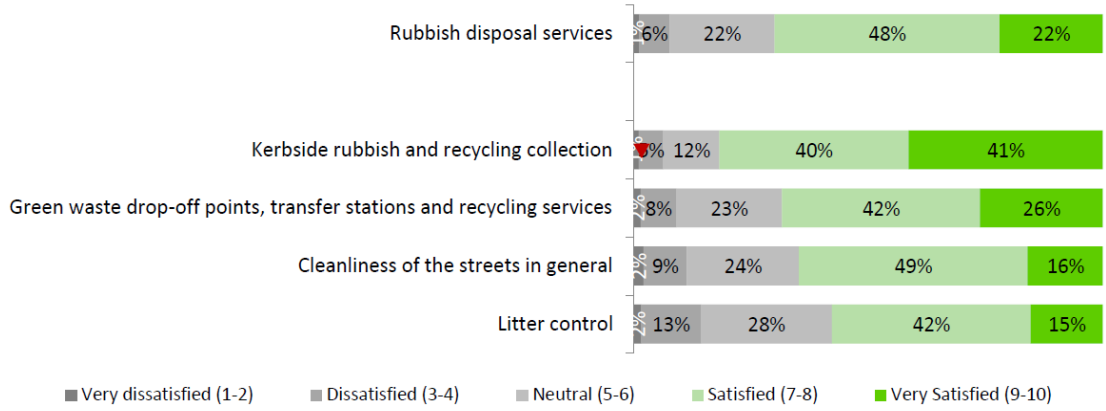


Figure 26: 2023 Residents' Survey Results

Comments made in the survey were analysed and the most common theme was positive, being that the city is very clean and customers are satisfied with our services. The main Issues that were mentioned included:

- Loose litter issues / litter on roadside
- Reduce collections costs / reduce cost to use the tip
- More and better recycling / more types of rubbish to recycle
- Green waste collection / cheaper green watse
- Fly tipping / fine people who litter / fine people who don't recycle
- More bins around the city / bins emptied more often
- Trucks inconsistent with pick up times / rough with bins / rubbish blowing away
- Better waste collection services / bins and not bags

It is important that these issues are considered in the planning of our Resource Recovery services. Figure 28 illustrates the 2023 trends in customer Satisfaction, with the percentage of satisfied customers presented in green, and the percentage of dissatisfied customers in red.

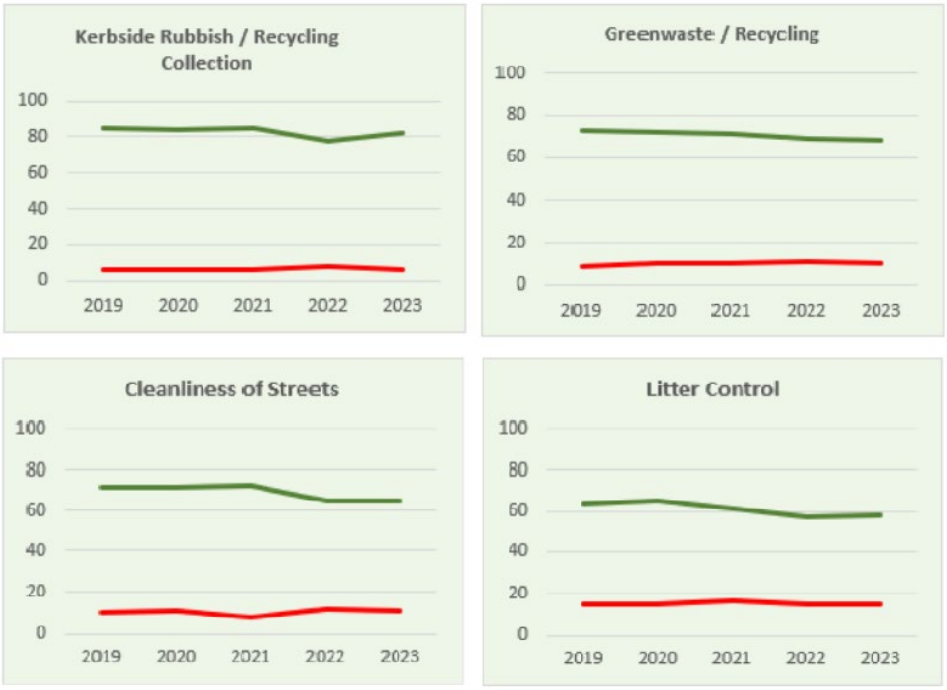


Figure 27: Annual Trends in Customer Satisfaction

He Aha Rā Ngā Whāinga Matua | What Really Matters?

Immediately following the 2022 council election, sector lead organisations were invited to suggest the issues elected members should be thinking about as they start to plan. At the same time, Massey University students Tatyana Kooznetzoff and Leearna Amos were commissioned to gather views from Palmerston North young people through two separate targeted research projects.

From surveys, our community views this as important with 83.33% respondents having their say. Opinions include:

- To have free rubbish bins for residents; and
- To introduce inorganic rubbish collection for free twice a year so that people would not dump in the reserves and parks.

As a stakeholder, Environment Network Manawatū proposed the following:

- Setting ambitious targets for the reduction of CO_2 emissions linked to the promotion of waste minimisation, and resource recovery;
- Increased collaboration in campaigns to showcase and promote sustainable practices in housing, gardening, energy efficiency, 3-waters efficiency, permaculture design, waste-free living, new technologies and environmental education. Tangible goals to achieve sustainability would be agreed for each campaign in consultation with Council.
- Increased accountability and accessibility for businesses to have commercial recycling and organic waste collection to increase resource recovery rates.
- Public recycling bins to be introduced next to public litter bins to increase public opportunities for resource recovery.
- Implementation of a soft plastics recycling scheme accessible by public and businesses across Palmerston North.
- Develop and implement a City-wide Food Resilience Policy that reduces food waste from the Healthy School Lunch Programme.
- The implementation of localized community composting systems (with community access to the compost) and the city-wide collection of household food waste to a council operated compost facility. There is a national push from the government to reduce food waste to landfill and we would like to see PNCC being proactive over reactive in this space. We advocate for household food waste collection to have its own, separate, for-purpose area, separate from landfill to allow the conversion of this waste from an emissions liability to a reusable asset.
- Undertaking behaviour change programmes.
- Composting food waste.

Analysis of Social Media Posts

Analysis of comments on our Facebook posts provided the following insights into the concerns and suggestions of our customers:

Table 12: Summary of Customer Feedback on Facebook

Theme	When	Issues	Suggestions
Phasing out Plastics 3, 4, 6 and 7	Nov / Dec 2020	• Recycling is too confusing. • Rates should be lowered due to less service.	• **People want kerbside rubbish bin.** • People wanting kerbside greenwaste bin. • Introduce new services to take these plastics (including incineration). • Introduce container return scheme.
Rubbish bags	2020 – 2022	• Rubbish bags are too expensive.	• People wanting free rubbish bags. • **People want kerbside rubbish bin.** • People wanting paper (or biodegradable) rubbish bags.
Illegal Dumping	2020 – 2022	• Rubbish is too expensive.	• People wanting inorganic collection days/ vouchers for free trips to dump each year. • People wanting free/cheaper rubbish bags/tip visits. • Want larger fines/PNCC to fine people more often. • Want clothing bins. • PNCC should own the landfil. • Want more public rubbish bins.
Food Waste Trial	2023	Concerns: • Cost (including wanting user pays) • Animals and insects • Odour • Worried about mess • Concerns for those who already compost at home	• **People wanting kerbside rubbish bin.** • People wanting kerbside green waste collection.

4.3 Review of Current Level of Service

Feedback from Elected Members on current Levels of Service was carried out in early 2023. Elected Members indicated overall satisfaction with the existing levels of service for Resource Recovery.

4.4 Level of Service Gaps

Existing Gaps

As summarised in Table 11 above all customer performance targets are being met and there are no current gaps in levels of service.

Forecast Gaps

Previously identified gaps in budgets have been rectified in order to:

- Reduce the risk of maintenance and renewal budgets becoming inadequate as our assets age;
- Provide an ongoing hazardous household waste disposal event; and
- Renew the Awapuni Closed Landfill resource consent.

4.5 Improvement Actions

While our maturity assessment indicates we are at a Core level of maturity for Levels of Service for Resource Recovery, there is a significant opportunity to:

- Introduce Levels of Service objectives that cover a wider range of the issues raised by customers; and
- Formalise the recording and reporting of technical (“intervention”) performance measures.

5. Future Demand and Drivers

5.1 Overview

This section outlines the demands and drivers that are directly relevant to the activity, how these are expected to have an impact on the services and our approach to understanding these. The SAMP includes discussion around the demands and drivers at a general level.

"There is 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 are likely to include the following:

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

In general, the factors that have the greatest influence on the 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."[6]

In addition to these drivers, our Strategic Direction is driving change including new services.

5.2 Strategic Drivers

Resource Recovery Plan and Waste Minimisation Plan (WMMP)

The Council sets its overall objectives for waste management and minimisation through the Resource Recovery Plan, as part of the Council's strategic framework. The Council is also obligated through the Waste Minimisation Act 2008 to produce a Waste Management and Minimisation Plan every six years. To ensure alignment and consistency between these two documents, the Council has committed to reviewing the WMMP early, shortly after the Council adopts the 10 Year Plan 2024-2034 (and the Resource Recovery Plan as part of the strategic framework).

The Resource Recovery Plan proposes a new level of service to "maximise the proportion of waste diverted from landfill." This is in response to the current WMMP, in which we have set a target to increase the proportion of waste diverted from landfill from 38% to 48% by 2025. If we don't adopt the proposed new level service – this will create challenges for us in achieving our any future proposed landfill diversion targets.

[6] Waste Assessment

5.3 Central Government Policy, Strategy and Plans

New Zealand had one of the highest per-capita rates of landfill disposal in the OECD in 2016. The linear use of resources is seeing landfills fill up and increase environmental harm. In response to this nationally significant issue Manatū mō te Taiao | Ministry for the Environment has an ongoing and evolving work programme under the New Zealand Waste Strategy 2010. Table 13 below summarises the various Central Government initiatives and their status as of May 2023.

Table 13: Central Government Work Programme for Waste

Title	Description	Status	Impact on Our Services
Product Stewardship	As part of the wider plan to reduce the amount of rubbish ending up in landfills or polluting the environment, the Government has declared six priority products for regulated product stewardship under the Waste Minimisation Act (WMA). They are: plastic packaging tyres electrical and electronic products (e-waste), including large batteries. agrichemicals and their containers refrigerants farm plastics	The plastic packaging scheme is currenlty being co-designed by the packaging forum and New Zealand Food and grocery Council. Tyrewise is Aotearoa New Zealand's first regulated product stewardship scheme for recycling used tyres. A pilot scheme is currently underway in Hawkes Bay, with a national roll-out of the scheme expected late 2023. Large batteries (over 5kg) are being addressed through The Battery Industry Group (BIG). The scheme is currently going through the accreditation process. The co-design for 'regulated e-product stewardship' is currently being led by TechCollect, and thescheme is currently working through the accreditation process. Implementation of a product stewardship scheme is expected in 2025. Cool-safe has completed he co-design for the refrigerants scheme, and has applied for accreditation which is expected in 2023 Farm plastics and agrichemicals and their packaging are in the co-design stage, which is being lead by the Agrecovery Foundation.	Long term, the introduction of tyrewise will have a direct impact onreduction in illegal dumping of tyres and associated costs. There will still be a legacy issue for a number of years with tyres that are not included in the scheme (ie, tyres that are imported before the scheme commences). The extent of the impact on our current e-waste and battery recycling drop off points won't be known until the design of each of these schemes is complete. The plastic packaging scheme is in the very early stages of design and the impact of this on our kerbside and drop off services is unknown. We expect little to no impact on resource recovery services with the agrichemical, refrigerants and farm plastics product stewardship schemes
Increase Waste Disposal Levy	The Government has confirmed its plans to increase and expand the national waste disposal levy to divert more material from landfill. It will use the revenue gathered from the waste disposal levy for resource	Progressively increasing from 2021.	The cost of rubbish bags will increase under the current user-pays model. The operational budgets for the waste management activity will also be affected by the Waste Levy increase.

Title	Description	Status	Impact on Our Services
	recovery and waste minimisation. The plan includes progressively increasing over four years the levy rate from $10 per tonne to $60 per tonne.		
National Environmental Standard for the Outdoor Storage of Tyres	About four million used car tyres and one million used truck and other vehicle tyres are generated annually in New Zealand. The majority of these are disposed of in landfills, stored on land or unaccounted for. Tyres stored outdoors pose risks to the environment, human health, and local communities.	Implemented.	We will need to consider the impact of this on our current stockpile of tyres located at Awapuni. We lease part of our Awapuni site to Waste Management where a tyre collection consolidation point operates. through this, we have cleared the stockpile of tyres accumulated through illegal dumping, and are able to offer a user pays tyre drop off service to residents. We are in the process of applying for a resource consent for this site under the NES for outdoor storage of tyres.
National Plastics Action Plan	To lead the development of guidelines to inform the sustainable use of plastic in Government procurement. Improve data on plastics. Support action on plastics through education. Leverage international connections to support our plastics agenda.	In progress, see also below overlapping actions.	Reduced processing costs due to exclusion of single use plastics from mixed recycling kerbisde colleciton.
Beverage Container Return Scheme	Government has funded the design of a CRS for New Zealand and is now considering the next steps. A CRS would not be implemented until 2023 at the earliest.	Deferred.	As a result of the CRS, high-value plastics and glass could be removed from kerbside collections. Therefore, it is in our interest to investigate how we can be involved in running a CRS locally.
Standardisation of Kerbside Collections	Kerbside recycling standardisation will be implemented to increase consistency, reduce confusion for householders, improve material quality and reduce residual rubbish to landfill.	Adopted.	Minimal modifications to processing. Minor tweaking to educational material to ensure it aligns. Amendment to Waste Management and Minimisation Bylaw Administration Manual.
Improving Household Recycling and	Making materials collected from households for recycling the	Adopted.	Establishment of a food colleciton service by 2030.

Title	Description	Status	Impact on Our Services
Food Scrap Collections	same across Aotearoa New Zealand from 2024. Ensuring kerbside recycling services are provided to households in urban areas (ie, towns of 1000 people or more) by 2027. Making food scraps collection services available to households in all urban areas by 2030.		
Reducing Food Waste	In 2023, the Government announced plans to get businesses ready to separate food scraps from general waste by 2030. This work is being progressed alongside proposed new waste legislation. Once in place, it is likely that the proposed requirement will affect most businesses and organisations that produce waste.	In progress.	Opportunities to participate in initiatives similar to existing ones such as Love Food Hate Waste.
Transition to a circular economy	Phase 1 of the Aotearoa New Zealand Waste Strategy with the goal that by 2030, enabling systems are working well and behaviour is changing.	Goals set for: Systems Infrastructure Circular behaviour	Involvement in the improvement of systems for regulation, investment, planning and reporting, data collection. Potential further investment in collection and resource recovery (RDOPs and MRF) and reprocessing (composting) infrastructure.

5.4 Population Growth, Demographics and Households

Population projections for Palmerston North can be found in Section 2.4.1 of the SAMP.

Household growth, rather than population growth or demographics, is the best indicator of demand for our collection services. New households that are constructed within the rubbish and recycling collection areas are assigned wheelie bins and crates from stock.

The biggest impact this has on the activity is the operational costs of longer collection routes. Growth is not uniform across collection routes and from time to time these need to be optimised and requires careful planning for customers whose collection day changes.

Subdivisions on the periphery of the city are further away from existing recycling drop off points and at some point, the travel distance will become a barrier to customers due to inconvenience. This needs to be investigated for suburbs of the city that have experienced growth such as Kelvin Grove and its surroundings.

Urban intensification can create servicing issues for residences of multistoried dwellings due to nowhere to store wheelie bins for each unit on site as well as not enough roadside space on collection day.

5.5 Economic Activity

Palmerston North's GDP in the year to September 2021 was $5,483M – an annual increase of 4.6% (compared to New Zealand as a whole, at 3.7%). Annual earnings have increased by 8.3% in the year to December 2020, compared to 4.7% nationally. Median earnings have also increased more than the national average. Although the number of businesses and employers has dropped slightly, and the survival rate of businesses has decreased slightly, the overall picture appears to be one of strong economic growth.

This has been softened recently, as in the rest of the country, by rising interest rates, high living costs, and ongoing supply chain difficulties. However, the economy continues to perform well, with the most recent measures of GDP suggesting a provisional 1.2% growth in the year to June 2022 (with national growth at 0.9%).

Ongoing issues with recruiting and retaining staff is reflected in employment growth and very low unemployment at 2.8% (to June 2022). Employment was mostly sourced in the financial and insurance services, retail, and healthcare sectors.

While the construction sector has contributed strongly to growth, this is reducing as the housing market softens and the number of sales reduces. The contraction in the sector is also seen in building consent numbers with a drop of 18% in the year to June 2022.

Research from the UK and USA 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.

As Palmerston North's population is anticipated to experience a steady but small growth, and the economy is currently performing strongly, it is likely that Palmerston North will experience an approximately similar increase in waste generated assuming no change to waste behaviour or resource recovery rates.

5.6 Changes in Lifestyle and Consumption

Consumption habits 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. Anecdotally, this has been accompanied by an increase in the use of printed direct mail ('junk mail') both in real terms and proportionally. This presents challenges for fibre recycling as this is a less desirable recycling commodity, although this has eased somewhat in the last couple of years as the two main supermarket chains cease the use of flyers.

COVID-19 pandemic management saw a significant increase in online purchasing, including regular purchases such as groceries, and to an extent this is likely to continue as purchasing behaviours have become habit. This is likely to result in an increased proportion of cardboard boxes and paper bags in homes; although this is not yet a measurable impact.

The ongoing growth in electronic devices will ensure that e-waste continues to be a growing waste stream, with (for example) data showing that households now tend to access the internet through multiple devices within the home and out, rather than a single home computer .

Government policies such as the proposed container return scheme and standardised kerbside recycling materials, and the recent ban of items such as PVC food containers/trays and polystyrene packaging, are likely to have an impact on brand owners and packaging manufacturers. Some likely consequences will be an increase in the use of #5 (PP) plastic for packaging, and the consistent use of #1 (PET or rPET) for clear meat trays. There may be a shift, even if just a temporary one, to more compostable alternatives (e.g. wooden sticks for stirrers, and compostable alternatives to expanded polystyrene packaging). However, MfE's position on compostable packaging discourages this and most compost operators do not welcome compostable packaging at their facilities. The concern about PFAS (poly-fluroalkyl substances, commonly used to form a moisture-proof layer on fibre or compostable packaging) is growing and is a factor in discouraging the use of compostable packaging particularly for products that require wet-strength packaging.

5.7 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:

- Revised New Zealand Waste Strategy (as discussed in Section 5.3.
- Infrastructure investment. An increased landfill levy and other funding sources will drive increased investment in waste infrastructure. MfE are currently working a long-term strategic waste infrastructure investment plan, which is due for release shortly.
- 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, and the New Zealand Emissions Trading Scheme. High inflation is also contributing to the costs due to increased labour and fuel rates. The current price for carbon credits, and the ongoing increases and expansions of the landfill levy, will make disposal prices a more significant consideration in waste management practices.
- Household collection systems: The current kerbside services in Palmerston North differ somewhat from the proposed standardised services; most significantly in the lack of an organic waste collection. There are likely benefits that will accrue from increased national education campaigns.
- Business collection systems: As one of the few councils that provides an organic waste collection service to some businesses, the proposals within the kerbside standardisation proposals for business food waste collections at various scales would have a lower impact than in other places. Council may be looked to as a provider of more extensive collection services, at least to those businesses that only produce small quantities of food waste and may be able to simply use a standard domestic-scale kerbside collection (on a user-pays basis).
- 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. COVID-19 pandemic management has presented ongoing challenges in resourcing, both staff and vehicles, and long lead-in times are still being experienced in the import and medication of collection vehicles.
- 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, by commodity prices for the equivalent virgin materials, and by market controls in key destinations such as China. The risk is linked to the wider global economy through international markets, and the impact of the China National Sword policies has demonstrated this.
- Performance standards and targets.

5.8 Technology

Council seeks to continue the processing of recyclables through the MRF from collections and RDOPs. The current age and condition of equipment associated with the MRF may require asset replacement or upgrade. An initial condition asset of the MRF assets is required to confirm the current condition. Upgrades may be required to enable the continued operation and facilitate potential capacity upgrades. Consideration of the current rapidly changing technology market and the scope of the container return scheme will require consideration by Council. Capital investment for upgrades or replacement of the MRF will required in the next five years.

Collection technology is moving ahead of our fleet including safety requirements. The costs of owning fleet are significant, and inparticular, electric vehicles are very expensive, have a limited life (seven years) and a direct impact on rates when renewed.

5.9 Data Trends

The 2019 WMMP identified a new action for the implementation of the provisions of the Waste Management and Minimisation Bylaw with reference to licensing and data collection for those companies who deliver waste services and zero waste events in Palmerston North. Enabling Council to set standards and gather data, providing them with information for informed decision making. Current waste assessments are carried out every three years, but the data gathered from private waste service providers will enable trending on an annual basis and better forecasting of waste diversion against future targets.

RFID tags have been installed on all recycling bins to track their location and usage. The data captured by the system is yet to be analysed as it is currently inaccessible. The analysis is likely to improve the efficiency of the operation and help reduce contamination by informing us of hot spots that can be targeted in campaigns.

New mandatory National Waste Data Framework reporting requirements are expected to be released in 2023 and are expected to tied to reporting on the effectiveness of the waste levy we receive.

5.10 Climate Change

The Climate Change Commission (CCC) was established to provide impartial expert evidence to government to support initiatives that would reduce greenhouse gas emissions and address climate change mitigation and adaptation, contributing towards the goals set out in the Climate Change Response Act 2002. The CCC reviewed the waste sector as part of its work during 2020 and 2021 and has provided its final advice to government with respect to this sector, amongst others.

The recommendations for the waste sector included an increase in waste minimisation infrastructure investments to decrease methane emissions from waste by at least 40% by 2035 from 2017 levels . New Zealand has a long-term target of net zero greenhouse gases by 2050, and a specific target for biogenic methane of 24 – 47% reduction by 2050 under the Climate Change Response Act (2002 Act).

The advice of the CCC is that unless waste management practices and policy settings in New Zealand change significantly, we will not meet the targets set in the 2002 Act – “current policies will not deliver the emissions reductions we must achieve.” Comprehensive action is required to reduce waste overall, divert waste from landfill disposal, and improve/extend landfill gas capture systems.

The main source of biogenic methane emissions from the waste sector is the anaerobic decomposition of organic wastes in landfill (81%). As one possible way to significantly reduce this, the emissions reduction plan proposes “key organic materials such as food, green, and paper waste could also be banned from Class 1 landfills by 2030” with a note that this could also be extended to wood waste. Further possible methods to reduce organic waste going to disposal include food and green waste collections, services to enable commercial premises to divert food and green waste, better paper and cardboard recycling, and improvements to infrastructure such as transfer stations and material recovery facilities (MRFs).

Other relevant proposals relate to reducing the generation of food waste, construction and demolition waste, and options to divert treated timber from disposal.

It is worth noting that even with all of the initiatives proposed this would still fall short of achieving the CCC's proposed target for waste emissions, as shown in Figure 28 below.

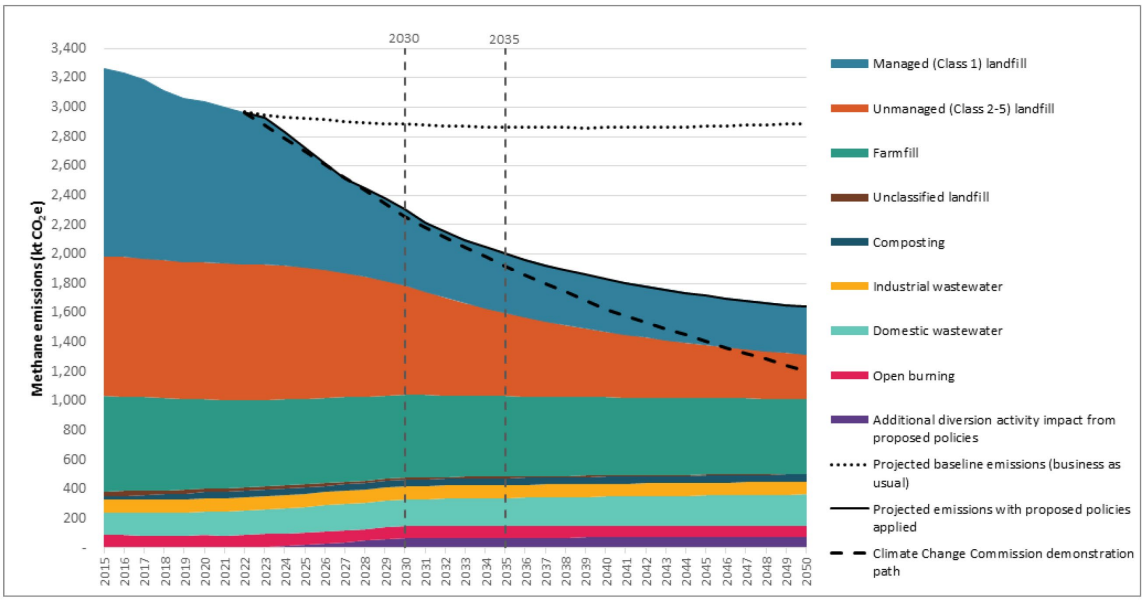


Figure 28: Total Projected Methane Emissions from Waste Showing the Impact of Proposed Combined Waste Policy Options

Reducing waste reduces the depletion of limited resources, including the limited capacity of the atmosphere to absorb greenhouse gas emissions.

5.11 Improvement Actions

Forecast Future Demand - Increase Event demand forecasting accuracy by improving reporting.

6. Our Assets, Condition and Performance

MfE classifies waste management infrastructure into these four categories:

- **Collection** infrastructure includes collection vehicles, skip bins, domestic bins for kerbside collections, and bins and collection points at shops and other public places.
- **Resource Recovery** infrastructure includes transfer stations and vehicles, drop-off facilities, sorting facilities and washing plants for reuse schemes.
- **Reprocessing** infrastructure includes composting and anaerobic digestion facilities for organic material, plastics processing plants, and plants for managing construction and demolition waste.
- **Disposal** infrastructure includes waste to energy plants, incineration facilities and landfills.

The following sections describe the assets at each of our sites.

6.1 Assets at Our Awapuni Resource Recovery Park

The Awapuni Resource Recovery Park is accessed from Tip Road (a sealed road owned by us) at the end of Maxwell's Line, Palmerston North. The Resource Recovery Park overlooks Marae Tarata, a site of cultural significance to Rangitāne o Manawatū at the now confluence of the Mangaone and Manawatū River. The site is partially fenced with security fencing and contains the following:

- A Material Recovery Facility (MRF) for processing recyclables;
- A separate processing plant for mixed colour glass;
- Resource Recovery Staff offices and education centre;
- The Awapuni Recycling Drop Off Point;
- Weighbridge;
- Green waste drop-off;
- Composting operations producing both commercial compost and biosolids;
- Leased sites for recycling purposes; and
- Awapuni Closed Landfill and associated gas collection and flaring system.

Material Recovery Facility

Opened in 2007 by the then Prime Minister Rt Hon Helen Clark, the 2000m^2 Material Recovery Facility (MRF) has been designed to process up to three tonnes per hour of co-mingled recyclables on a single process line (see Figure 29). Co-mingled recyclables are separated using both mechanical and manual sorting processes into product streams of fibre (paper and cardboard), plastics and metals (steel and aluminium). Anything that cannot be recycled is also separated into the MRF waste stream. While we do provide public space bins and event recycling services, most materials for sorting come from our kerbside collection services, RDOPs, Horowhenua and Tararua District Councils and commercial customers.

Figure 29: Material Recovery Facility Sort Line

Table 14 contains quantities of mixed recycling typically processed at the MRF.

Table 14: Typical Quantities of Mixed Recycling Processed by the Material Recovery Facility

Source of Mixed Recycling	Tonnes Processed 2018/19	Tonnes Processed 2019/20	Tonnes Produced 2020/21	Tonnes Produced 2021/22
Kerbside Collections	3740	3793	3940	3395
Commercial Arrangements	1202	1689	1678	1423
Recycling Drop Off Points	485	438	770	695
Total	**5427**	**5920**	**6388**	**5513**

As shown in Figure 30, the current layout of MRF creates a heavy reliance on the conveyors and processing machinery at the start of the line. Operation of those assets are critical to the operation of the entire plant and therefore proper planning, maintenance, and renewals need to be in place to ensure the continuation of the MRF's services.

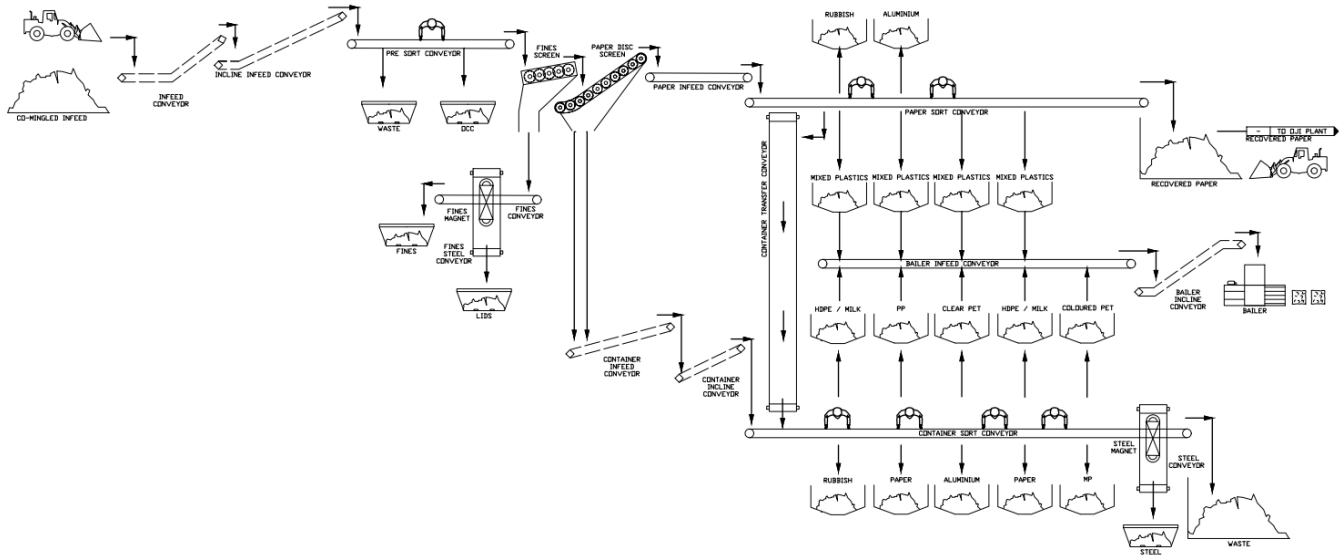


Figure 30: MRF Process Flow Diagram

As shown in Table 15 below most recovered materials are fibre (paper and cardboard). Note that the total product stream is greater than the inputs as about 15% of the fibre is supplied pre-sorted and is sold directly to our commodity traders.

Table 15: Typical Quantities of Product Streams Produced

Product Stream	Tonnes Produced 2019/20	Tonnes Produced 2020/21	Tonnes Produced 2021/22	%	Sorting Mechanism
Fibre	4065	3675	3552	63	Mechanical and manual
Mixed Plastics	212	102	43	3	Manual
Steel Cans	278	248	626	4	Magnetic
PET Clear Plastic	248	206	353	4	Manual
HDPE Janitorial Plastic	103	239	90	2	Manual
HDPE Clear Plastic	97	8	86	1	Manual
Aluminium	81	101	97	1	Manual
Polypropylene	24	61	19	<1	Manual
Waste/Contamination	1363	920	991	21	Manual/Mechanical
Total	**6471**	**5560**	**5493**		

Contamination of the mixed recycling has become more of an issue again as shown in Figure 31 below. From time to time this issue is managed by way of:

- Runners that inspect bins ahead of being emptied by the collection trucks;
- Stickering contaminated bins; and
- Education and behaviour change campaigns

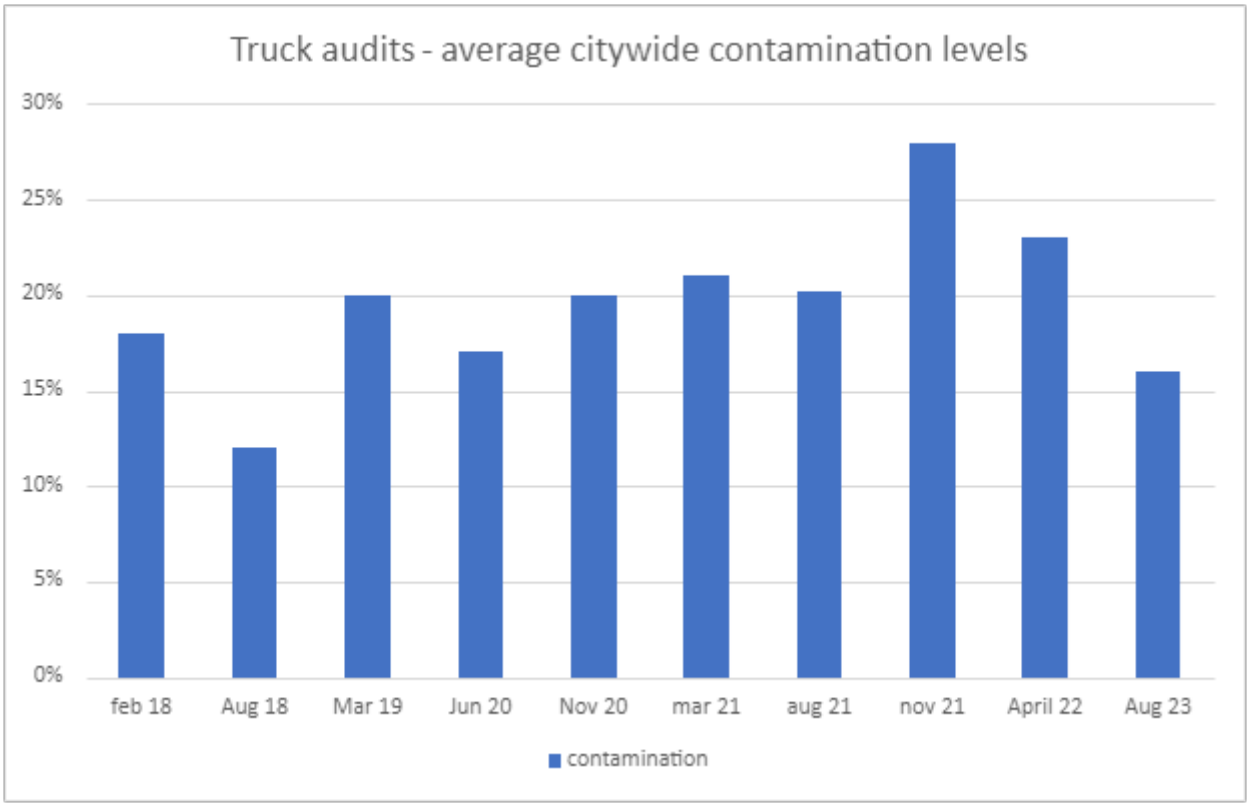


Figure 31: Mixed Recycling Contamination Trends

We recently altered the methodology of conducting contamination audits which will give us a fairer representation of contamination throughout a truck.

Glass Processing Facility

We currently sort glass by colour when it is collected and loaded onto our collection trucks. This allows us to deliver sorted coloured glass directly to our traders. Before this method, mixed glass was collected and taken to the glass processing facility at the Resource Recovery Park. On occasion, this still occurs, especially when glass collection trucks or operators are unavailable, hence the glass processing facility is still in operation.

The glass processing facility consists of an in-feed chute, a single conveyor situated inside a modified shipping container, and a series of bays into which the coloured glass is sorted. Unsorted mixed coloured glass remains stockpiled adjacent to the facility from a decade ago.

Resource Recovery Offices and Education Centre

In 2007 a single storey 340m^2 office and amenities building was built adjacent to the MRF. This comprises four offices, a visitor and education centre, kitchen, toilets, shower and storerooms. The education centre is used to undertake education programmes for students and researchers, interest groups and other visitors to increase the awareness of waste minimisation issues.

This area was expanded and upgraded in 2023 to create a designated staff area that was seperated from the educational and meeting space, a drying room, and additional toilet and bathroom facilities to meet the needs of staff.

Weighbridge

We operate a weighbridge at the Awapuni Resource Recovery Park to track the amount of recycling our collection trucks pickup as well as product sales and movements of other materials on and off the site such as green waste. The weightbridge is also used by our various tenants and their customers.

The kiosk was renewed in 2019 and the single weighbridge was upgraded in 2017. The length of the weighbridge does not allow a truck and trailer unit to be weighed during one pass. Additionally, as there is only one weighbridge, vehicles leaving the site requiring a tare weight to be recorded must pass through the weighbridge for their tare weight to be recorded. This requires these vehicles to 'loop' around the kiosk.

Green Waste Drop Off

A hardstand drop-off area is maintained for the public to unload green waste at the Resource Recovery Park. For health and safety reasons the area is kept separate from the compost windrow operations and the wastewater treatment plant sludge handling area. The area is cleared of green waste by a frontend loader[7].

Composting Operations

Closely associated with the green waste drop-off is our compost operation that produces two streams of compost products:

- Commercial grade compost that is sold to the public, with a portion made available free of charge to community groups, schools and education facilities; and
- Composted Biosolids are spread over the landfill to protect the clay capping from damage, and to create a medium for planting.

The compost operation is authorised by resource consents (refer to Appendix C for further details) from Horizons Regional Council and the biosolids area is required to have its drainage system that diverts runoff to the Tōtara Road Wastewater Treatment Plant for treatment. Runoff from the commercial area is directed with stormwater drainage to a soakage pond that is monitored as part of the closed landfill resource consent.

Additional dedicated hardstand areas are maintained for receiving different organic inputs from industries, stables and our food waste collections. There is a significant amount of mobile plant and equipment that is used for shredding green waste and forming windrows which are outside the scope of this AMP.

Leased sites

Five areas of the Awapuni Resource Recovery Park are leased for the following activities:

- OJI Fibre;
- Scrap metal recycling;
- Reclaimed timber;
- Tyre Recycling yard;
- Asphalt production plant and concrete processing.

OJI Fibre

OJI lease just under half of the Materials Facility Building for the processing and baling of fibre (paper and cardboard) collected from their operations in the Lower North Island, they also lease office space and a storeroom at this location.

Scrap Metal Recycler

An area of approximately 5000 m^2 is leased for scrap metal recycling. The fenced area has a power supply and concrete pad for the metal baler. The site has been operating under the existing lease since 2017. The buildings on site are owned by us, with mobile assets owned by the leaseholder.

Reclaimed Timber

An area of approximately 2600 m^2 is leased for timber recycling. The fenced area includes the former recycling building (315 m^2 steel clad shed) which is owned by us, with mobile assets on this site owned by the leaseholder.

[7] Fleet management is not part of the AMP scope.

Tyre Recycling

An area of approximately 1300 m^2 isleased as a holding & distribution site for tyre recycling. The tyres are picked up from the site and distributed to Northland to be used as fuel for a concrete kiln.

Asphalt and Concrete processing

An area between Tip Road and the Tōtara Road Wastewater Treatment Plant is leased for concrete production and asphalt batching. This lease is a land lease only, with the buildings and plant located at this site are owned by the leaseholder.

Quarry Site for Metal Extraction

Some 13,300 m^2 of riverside land was previously leased for metal extraction but the leaseholder ceased its operations at this site in 2019.

Awapuni Recycling Drop Off Point (RDOP)

The Awapuni RDOP was renewed in 2019 to improve the experience for our customers. At the new RDOP customers can drop off paper and cardboard, plastics, metals and colour sorted glass into separate receptacles as shown in Figure 32 below.

Figure 32: The New Awapuni RDOP

6.2 Assets at our Other Street Recycling Drop Off Points

Ferguson Street Recycling Drop Off Point

The Ferguson Street RDOP comprises four areas:

- Timber-framed building (20.6 m x 8.8 m x 4 m high) constructed on a reinforced concrete floor slab. It is serviced with power, water supply, and telephone. Fibre (Paper and Cardboard), e-waste, engineoil, car oil filters, cooking oil, batteries and child car seats are dropped off here for recycling. Some items incur a fee for recycling.
- Outside covered area with, fibre (paper and cardboard), plastics, steel and aluminium tins and cans, and glass bottles and jars, with CCTV security cameras and lighting.
- 100 m^2 sealed handling and storage area behind the RDOP building.
- Sealed customer parking at the front of the RDOP building.

This RDOP was renewed in recent years and the new facility is shown in Figure 33 below.

Figure 33: Ferguson Street RDOP

Ashhurst Recycling Drop Off Point

Two modified shipping containers, as shown in Figure 34 below, with posting holes and internal partitions is located on the outside of the Ashhurst Transfer Station. This allows it to be transported to the Awapuni MRF for emptying and sorting. These are leased from Envirowaste.

We have purchased our own Mobile Recycling Centre to replace the two leased containers and work is currently underway to get them installed at the Ashhurst Recycling Drop Off Point. Work is due to be complete in late 2023.

Figure 34: Recycling Drop Off Facility for Ashhurst

6.3 Assets Associated with our Transfer Stations

Ashhurst Transfer Station

The Ashhurst Transfer Station was built in 1995, the same year that the Ashhurst Landfill closed. The 1000 m^2 site (see Figure 35 below) has security fencing, a concrete ramp for unloading rubbish and green waste into hired skip bins and a kiosk for staff.

Figure 35: Ashhurst Transfer Station

Closed Bunnythorpe Transfer Station

The Bunnythorpe Transfer Station was transferred from Manawatū District Council to our ownership in 2012 when the Council boundary was adjusted. The 1800 m^2 facility was closed in 2017 due to low usage and recovery, and relatively high costs making it economically unviable. A decision on the future of the property is yet to be made.

6.4 Assets Associated with our Closed Landfills

Awapuni Closed Landfill

The Awapuni landfill was operational from 1950 to 2007, during which time an estimated 2.5 million tonnes of rubbish was disposed of. The most recent extension of the landfill in 1995 was lined (indicated in Figure 36 below), and leachate is pumped to the Tōtara Road Wastewater Treatment Plant for treatment. The Awapuni closed landfill has consents that expire in 2029 that include the requirement for a closure management plan.

The entire landfill has a clay cap to prevent stormwater rainfall ingress and therefore minimise leachate. The clay cap also traps landfill gasses which can be syphoned off via the 2km long gas collection system (installed in 2006). A consented gas flare is located on-site if needed but most of the gas is now piped to the electricity generator at the Tōtara Road Wastewater Treatment Plant. Planting of approved native bush species is undertaken from time to time. Stormwater drainage on the site directs most runoff to a soakage pond, shallow groundwater monitoring bores are installed around the periphery to monitor for potential leachate.

Figure 36: Aerial Photo (2019) of Awapuni Closed Landfill

Ashhurst Closed Landfill

The Ashhurst Closed Landfill site occupies an area of 1.1 ha, with the landfill itself occupying about half of this. Approximately 15,000 m^3 of rubbish was disposed of at the Ashhurst Landfill between 1950 and 1995 before it was closed. The landfill is unlined and clay capping is only applied to the top as the sides are too steep and close to waterways to enclose with soil. Where possible, pine trees have been planted on the sides to stabilise them. This landfill is also consented and has ongoing monitoring and reporting obligations with Horizons Regional Council.

6.5 Assets Associated with our Collection Services

When the wheelie bin kerbside collection service was introduced in 2010, we bulk purchased enough bins for our customers plus some stock for replacements. Currently, we have about 2,500x 80L, 29,500x 240L and 30x 660L wheelie bins for our residential and commercial customers.

These wheelie bins are also suitable for food waste collection and can be allocated to commercial customers. Similarly, in 2010 we also bulk purchased crates for our glass recycling (with some smaller purchases since) and have nearly 30,000 45L crates. Figure 37 shows our 240L wheelie bin and glass crate.

Assets associated with the rubbish bag collections services are outside the scope of this AMP.

Figure 37: Recycling Wheelie Bin and Glass Recycling Crate

6.6 Other Assets that Benefit the General Public

Public Space Bins

We provide 655 rubbish and recycling bins in strategic locations and have been standardising the bins as they come up for replacement or at the same time as streetscape and park upgrades. A strategic placement review in recent years has also seen the removal of some bins. Public space bins located within parks and reserves that have staff on site are serviced by Parks and Reserves Division Staff. We are also trialling three solar compacting bins.

Illegal Dumping

All assets used to support the investigation, collection and disposal of illegally dumped rubbish are outside the scope of this AMP.

6.7 Asset Challenges and Issues

Table 16 contains a summary of the main challenges in terms of the level of risk and investment. Overall, as mentioned in Section 52 there has been minimal investment in new assets in the last 10 years and there has been a slight increase in asset renewals and maintenance costs in the last five years.

Table 16: Asset Challenges by Location and Service

Material	Site	Key Assets	Asset Challenges
Waste Minimisation			
All	Awapuni Resource Recovery Park	Waste Management offices and education room	Insufficient staff amenities. Under-utilisation of education room for education purposes
Organic and Green Waste	Awapuni Compost Operations	2 hot rot composters Trommel screen Drainage and hardstand areas	Hot rot composters are out of service and have high maintenance costs. Trommel screen has been replaced in 2022/23.
	Commercial	Food waste wheelie bins	Customers are required to maintain the cleanliness of bins.
	Ashhurst Transfer Station	Land Loading zone	Previously over utilised due to low fees. Health and safety hazards to staff and the public require active management. Small site, scope for expansion limited
Mixed Recycling Glass	Residential and Commercial kerbside	80L and 240L wheelie bins 45L crates	Radio frequency identification tags have been recently installed to monitor presentation rates and the location of bins assigned to customers.

Material	Site	Key Assets	Asset Challenges
		Collection trucks (out of scope)	Commercial customers want more options.
	Awapuni Resource Recovery Park	Material Recovery Facility	Contamination is increasing operating costs (labour to process and waste disposal fees).
	Ashurst RDOP	Mobile recycling receptacle	Isolated location is prone to vandalism and contamination resulting in poorer yield. Glass collected mixed which reduces yield.
	Awapuni RDOP	Recycling receptacle	Recently replaced to standardise and improve customer experience.
	Ferguson Street RDOP	Recycling receptacle	Upgraded to improve customer experience.
Mixed Recycling Glass	Public spaces	Recycling bins Three solar compacting bins	Vandalism of bins, requiring immediate replacement. Bins standardised as renewed.
	Events	Events recycling trailers	Recently developed service
Household Chemicals	Ferguson St RDOP	Oil containers	Contracted
	Hazardous Waste Event	Hazardous waste facilities	Contracted
E-Waste	Ferguson St RDOP	None (storage only)	Recycling provided by contractor
Waste Minimisation (Continued)			
Car Seats	Ferguson St RDOP	None (storage only)	Recycling provided by contractor
Waste Management			
Rubbish	Residential kerbside	Rubbish trucks (out of scope)	-
	Ashhurst Transfer Station	See Green Waste above	See Green Waste above
	Public spaces	Rubbish bins	Vandalism of bins, requiring immediate replacement. Standardised as renewed.
	Illegal dumping	Rubbish truck (out of scope)	
Landfill Management			
None	Awapuni Closed Landfill	Clay lining Clay capping Leachate collection system Landfill gas collection system Gas flare	Consented and requires monitoring for compliance. Renewal of consent may result in investment in further mitigation of environmental impacts. Located by waterways of cultural significance to Rangitāne o Manawatū. Declining gas production will lead to the disposal of the gas line to an electricity generator at Tōtara Road Wastewater Treatment Plant.
	Ashhurst Closed Landfill	Clay capping Land	Consented and requires monitoring for compliance. Located by waterways of cultural significance to Rangitāne o Manawatū. Minimal maintenance required.

6.8 Asset Condition and Performance

Asset condition is largely theoretical based on age as little actual condition data is recorded in our asset information systems. Figure 38 below shows the theoretical condition of the assets by sub-activity held in IPS (excludes property assets, land and public space bins). The condition score is calculated using the expected life and age of the asset. The average theoretical asset condition is moderate, but attention needs to be given to aging assets (condition 4 or greater) assets associated with the landfill gas collection, compost hardstand areas and operations.

Figure 38 also shows the forecast condition without any planned maintenance and/or renewal interventions. The recently developed criticality framework is a key input into prioritising these interventions.

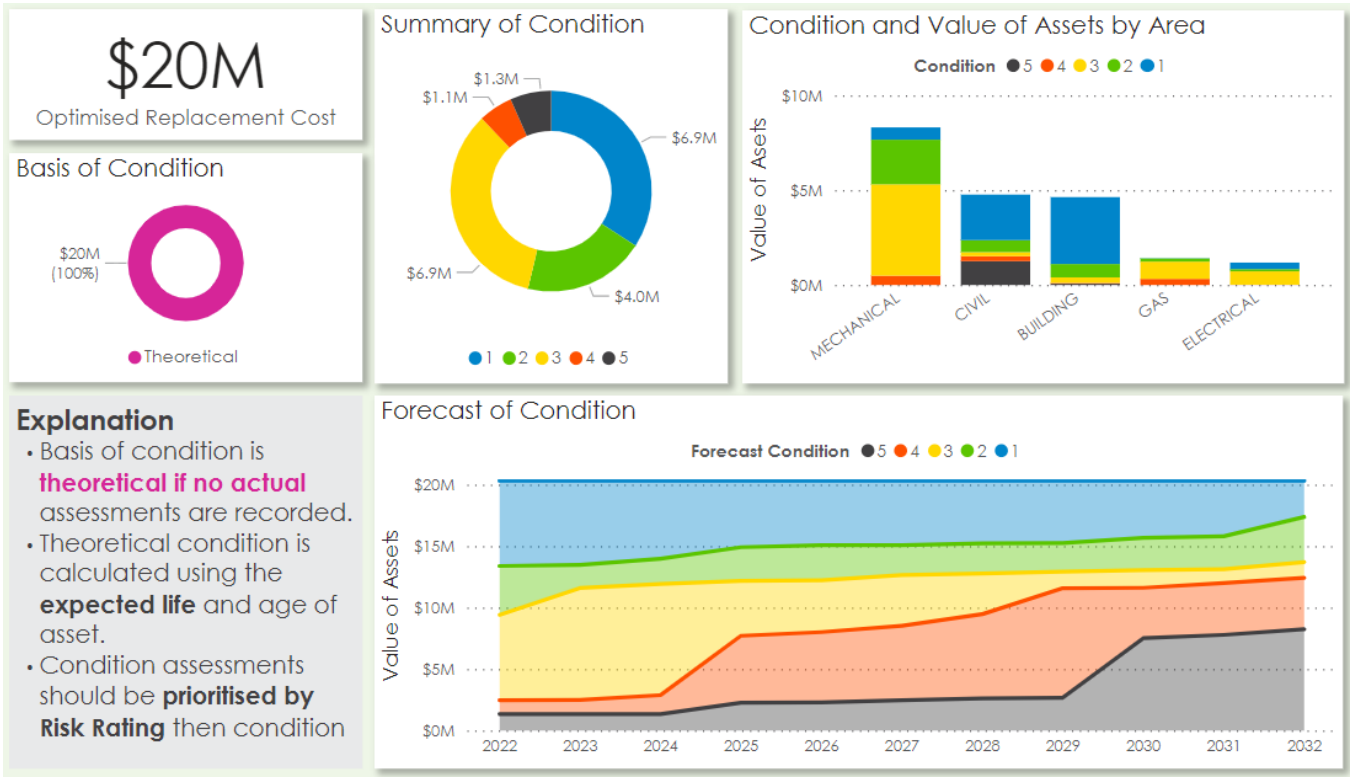


Figure 38: Theoretical Asset Condition Based on Age

Asset performance is relatively unassessed and is monitored primarily through customer levels of service performance. It is assumed most assets have a good asset performance grade.

Performance metrics are highly recommended to be tracked include:

- Repairs and maintenance of all assets (to be commenced under MRF maintenance contract); and
- Utilisation / demand / capacity (MRF and RDOPs).

7. Risk and Resilience

This section identifies the risks to the Resource Recovery activity and outlines Council intentions to mitigate risk and increase resilience. Understanding risk and the impact of risk provides Council confidence it can deliver services in the event of uncertainty.

Risks are defined as the effect of uncertainty on objectives. Risks are identified and assessed according to the likelihood of them occurring and the impact of their occurrence.

The Strategic Asset Management Plan (SAMP) - describes the council-wide approach to managing risk across the Council's different asset portfolios.

Our Risk Management Framework sets out the basis for managing risk across the Council. The purpose of this Risk Management Framework is to aid us in integrating risk management into all activities and functions.

7.1 Resource Recovery Activity Risks

Rather than identify single risk events, we have identified risks that occur within our processes and work streams. Our resource recovery management processes have been collated into 9 work streams categories which:

- Resource Recovery Activity Management
- Investigations & Planning
- Waste Assessment & SWAP
- Waste Minimisation Mgt. Plan
- Management of Closed Landfill
- Collections
- Processing of recycle materials
- Disposal of recyclable materials
- Composting

Each workstream category has sub process with risks, potential failures and effectiveness of mitigation options outlined.

Within the risk process we identify the raw risk, residual risk, and target risk. The residual risk is the remaining risk after implementation of risk treatment (through mitigation on controls). The treatment might include avoiding, modifying or sharing the risk.

Any residual risks that are low to medium consequence level are approved off by the Division Manager. Risk rating Very High and Extreme are to be reviewed by the Chief Infrastructure Officer and Chief Executive.

Risk Management – Insurance

Reference should be made to the Strategic Asset Management Plan.

7.2 Critical Assets

Critical assets are defined as those assets with the highest consequence of failure regardless of the probability of failure.

Our Part G – Plant and Equipment Criticality Framework was created in 2022. We used this to derive the criticality ratings for our plant and equipment assets for the Resource Recovery activity. We are still yet to apply criticality ratings to all our plant and equipment in IPS. This has been identified as a high priority improvement item as the criticality rating of assets helps to prioritise renewals and would better inform maintenance budgets and our risk profile.

Our critical plant and equipment assets were:

- The trommel mulch screen ($250,000);
- Various road formations;
- Greenwaste extension area that is retained with a tyrewall;
- Staff “office” (shipping container); and
- Weighbridge generator.

Criticality ratings for our Resource Recovery buildings can be found in the Property AMP – Section 8.2.

7.3 Criticality of our Services

Essential Services

In 2009 (see OASIS 1731539) kerbside rubbish collection and disposal was identified as an essential service to meet public health requirements but not the collection of recycling. This was confirmed during our response to Covid-19.

The impact of non-collection of commercial and household waste may impact Health and Safety to both the public and our staff, through issues such as potentially increased exposure to pathogens from waste, vermin and animals. Also, potential aesthetic issues from uncollected waste, unpleasant smell and odours.

An overview of Business Continuity Planning is outlined in Section 7.5.

Critical Customers

Critical customers are those relying on our essential kerbside rubbish collection service, that is:

- Households;
- Businesses in the CBD; and
- Commercial busineses within the collection area.

In the event of a major disruption of service establishing at least a temporary rubbish collection for critical customers would be a priority.

Critical Suppliers

Critical suppliers are those providing services required for the delivery of our essential kerbside rubbish collection service. The following support services are critical:

- Radio communication
- Rubbish disposal (MidWest Disposals)
- Rubbish Bag supplier for Kerbside Rubbish Bags
- Fleet
- Fuel
- Access to our site at Awapuni

Services that are deemed as not required are:

- Power
- Water supply services;
- Access to our buildings;
- Information Management

7.4 Assessing Infrastructure Resilience

Hazards

Resilience is "the ability to anticipate and resist the effects of a disruptive event, minimise adverse impacts, respond effectively post-event, maintain or recover functionality, and adapt in a way that allows for learning and thriving" (National Disaster Resilience Strategy 2019).

Our asset planning considers the resilience of the just the built environment only and we are still yet to formally assess this for our critical assets. The impact of extreme weather, earthquakes and volcanoes on our critical assets needs to be assessed.

Please refer to the SAMP for a full overview of pr approach to reslience for our infrastructure assets.

Table 17 - General Hazards - Resource Recovery Activity

Hazard Type	Overview
Natural Hazards – Flooding and Erosion	The Awapuni Closed Landfill is adjacent to the Manawatū River and we are actively monitoring erosion of the river bend towards the landfill at the end of Tip Road. In 2022 the Mangaone Stream flooded while the Manawatū River was relatively low and without any backwater effects from the Manawatū caused unexpected erosion of its true left bank near the northern face of the lined landfill section. Emergency works were carried out in order to reinstate the river bank at the time. We also do not have a Standard Operating Procedure for dealing with the disposal of volcanic ash in the event of an eruption.
Biological Hazards	There is an opportunity to better assess the impact of biological hazards on our rubbish and recycling services. Currently we mitigate any biological risks to our collection and sorting staff via personal protective equipment (PPE)

7.5 Business Continuity Planning (BCP)

The Business Continuity Plan was updated in 2023. The Plan details strategies including co-ordination of people and resources to ensure that we can reduce the impact of any disruption on our critical services. Our priorities in any disruption are to:

- Ensure the health, safety and wellbeing of staff, contractors and community;
- Reuce the impact (and costs) of any event; and
- Resume core functions effectively and efficiently.

The BCP outlines the maximum tolerable downtime, key inputs and contingency plans for the following critical services/functions:

- Rubbish bag collection and public rubbish bins;
- Provision of rubbish bags, recycling crates and bins;
- Collection of recycling bins and crates;
- Provide greenwaste drop-off point;
- Composting;
- Material recovery process;
- Closed landfill inspections; and
- Selling of recyclable materials.

The document is intended to be reviewed at least six-monthly, and immediately following any significant organisational change.

7.6 Improvements - Risk Management

1. An improvement item is to include more condition and risk assessment information about resource recovery plant assets in this AMP.
2. To apply criticality ratings to all our Resource Recovery plant and equipment in IPS.

8. Operational Planning

8.1 Operational Objectives, Performance Measures and Interventions

Operational and maintenance practices for Resource Recovery are recorded under historical Service Level Agreements (SLA). These agreements were developed to provide the required levels of service under the previous internal service delivery model. Even though it is no longer required due to a change in the service delivery model, these agreements are still the best record of the scope of operational and maintenance tasks. Once technical performance measures are implemented these can be used to initiate interventions that ensure we meet our customer Levels of Service.

8.2 Planned Maintenance Analysis and Scheduling

Regular inspections of the gas collection assets are carried out.

In 2023 planned inspections and maintenance will commence on the MRF plant and equipment.

8.3 Reactive Maintenance Process

Most of the maintenance for the Resource Recovery Activity has historically been carried out reactively. The biggest risk of this approach is at the MRF, where the most critical assets are located. For this reason, an Electrical and Mechanical contract has commenced at the MRF in 2023. The scope of this contract includes establishing routine inspections, condition assessments and preventative maintenance.

8.4 Operations Plans

Resourcing of operations plans are determined from historical trends, but it is expected that a bottom-up approach will be taken soon based on revised operational objectives and performance measures.

High-level summaries of the operational activities are contained in the Operations and Maintenance sections for each of the asset groups in Section 9 below.

9. Lifecycle Management

9.1 Lifecycle Overview

The Resource Recovery Activity is planned for, managed, and operated in six distinct lifecycle groups, these being:

- Collection assets;
- Recycling Drop off Points (RDOP) and Transfer Stations;
- Public space bins;
- Materials Recovery Facility (MRF) including glass processing;
- Compost operations; and
- Closed landfills and transfer stations including weighbridge.

Table 18 contains a summary of the assets in each lifecycle group.

Table 18: Summary of Assets within each Lifecycle Group

Lifecycle Group	Sub-Activity	Asset List
Collection Assets	• Waste Minimisation	• Recycling wheelie bins • Glass recycling crates • Food waste wheelie bins • *(Waste Management fleet assets are out of scope of this AMP)*
Recycling Drop Off Points and Transfer Stations	• Waste Management • Waste Minimisation	• Ashhurst Transfer Station • Ashhurst RDOP • Awapuni RDOP • Ferguson Street RDOP
Public Space Bins	• Waste Management • Waste Minimisation	• General rubbish bins • Comingled recycling bins • Glass recycling bins
Materials Recovery Facility	• Waste Minimisation	• Material Recovery Facility • Glass sorting facility
Compost Operations	• Waste Minimisation	• Compost plant and equipment • Hard stand areas • Awapuni Green Waste Dropoff
Closed Landfills	• Waste Management	• Ashhurst Transfer Station (includes green waste drop off) • Landfill gas collection • Security fencing • Drainage • Weighbridge

The sub-sections are built up based on the following:

- What are the strategic drivers and levels of service expected from this asset?
- What are our customer and strategic issues for this asset?
- What operating, maintenance, renewal, and asset improvement investment do we need to respond to these things are deliver on the outcomes sought?

In addition, an overall Lifecycle management alternatives section examines what investment alternatives are available.

Service overview

The Service Overview sub-section describes the asset group being considered.

Customer and Strategic Issues

This section provides a link between levels of service, strategic direction, activity challenges, and risks through to specific assets. It seeks to translate this direction into short term goals, long term goals, and life cycle impacts sought from investment.

Operations and Maintenance

How we operate and maintain our assets day to day is important in the performance of the resource recovery activity. Operational activities ensure the successful continuation of the service, while maintenance activities serve to extend the life of the asset, delaying the need for asset renewal.

Renewals Plan

The aim of the renewal plan for each asset type is to identify the optimum level of renewal investment to minimise whole of life costs while delivering the appropriate level of service to the customers.

Asset Improvement and New Assets

To deliver the outcomes sought for the resource recovery activity, asset improvement and capital new investment may also be required. Asset improvement will typically be required where there is a gap between a level of service and what is currently being delivered.

Asset Disposal

When an asset is no longer required, its appropriate decommissioning and disposal needs to be considered. Ideally, this would have been considered in the planning for the asset.

9.2 Investment Management

This section includes initiatives that do not involve physical works but involve investigation and planning to manage investment in the Activity.

There are currently five operational programmes in place to contribute to the investment management of the Resource Recovery Activity. The allocated budget for each of these over the next ten years is detailed in .

There is a programme (974) dedicated to increasing educational efforts in the Resource Recovery Activity. It includes resources to develop educational materials such as; written articles, information brochures, video, and multi-media presentations. Another option is to include an application for residents to use to find key information. This programme will also support and communicate changes to the activity.

Programme 1724 funds a series of specific studies to investigate the diversion of target materials from landfill. The investigations will target specific materials and actions in the WMMP 2019 (Food Waste E06 and C03), Mattress Recycling (C08), Construction and Demolition Waste (IN3). Further target materials as they are identified have been allowed for.

The undertaking of a bi-annual Hazardous Waste Day Collection is supported by programme 1811. This programme is supported by action C06 in the WMMP 2019 and is reinforced by three events that have been trialled over the last three years. These events have been successful in removing Hazardous Waste from the environment.

Programme 1908 is dedicated to improving our Resource Recovery Activity asset information with a focus on the component level and condition assessments. This information is required to inform the renewals and maintenance programmes and strategies.

A programme was created (1909) to make a portion of the Waste Minimisation Funds received available as a contestable fund.

Table 19: Operational Programmes for the Recycling and Recycling Activity

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budget				
Operational	2328-Resilience of the Closed Landfills - Investigation	2024/25	2025/26	2026/27	2027/28	2028/29
		$0	$100,000	$0	$0	$0
		2029/30	2030/31	2031/32	2032/33	2033/34
		$0	$0	$0	$0	$0
Operational	2461-Food Scraps - Detailed Analysis of Programme Delivery	2024/25	2025/26	2026/27	2027/28	2028/29
		$75,000	$25,000	$0	$0	$0
		2029/30	2030/31	2031/32	2032/33	2033/34
		$0	$0	$0	$0	$0
Operational	2462-Resource Recovery - Service Delivery Model Review	2024/25	2025/26	2026/27	2027/28	2028/29
		$200,000	$0	$0	$0	$0
		2029/30	2030/31	2031/32	2032/33	2033/34
		$0	$0	$0	$0	$0

9.3

9.4 Collection Assets

Lifecycle Management

The collection assets, namely crates and bins, are used for customers to store recyclables and food waste before collection. As mentioned, our fleet and rubbish bags are outside the scope of this AMP.

Table 20 summarises the links between levels of service and the lifecycle management of the collection assets, including associated risks. These are discussed in more depth in the following sections.

Table 20: Lifecycle Management of the Collection Assets

Levels of Service Statements	Technical Performance Indicators	Short Term Goal	Long Term Goal	Risks	Life Cycle Impacts
We provide collection services to manage waste in an environmentally responsible manner and maximise the amount of waste diverted from landfill.	• Resolve requests for new bins and/or crates within two weeks. • Hold stock for at least two months' supply of bins and crates.	• Provide and/or replace crates and bins as requested.	• Develop new services (such as kerbside food waste collection) to increase diversion.	• Customer satisfaction deteriorates. • Waste diversion target is not met. • Lack of stock.	• Sufficient stock is available to supply new or reactive replacement bins and/or crates. • Plan for residential kerbside food waste pilot.
We manage our services in a financially sustainable way.	• Contamination is less than 12%. • No quality penalties for colour sorted glass sales. • Commercial customer churn <5%.	• Optimise collection days to maximise route efficiency. • Educate and campaign for correct behaviour.	• Minimise uncertainty in budgets by piloting new services.	• Disposal costs exceed budgets. • Collected materials too contaminated to process. • Loss of revenue from commercial customers.	• Operational cost is minimised. • Revenue is maximised. • Budgets for new services are at the appropriate level of certainty.

Operations and Maintenance

Scope

The following activities are included within the operation and maintenance of the collection assets:

- Provide a fortnightly kerbside collection of recycling wheelie bins and glass crates (alternative weeks to wheelie bins) to the residential and commercial areas, and weekly collection in the Palmerston North CBD that are rated for the service, as per the collection maps.
- Colour sort glass at the kerbside to purchasers' requirements to ensure 100% glass recovery and realisation of the maximum available sale revenue.
- Deliver comingled materials and glass to the Materials Recovery Facility for processing
- Data management to record the number of wheelie bins collected and tonnage of recycling collected on each collection route.
- Administering the Waste Management and Minimisation Bylaw
- Public education of what can be recycled.
- Record contaminated bins.
- Audit the kerbside recycling collection.
- Carry out Council's fortnightly wheelie bin recycling collection service as efficiently and effectively as possible.
- Minimise non-compliance issues associated with the wheelie bin recycling collection service.
- Ensure the collection is undertaken in such a way as to meet OSH requirements and to minimise injuries to the collectors.
- Response to and resolution of Request for Service (RFS) within agreed timeframes.

Operational and maintenance practices for collections are mainly documented in the Kerbside Comingled Recycling Collection Services and Kerbside Glass Recycling Collection Services Service Level Agreements (SLA). These agreements were developed to provide the required levels of service under the previous internal service delivery model. Even though it is no longer required due to a change in the service delivery model, these agreements are still the best record of the scope of operational and maintenance tasks.

Procedures

The collections Standard Operating Procedures (SOP) provide additional detail to the SLAs on the operational and maintenance tasks. These currently cover mostly health and safety issues, and administrative tasks.

Operational Plans need to be developed that set operational objectives that give effect to the Asset Management Objectives to provide the agreed Levels of Service to our customers.

Risks

The risk of customer satisfaction deteriorating is low and managing requests reactively is considered appropriate as long as there is sufficient stock. Two months is considered sufficient lead-in time for orders to be filled for wheelie bins and crates.

Contamination is a significant issue and requires an operational response from time to time to either educate and campaign for customers to use the service correctly or carry out inspections of wheelie bins before collection.

A Business Development Officer role has been created to grow our commercial customers but is currently vacant.

Renewal Plan

Replacement of crates and wheelie bins occurs reactively when they break or have been lost/stolen or intentionally damaged (e.g. burnt out). We use an assumed negative skewed asset survivor curve to forecast the renewal budget. This curve is updated every three years based on actual replacement rates.

An additional programme for the reactive replacement of Foodwaste bins and caddies has been proposed to sart from the year following the foodwaste service roll out.

Renewal programmes for the collection assets are shown in 21 below.

Table 21. Proposed Programmes for Replacement of Collection Assets

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budget				
Renewal	612-Recycling - City-wide Wheelie Bin and Crate Renewals	2024/25	2025/26	2026/27	2027/28	2028/29
		$100,000	$100,000	$100,000	$300,000	$350,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$450,000	$100,000	$100,000	$100,000	$100,000
Renewal	2341-City-wide Food Waste Bin and Caddie Renewals	2024/25	2025/26	2026/27	2027/28	2028/29
		$0	$0	$0	$0	$0
		2029/30	2030/31	2031/32	2032/33	2033/34
		$0	$13,000	$13,000	$13,000	$13,000

Asset Improvement and New Assets

For existing services, new bins and crates are provided to all rated properties within the serviced collection area. The project household growth rate is used to forecast budgets and it is assumed that no rural residential customers will opt-in.

Central Government now requires all Councils with urban areas with a population over 1000 to provide a kerbside food waste collection service by 2030. A number of assumptions have had to be made in order to develop the proposed budgets in Programme 1910 as the new Waste Management and Minimisation Plan (WMMP) still under developement.

The key assumptions made are that we will debliver the collection service internally and also material processing (composting) will be in-house rather than contracting the collection service out and the processing of material happening at non-council run facility. We have also assumed that council will roll out the service in 2028/29 financial year.

We currently do not have the resources and assets to carryout kerbside contamination monitoring and education. Contamination Monitoring was previously carried out before staffing constraints and has a proven record of reducing contamination in Kerbside recycling which supports council in achieving key diversion rate targets as legislated by Government. We are proposing to have a programme 2338 to provide for the purchase of a dedicated small vehicle for the implementation of an operational programme for Contamination Monitoring and education focused on kerbside recycling bins.

We identified a risk in safety and security for the workers operating our collection vehicles when they are approached by the public.

Table 22 contains the proposed budgets for new collection assets.

Table 22: Proposed Programmes for New Collection Assets

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budget				
Capital New	657 - Urban Growth - Recycling - City-wide Wheelie Bins and Crates	2024/25	2025/26	2026/27	2027/28	2028/29
		$90000	$90000	$90,000	$95,000	$95,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$95,000	$95,000	$95,000	$95,000	$95,000
Capital New	1410 – City-wide Recycling Services to commercial /organisational Properties Development	2024/25	2025/26	2026/27	2027/28	2028/29
		$45,000	$45,000	$45,000	$50,000	$50,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$50,000	$50,000	$50,000	$50,000	$50,000
Capital New	1910 - City-Wide - Kerbside Food Waste Collection and Processing Service Development	2024/25	2025/26	2026/27	2027/28	2028/29
		$0	$0	$992,500	$137,000	$0
		2029/30	2030/31	2031/32	2032/33	2033/34
		$0	$0	$0	$0	$0
Capital New	2342 – Urban Growth – Food Waste - City-Wide Food waste Bins and Caddies	2024/25	2025/26	2026/27	2027/28	2028/29
		$0	$0	$0	$0	$0
		2029/30	2030/31	2031/32	2032/33	2033/34
		$0	$26,000	$26,000	$26,000	$26,000
Capital New	2338 - Recycling Contamination Monitoring Development	2024/25	2025/26	2026/27	2027/28	2028/29
		$55,000	$0	$0	$0	$0
		2029/30	2030/31	2031/32	2032/33	2033/34
		$0	$0	$0	$0	$0
Capital New	2503 – Collection Vehicles – Safety and Security Development	2024/25	2025/26	2026/27	2027/28	2028/29
		$245,000	$0	$0	$0	$0
		2029/30	2030/31	2031/32	2032/33	2033/34
		$0	$0	$0	$0	$0

New Collection Assets - Consequential Opex

As a results of new collection assets and services. There will be an increase in operating costs associated with:

- additional wheelie bins and crates,
- food waste bins and crates
- Upgrading our vehicles with safety and surveillance equipment,
- development of kerbside food scraps collection services and additional food waste bins and caddie assets
- and contamination monitoring development

The table below summaries the first 10 years of operating costs. A 30-year view of operating costs is available in the Appendix - 30 Year Financial Forecast.

Table 23 - New Collection Assets - Consequential Opex Programme

New Collection Assets - Consequential Opex Programmes	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)
657 - Urban Growth - Recycling - City-wide Wheelie Bins and Crates	$5,000	$10,000	$15,000	$20,000	$25,000
1410 -Recycling - City-wide Recycling Services to Commercial/organisational Properties Development	$500	$1,000	$1,500	$2,000	$2,500
1910 -City-Wide - Kerbside Food Scraps Collection and Processing Service Development	$-	$-	$-	$-	$ 600,000
2338 - Recycling Contamination Monitoring Development	$10,000	$10,000	$10,000	$10,000	$10,000
2342 - Urban Growth – Food Scraps - City-Wide Food Waste Bins and Caddies	$-	$-	$-	$-	$-
2503 - Collection Vehicles - Safety and Security Development	$-	$20,000	$20,000	$20,000	$20,000
Total	**$15,500**	**$41,000**	**$46,500**	**$52,000**	**$657,500**
New Collection Assets - Consequential Opex Programmes	**Year6 (2029/30)**	**Year7 (2030/31)**	**Year8 (2031/32)**	**Year9 (2032/33)**	**Year10 (2033/34)**
657 - Urban Growth - Recycling - City-wide Wheelie Bins and Crates	$30,000	$35,000	$40,000	$45,000	$50,000
1410 -Recycling - City-wide Recycling Services to Commercial/organisational Properties Development	$3,000	$3,500	$4,000	$4,500	$5,000
1910 -City-Wide - Kerbside Food Scraps Collection and Processing Service Development	$600,000	$600,000	$600,000	$600,000	$600,000
2338 - Recycling Contamination Monitoring Development	$10,000	$10,000	$10,000	$10,000	$10,000
2342 - Urban Growth – Food Scraps - City-Wide Food Waste Bins and Caddies	$5,600	$11,200	$16,800	$22,400	$28,000
2503 - Collection Vehicles - Safety and Security Development	$20,000	$20,000	$20,000	$20,000	$20,000
Total	**$ 668,600**	**$ 679,700**	**$ 690,800**	**$ 701,900**	**$ 713,000**

Asset Disposal

As our kerbside bins and crates are made of HDPE and are supplied to a plastic processor for recycling.

9.5 Recycling Drop Off Points

Lifecycle Management

Recycling Drop Off Points (RDOPs) are available for residents and businesses to use in addition to the collection services. There are three RDOPs located at Awapuni, Ferguson Street and Ashhurst.

Table 23 summarises the links between service levels and the lifecycle management of the RDOP assets.

Table 24: Lifecycle Management of the Recycling Drop Off Points

Levels of Service Statements	Technical Performance Indicator	Short term goal	Long term goal	Risks	Life Cycle impacts
We provide collection services to manage waste in an environmentally responsible manner and maximise the amount of waste diverted from landfill.	• Increase in amount diverted year on year.	• Maintain current service level. • Record asset condition.	• Prioritise replacement by condition and risk. • Plan for new RDOP to meet growth.	• Usage declines due to the state of customer-facing assets. • Customer satisfaction declines in new suburbs due to the inconvenience of RDOP locations.	• Optimised maintenance and renewals. • Plan for new RDOP in conjunction with other property development.
We manage our services in a financially sustainable way.	• Fees set annually. • No illegal dumping at RDOPs.	• Set fees at an appropriate and fair level. • Discourage illegal dumping.	• Minimise uncertainty in budgets by designing new RDOP ahead of the delivery year.	• Low fees result in overuse of service. • High fees result in illegal dumping.	• Operational cost is minimised. • Revenue is maximised. • Budgets for new services are at the appropriate level of certainty.

Operations and Maintenance

Scope

The following activities are included within the operation and maintenance of the RDOP assets:

- Operation:
  - Collection of fees (as appropriate).
  - All recyclable materials collected are stored on-site before transportation.
  - Materials collections are practiced in a manner to obtain maximum recovery rates.
  - Rubbish is transported to the transfer station at Matthews Avenue.
- Proactive maintenance:
  - All signage is maintained to be correct and visible.
  - Fences are kept in a good state of repair.
  - Sites are kept free of vermin and pests.
- Reactive maintenance:
  - Litter is removed from the perimeter fences and within the site.

Operational and maintenance practices for the RDOP's are found in the corresponding Ferguson Street RDOP, Awapuni RDOP and the Ashhurst Bunnythorpe Transfer Station Service Level Agreements (SLA). These agreements were developed to provide the required levels of service under the previous internal service delivery model. Even though it is no longer required due to a change in service delivery model, these agreements are still the best record of the scope of operational and maintenance tasks.

Procedures

The collections Standard Operating Procedures (SOP) provide additional detail to the SLAs on the operational and maintenance tasks. These currently cover mostly health and safety issues, and administrative tasks.

Operational Plans need to be developed that set operational objectives that give effect to the Asset Management Objectives to provide the agreed Levels of Service to our customers.

Renewal Plan

Budgets for the renewal of RDOP assets is based on expected life. The decision making around the renewal of RDOP assets is based on staff judgement and experience. RDOP asset renewal programme budgets are shown in Table 24 below.

Table 25: Proposed RDOP Renewal Programmes

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budget				
Renewal	1374 - City-wide - Recycling Drop Off Facilities - Renewals	2024/25	2025/26	2026/27	2027/28	2028/29
		$15,000	$15,000	$15,000	$15,000	$15,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$15,000	$15,000	$15,000	$15,000	$15,000

Asset Improvement and New Assets

The Ferguson Street RDOP has had a recent major upgrade in the last five years. It is now a covered recycling facility, where users can deposit household recycling products.Due to the recent modifications, this facility is operating at its best, in comparison to the other RDOPs. Issues arising from the Ferguson Street RDOP relate to contamination and fly-tipping by some users. While these issues have been minimised by security enhancements, they cannot be eliminated.

The Awapuni RDOP has been recently upgraded and included security CCTV to minimise illegal dumping.

The Ashhurst RDOP is a mobile facility and there are no plans to construct a fixed assets.

There is no plan to construct our own specialised hazardous waste facility.

The capital new programme budgets associated with the RDOPs is shown in Table 25 below. Anew RDOP is planned for 2027/28~29.

Table 26: Proposed RDOP Capital New Programmes

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budget				
Capital New	1373 - City-wide - Recycling Drop Off Facilities - Development	2024/25	2025/26	2026/27	2027/28	2028/29
		$-	$-	$-	$-	$1,100,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$1,100,000	$-	$-	$-	$-

Proposed RDOP Consequential Opex

Under programme 1373 - There will be an increase in operating costs of around $250,000 per year from yer 5 onwards , for the additional Recycling - City-wide Drop Off Facilities . The table below summaries the first 10 years of operating costs. A 30 year view of operating costs is available in the Appendix - 30 Year Financial Forecast.

Table 27 - Proposed RDOP - Consequential Opex Programme

Consequential Opex Programmes	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)
1373 - Urban Growth - Recycling - City-wide Drop Off Facilities - Development	$-	$-	$-	$-	$-
	Year6 (2029/30)	Year7 (2030/31)	Year8 (2031/32)	Year9 (2032/33)	Year10 (2033/34)
	$250,000	$250,000	$250,000	$250,000	$250,000

Asset Disposal

Assets are disposed of as demolition waste during facility upgrades. When assets such as steel cages are replaced, they are often repurposed or disposed of through a metal recycler.

9.6 Public Space Bins

Lifecycle Management

Rubbish and recycling bins are located strategically in our parks, roads and other public areas. We typically maintain these assets on an as-required basis. This includes bin emptying and bin replacement when necessary.

Public space bins provide the community with disposal services of varying types, these being; general refuse, co-mingled recycling and glass recycling. The availability of these services depends on the demand at the location. All bins are made available where there is a high demand to encourage recycling but where demand is lower, no glass recycling is provided or sometimes only a rubbish bin.

Table 26 summarises the links between service levels and the management of the lifecycle of the public bin assets.

Table 28: Lifecycle Management of the Public Space Bins

Life Cycle Intent Statement	Technical Performance Indicators	Short Term Goal	Long Term Goal	Risks	Life Cycle Impacts
We provide collection services to manage waste in an environmentally responsible manner and maximise the amount of waste diverted from landfill.	Increase in amount diverted year on year.	Continue with scheduled bin emptying.	Investigate technology to prompt emptying.	Overflowing bins prevented by continual tweaking of bin emptying frequency.	Increased operational costs to maintain service level.
		Standardise bins (rolling renewal).	Minimise early replacement.	Standardisation ensures users can find and use bins correctly.	Increased asset write-off to provide consistent customer experience.
We manage our services in a financially sustainable way.	Bin utilisation is maximised and bins are emptied before full.	Complete service rationalisation.	Utilise technology to prompt emptying.	Without rationalisation of locations can lead to an inefficient and costly service.	Optimised operational costs.

Operations and Maintenance

Operational tasks include rubbish and recycling collection, and any physical maintenance required to keep the public space bins in service. We empty the bins on a reoccurring schedule, ranging from daily to fortnightly clearances. The schedules are determined by the popularity and regular usage of the areas the bins inhabit. On occasion, customers report overflowing bins and these are responded to and emptied reactively. Physical maintenance could include fixing, repositioning, or re-stickering damaged bins.

Renewal Plan

Budgets for the renewal of public bin assets is based on an assumed level of replacement due to damage and is reduced due to the need to intervene and standardise the bin designs. Public space bin renewal programme budgets are shown in Table 27 below.

Table 29. Proposed Public Space Bin Renewal Programmes.

Programm. Type	Prog. No. & Name	Proposed 10 Year Plan Budget				
Renewal	1368-City-wide - Public Space Rubbish & Recycling Bins Renewals	2024/25	2025/26	2026/27	2027/28	2028/29
		$45,000	$45,000	$45,000	$45,000	$45,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$45,000	$45,000	$45,000	$45,000	$45,000

Asset Improvement and New Assets

Capital new programmes have been developed with a focus on rationalising and standardising the number and design of bins in public spaces and the road. The new bin design is clearer to differentiate the bin types to reduce contamination from misplacement. The national standard recycling and waste colours have been adopted for bins. This budget allows for the replacing (with subtantially improved bins) of 10% of the current aging public bin assets year on year. The capital new programme budgets associated with public space bins is shown in Table 28 below.

Table 30: Proposed Public Space Bin Capital New Programmes

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budget				
Capital New	506 - City-wide - Public Space Rubbish & Recycling Bins Development	2024/25	2025/26	2026/27	2027/28	2028/29
		$280,000	$280,000	$280,000	$280,000	$280,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$280,000	$280,000	$280,000	$280,000	$280,000

Public Space Bin Consequential Opex

Under programme 605 - City-wide - Public Space Rubbish & Recycling Bins Development There will be an increase in operating costs associated with additional Public Space Rubbish & Recycling Bins. This will occur at rate of $2000 in year 1 and increase in increments of $2000 to year.The table below summaries the first 10 years of operating costs. A 30 year view of operating costs is available in the Appendix - 30 Year Financial Forecast.

Table 31 - Public Space Bin Consequential Opex Programme

Public Space Bin Consequential Opex Programme	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)
506 -City-wide - Public Space Rubbish & Recycling Bins Development	$2,000	$4,000	$6,000	$8,000	$10,000
	Year6 (2029/30)	Year7 (2030/31)	Year8 (2031/32)	Year9 (2032/33)	Year10 (2033/34)
	$12,000	$14,000	$16,000	$18,000	$20,000

Asset Disposal

Assets are typically disposed of as waste through a metal recycler. Disposing of assets occurs when bins are damaged and unable to be repaired. Our public bin asset information is stored in Road Assessment and Maintenance Management (RAMM) software. As assets come to the end of their life and are replaced, RAMM will be updated by our Officer's to reflect this information. The old asset will be presented as 'out of service' and the new asset will be added, with its accompanying information.

9.7 Materials Recovery Facility (MRF) and Glass Sorting Facility

Lifecycle Management

The purpose of the MRF is to increase diversion and revenue by sorting recyclables into products that can be sold to commodity traders. It provides a facility for large amounts of commercial recycling to be dropped off, either ad-hoc or under contract.

A glass recycling facility is also maintained and operated occasionally. Historically this was used to colour sort glass but now most of the glass collected is either sorted at the kerb by us or by our customers.

Table 29 summarises the links between service levels and the management of the lifecycle of the MRF and glass recycling assets.

Table 32: Lifecycle Management of the MRF and Glass Recycling Facility Assets

Life Cycle Intent Statement	Technical Performance Indicator	Short Term Goal	Long Term Goal	Risks	Life Cycle Impacts
We provide collection services to manage waste in an environmentally responsible manner and maximise the amount of waste diverted from landfill.	Seven day average of recyclables received is less than 21 tonnes per day. Productivity is at least 0.4 tonnes per person hour.	Record asset condition and maintain plant to minimise shutdowns. Formalise maintenance contract and recording of work done.	Investigate optical sorting of plastics as an alternative to manual sorting.	Failure of critical assets could result in sending unprocessed materials to the landfill for sanitary reasons if store for more than three days. Urban growth and regional demand place pressure on the MRF Capacity	Optimal balance between the condition of assets and maintenance costs. Plan for new sorting technologies, or alternatively collection methodology changes.
We manage our services in a financially sustainable way.	Contamination is less than 12%.	Manage accepted products to those that can be recycled.	Identify new product markets.	Increased waste disposal costs. Loss of revenue including paying to get rid of products.	Plan for new sorting technologies. Net operating cost minimised.

Operations and Maintenance

Scope

The following activities are included within the operation and maintenance of the MRF and glass recycling assets:

- Operational
  - Standard operating procedures (SOPs)
  - Auditing of incoming loads
  - Cleaning
  - Removal of products stuck in the mechanical equipment
  - Proactive maintenance
  - Servicing mechanical equipment
- Reactive maintenance
  - Equipment failure

Operational and maintenance practices for the MRF are specified in the Awapuni Materials Recovery Facility – Comingled Processing and Awapuni Material Recovery Facility – Glass Processing Service Level Agreements (SLA). These agreements were developed to provide the required levels of service under the previous internal service delivery model. Even though it is no longer required due to a change in the service delivery model, these agreements are still the best record of the scope of operational and maintenance tasks.

Procedures

The collections Standard Operating Procedures (SOP) provide additional detail to the SLAs on the operational and maintenance tasks. These currently cover mostly health and safety issues, and administrative tasks.

Operational Plans need to be developed that set operational objectives that give effect to the Asset Management Objectives to provide the agreed Levels of Service to our customers.

Audits are scheduled quarterly at the MRF. The purpose of these is to gain insight into the type of products that are being recycled and the amount of contamination that we are receiving. We can associate this data with their collection routes to then inform future decisions in that area. Audits are carried out on kerbside, RDOP, and commercial recycling collection trucks. Auditing public space bin collections at the MRF could help improve the decision making in that activity.

When operation of the glass sorting facility is carried out, staff from the MRF are transferred to the glass sorting location for operation, usually during MRF downtime.

Currently, the only cleaning operations carried out in the processing plant is floor sweeping and removal of products stuck in the paper screen. Sweeping is done every Monday and removals are carried out as required. A more in-depth cleaning routine would help to extend the life of the mechanical assets and should be noted as an improvement opportunity.

In 2022 we tendered for an experienced mechanical and electrical contractor to undertake preventative and reactive maintenance as well as minor renewals and capital upgrades of our MRF sorting and handling equipment. The contract 4059 was established to improve consistency and efficiency with respect to mechanical and electrical maintenance services. Furthermore, this contract is designed to improve understanding of the condition and performance of the assets as well improve the capture and recording of asset data, to enable better decision-making on the scope and timing of maintenance as well as renewal and upgrades to the assets involved.

This three year contract was awarded to Max Tarr in January 2023 as they successfully demonstrated value for money and the ability to:

- Take ownership of ensuring asset information held by us is accurate;
- Contribute to the development of an optimised and robust renewal and upgrade work programme;
- Work in a collaborative way with our fitters; and
- Be sufficiently resourced.

Renewal Plan

Budgets for the renewal of MRF and Glass processing assets are based on expected life. A significant reduction in the 2025/26 year and then staggered increase back up for renewals is based on the assumption that the MRF Development programme in 9.6.4 will be carried out in the same year. The decision making around the renewal of assets is based on staff judgement and experience. Asset renewal programme budgets are shown in Table 30 below.

Table 33: MRF and Glass Recycling Asset Renewal Programmes

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budget				
Renewal	649 - Recycling - Materials Recovery Facility Renewals	2024/25	2025/26	2026/27	2027/28	2028/29
		$200,000	$10,000	$10,000	$50,000	$50,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$50,000	$50,000	$50,000	$50,000	$50,000

Asset Improvement and New Assets

The asset improvements identified at the MRF and the Glass Sorting Facility are listed in Table 31 below.

Table 34: Investigations into MRF and Glass Recycling Facility Asset Improvements

Description of Investigation	Benefits
Investigate an optical sorter in the line.	• Installing an optical sorter on the container sort line would help accurately identify the different plastics processed, alleviating the error caused by the naked human eye when separating plastics. • Hard to differentiate grade 1's, 2'sand 5's that can be rescued from the 'mixed grade' selection and sold to generate revenue.
Investigate upgrading the paper screen in the line.	• This could result in fewer products getting stuck in the screen. • Downtime is minimised and productivity increases. • Improve the separation of paper products from the containers (plastics, steel and aluminium)
Investigate weather protection from the line.	• Processing can continue in wet/windy weather conditions. • Better guaranteed productivity. Asset lives are prolonged from less weather interference.

There is currently a number of project proposed as part of Programme 727. The key one of these being the upgrade and development of the MRF processing plant equipment as it is reaching the end of of its usable life.

This work is programmed to start in year 1 with a focus on planning and design with the procurement and install being done in year 2.

The capital new programme budgets associated with the MRF and Glass Sorting Facility is shown in Table 32.

Programme budgets associated with the renewal and development of Resource Recovery Buildings is addressed in the Properties AMP section 11.2 Lifecycle Management.

Table 35: MRF and Glass Sorting Facility Capital New Programmes

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budget				
Capital New	727 - Recycling - Materials Recovery Facility Development	2024/25	2025/26	2026/27	2027/28	2028/29
		$200,000	$5,200,000	$100,000	$520,000	$25,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$-	$-	$-	$-	$-

MRF and Glass Sorting Facility Consequential Opex

Under programme 727 - Materials Recovery Facility Development. There will be an increase in operating costs for the new plant and processing equipment. There will be a 12–16-week period where the current MRF will not be operational due to the replacement of current MRF. The increase in operating cost in year 2 is due to offsite processing which include transportation costs of recycling materials – likely to be out of region. The table below summaries the first 5 years of operating costs.

Table 36 - MRF and Glass Sorting Facility - Consequential Opex Programme

MRF and Glass Sorting Facility Consequential Opex Programme	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)
727 -Recycling - Materials Recovery Facility Development	$-	$672,000	$-	$-	$-

Asset Disposal

There are three options to disposing of the MRF and Glass Sorting assets; resale, recycle, or send to landfill. Large mechanical equipment is attempted to be resold, but often the equipment is out of date and has no resale value. If this is the case, the equipment is scrapped for recyclable materials where possible. Any assets or asset parts that cannot be recycled are disposed of in a landfill.

When an item is out of service, this information is recorded in IPS. As we have identified some data gaps in IPS, an asset update is underway to accurately reflect the current state of the MRF and Glass Sorting Facility assets.

9.8 Compost Operations

Lifecycle Management

We can accept many inputs from our customers that we compost in either our commercial-grade compost process or biosolids process. This means we can provide a high-quality soil conditioning product that can be sold to our customers that is safe and meets our standards and resource consent conditions. Our biosolids composting operation benefits our Wastewater Activity as we can process wastewater treatment sludge and apply it safely to the landfill cap to protect it.

Table 33 summarises the links between service levels and the management of the lifecycle of the compost assets.

Table 37: Lifecycle Management of the Composting Operation Assets

Life Cycle Intent Statement	Technical Performance Indicators	Short Term Goal	Long Term Goal	Risks	Life Cycle Impacts
We provide collection services to manage waste in an environmentally responsible manner and maximise the amount of waste diverted from landfill.	• Increase in amount diverted year on year. • Composting consent conditions are met.	• Create commercial-grade compost and composted biosolids for closed landfill cover. • Comply with consent conditions.	• Determine the future of compost operations concerning the Nature Calls project and compost consent expiry.	• More food waste customers are needed as some food waste could be diverted to Tōtara Road Wastewater Treatment Plant Digester.	• Optimised maintenance and renewals.
We manage our services in a financially sustainable way.	• Increase in food waste customers year on year. • Increase in compost sales year on year.	• Develop food waste customers.	• See above.	• Loss of revenue due to inputs going to Wastewater Activity.	• Net operating cost minimised.

Operations and Maintenance

The following activities are included within the operation and maintenance of the composting assets:

- Operations:
  - Site housekeeping and windrow placement
  - Processing input material
  - Testing materials (inputs and products)
  - Creating compost (commercial grade and cover grade)
  - Preparing compost for sale
- Proactive maintenance:
  - Daily monitoring (data, windrow temperature, carbon dioxide, moisture, and oxygen)
  - Greenwaste shredder pre-startup and pre-shutdown checks and maintenance
  - The mower and digger are maintained according to their hour meters and service stickers
- Reactive maintenance:
  - Fire protocols
  - Equipment failure

Processes and SOPs

Operational and maintenance practices for the composting services are documented in Awapuni Composting SLA. This was a service provision agreement between the Resource Recovery Division and the previous iteration of the Council Infrastructure Unit developed to state the composting operations level of service. Even though it is no longer required due to Council structure change, it is the best record of the schedule of operation and maintenance tasks and frequencies. The SLA has historically renewed annually, with the last renewal and update in 2014.

Daily operations are listed within the SOPs. A record of these are located in the Solid Waste SOP Register. The SOPs are generally up to date, although some are still in development and require completion. More specifically, a 'Maintenance of Machinery', 'Gas Field Testing & Emergency Response', and 'Hire Equipment' SOPs are due to be developed, as highlighted in the Solid Waste SOP register. There is a hard copy of the SOPs onsite for the team to refer to for descriptors of the day to day tasks. An improvement item to streamline this process is for a scheduled rolling review on a two-yearly basis. This should be in place unless changes occur in the operations, requiring interim updates. For example, the acceptance of materials from DAF has stopped, due to the nature of this material and its contribution to fires onsite during the autumn period. A change to operations was made following this action by increasing the distance between windrows. This has also aided in the accessibility to material and between windrows.

Documentation of the composting operations can be improved by inputting the processes applicable in Promapp. As Promapp is reviewed periodically, it will ensure a planned and continuous revision of the current operational activities.

A board of the daily tasks is located in the staff room. As a lot of the composting operations are daily tasks, staff actioning these is essentially run like clockwork. Daily monitoring is high on the list of daily requirements and projects are delivered if required, as time persists.

Renewal Plan

Due to the number of composting assets leased out, the renewal process generally involves requesting replacement equipment from these businesses.

For assets owned by us, the renewal budget previously encompassed all assets held at the Awapuni site but has now been separated as shown in Table 34 below. The trommel screen is scheduled for renewal in 2031/32 . Budgets have been derived from the asset expected life and current condition of the asset.

Table 38: Proposed Renewal Programme Budgets for Compost Operations

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budgets				
Renewal	1721 - Composting Activity Site Renewals	2024/25	2025/26	2026/27	2027/28	2028/29
		$10,000	$10,000	$20,000	$10,000	$15,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$15,000	$15,000	$691,500	$25,000	$38,500

Asset Improvement and New Assets

A Compost Bunker Processing System has been proposed as part of the 2024/25 LTP which will support the growth of the city and the roll out of the Foodwaste collection service.

The timing of this programme being delivered from 20206/27 to 2027/28 is based on the assumption that the Foodwaste material from the collection service being rolled out in 2028/29, will be processed at our compost facility located within the Awapuni Resource Recovery centre.

There is a need for a number of assets and infrastructure in the Compost activity that are captured as part of the Landfill site-wide Programme 1371 which can be found in section 9.8.4

Table 39:Proposed Compost Bunker Capital New Programmes

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budgets				
Capital New	2336 – Compost Bunker Processing System Development	2024/25	2025/26	2026/27	2027/28	2028/29
		$-	$-	$100,000	$1,500,000	$-

		2029/30	2030/31	2031/32	2032/33	2033/34
		$-	$-	$-	$-	$-

Closed Landfills and Transfer Stations - Consequential Opex

Under programme 1371 - There will be an increase in operating costs of around $20,000 per year for the additional safety and security developments . The table below summaries the first 10 years of operating costs. A 30 year view of operating costs is available in the Appendix - 30 Year Financial Forecast.

Table 40 - Closed Landfills and Transfer Stations - Consequential Opex

Closed Landfills and Transfer Stations - Consequential Opex Programmes	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)
1371 - Closed Landfills and Transfer Stations - Safety, Security and Development	$20,000	$20,000	$20,000	$20,000	$20,000
	Year6 (2029/30)	**Year7 (2030/31)**	**Year8 (2031/32)**	**Year9 (2032/33)**	**Year10 (2033/34)**
	$22,000	$22,000	$22,000	$22,000	$22,000

Asset Disposal

Assets are typically disposed of as waste through a metal recycler. The decision-making around whether to repair or replace (therefore dispose of) an asset is determined by staff judgement at the time. The trommel screen requires replacement within the next ten years. As this is upcoming, some planning around how to dispose of this asset is needed as it is a large piece of equipment.

9.9 Closed Landfills and Ashhurst Transfer Station

Lifecycle Management

The Ashhurst and Awapuni Closed Landfills require ongoing management. This is more intensive at the Awapuni Closed Landfill given the scale of it, the fact that it is partially lined and has a gas collection system. Associated with the Ashhurst Closed Landfill is the Ashhurst Refuse Transfer Station, which has been modified to also accept green waste.

Table 36 summarises the links between service levels and the management of the lifecycle of the closed landfill assets.

Table 41: Lifecycle Management of the Closed Landfill and Transfer Station Assets

Life Cycle Intent Statement	Technical Performance Indicators	Short Term Goal	Long Term Goal	Risks	Life Cycle Impacts
We provide collection services to manage waste in an environmentally responsible manner and maximise the amount of waste diverted from landfill.	• Closed landfill consent conditions are met. • Landfill gas quality.	• Comply with consent conditions. • Generate electricity from landfill gas until yield and quality drops.	• Renew consents and identify investments to mitigate environmental effects.	• Increased environmental standards could require significant investment at landfills upon renewal of consents.	• Optimised maintenance and renewals.
We manage our services in a financially sustainable way.	• Transfer Station fees set annually.	• Set fees at an appropriate and fair level.	• Rationalise the need for a Transfer Station in conjunction with a review of other property.	• Low fees result in overuse of service. • High fees result in illegal dumping.	• Net cost is minimised for the Transfer Station.

Operations and Maintenance

Scope

The following activities are included within operation and maintenance of the closed landfills at both Awapuni and Ashhurst:

- Operations:
  - Site housekeeping (general tidy)
  - Maintain access points
  - Cash handling
  - Daily monitoring of gas
- Proactive maintenance
  - Weed spraying
  - Capping with compost
  - Testing quarterly (Awapuni only)
  - Frequent walkovers (Awapuni only)
  - Address asset wear and tear
- Reactive maintenance
  - Asset failure

Operational and maintenance practices for the closed landfill are touched on in Awapuni Resource Recovery Park and Closed Landfill SLA, but the specific tasks are documented in the Awapuni Landfill Post-Closure Management Plan. There is also an Awapuni Closed Landfill Gasfield and Cogeneration unit Operation and Maintenance SLA that outlines how to manage, operate and maintain the gas field and associated cogeneration engine at the Awapuni closed landfill site. These agreements were developed to provide the required levels of service under the previous internal service delivery model. Even though it is no longer required due to a change in the service delivery model, these agreements are still the best record of the scope of operational and maintenance tasks.

Procedures

The Awapuni Closed Landfill currently has a Daily Monitoring Data SOP. This was last updated in 2019, although no current review schedule is in place. No other SOPs are defining the operations and maintenance involved in the Awapuni closed landfill. The weighbridge requires SOPs to be written regarding; weighbridge operations, the key collect and return procedure, and sales and cash handling procedures. Knowledge in these areas is currently passed on by staff through experience, therefore standard procedures are required to ensure appropriate training and correct task completion.

The requirement and frequency of the listed operation and maintenance activities are determined by the Awapuni site staff. There is no definitive maintenance schedule documented. The knowledge and experience of the site staff initiate these activities, and are enforced by the legal requirements associated with closed landfill aftercare, which are a guide was provided by the Ministry of the Environment in 2001. As the Awapuni closed landfill is larger than the Ashhurst site, more work is required to maintain the space. Producing and implementing a formal maintenance schedule will help ensure the landfill is decomposing as it should and is not harmful to the community or environment.

The Awapuni landfill is tested quarterly and has frequent walkovers due to the quantity of staff at the Awapuni site regularly. Resource consents are granted for compliance with the closed landfills rules and regulations. In February 1994 PNCC was granted a suite of resource consents by the Manawatu-Wanganui Regional Council for the Awapuni closed landfill. These are:

- Water Permit 3962 – Divert Stormwater to Soakage
- Discharge Permit 3963 – Discharge of Stormwater from Soakage to Ground
- Discharge Permit 3964 – Discharge Stormwater to Surface Water
- Discharge Permit 3965 – Discharge Contaminant (Leachate) to Ground
- Discharge Permit 3966 – Discharge Contaminant (Landfill Gas, Dust and Odour) to Air
- Discharge Permit 3967 – Discharge Contaminant (Refuse and Recirculated Leachate) to Ground

The discharge permits that allow contaminant discharge as a result of combustion and flaring of landfill gas to air is set to expire in July 2031.

Annual reports are provided to Horizons Regional Council to support and confirm compliance with the resource consents. The reporting involves monitoring and tests carried out by a technical officer, which contributes to maintenance activities. A separate operational budget is provided for the resource consenting process, shown in .

There are no specific SLAs documented for the Ashhurst Closed Landfill. As the operational requirements are the same, if not less than, those at the Awapuni site, the SLA's directed at the Awapuni landfill are also used to define the operational services required at Ashhurst. As there are also no SOPs directly assigned to the Ashhurst landfill operations and maintenance, so the same processes are adopted from the available Awapuni landfill SOPs.

Horizons Regional Council issued two resource consents for the Ashhurst Closed Landfill:

- Resource Consent 105346: Discharge Permit to discharge leachate to land
- Resource Consent 105405: Discharge Permit to discharge stormwater to land

These resource consents were issued in September 2010 to replace consent 6155 and expire in July 2033. Budgets have been provided for in MSL to start the proccess and work through the reconsenting for these consentsRenewal Plan

A rolling renewals programme (see Table 37) is in place to upkeep the assets located at the two Closed Landfill Sites as well as the Asshurts Transfer Station. This covers work such as fence replacements, landscaping renewals to ensure we comply with consent requirements, road resurfacing, and chip seal resurfacing.

There is a preference for these roads to be maintained more frequently due to the nature of the traffic using these roads (heavy load vehicles) and the differential ground movement caused by the closed landfill settlement beneath the roads.

Budget has been proposed in 2024/25 for a significant renewal of Tip road due to its poor condition. Works will include resurfacing and some substrate work.

The weighbridge associated assets include; load cells, steel deck, kiosk, security cameras, and the civil infrastructure that supports these. Any required renewals associated with the weighbridge are captured in the rolling renewals budget allocated to both the closed landfills and transfer station sites.

The assets at the Ashhurst Closed landfill include the clay capping and pine plantation (for bank stabilisation). An allowance is made for minor renewals at the Ashhurst Transfer Station.

Table 37 details the proposed budgets for the Closed Landfills and Transfer Station.

Table 42: Proposed Programme Budgets for the Closed Landfills and Transfer Station

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budgets				
Renewal	185 - Closed Landfills and Transfer Stations - Site Renewals	2024/25	2025/26	2026/27	2027/28	2028/29
		$291,350	$19,000	$25,000	$74,000	$19,000
		2029/30	2030/31	2031/32	2032/33	2033/34
		$19,000	$19,000	$19,000	$19,000	$19,000

Asset Improvement and New Assets

Table 38 contains a summary of the proposed capital new budgets for the Closed Landfills and Transfer Stations and include:

- A second weighbridge for outgoing traffic has been proposed in year of programme 1371 due to capacity limits of the current single weighbridge. It will also allow for redundancy and continued operations during weighbridge maintenance, servicing and recalibration.
- Construction of a purpose built Compost activity Storage facility
- A Shredder Chipper machine is proposed for 2027/28 as the one we currently lease is aging and if we need to process Foodwaste from the new collection service in-house we will need a new reliable machine.
- Sealing of the green waste drop off area as it is used by a large volume of vehicles including heavy vehicles that are turning and when it rains the area becomes very muddy and is a safety risk for loss of traction by the vehicles.
- New facilities for construction and demolition waste are likely to be located at the Awapuni Resource Recovery Park as it has space.
- Development of Tip Road to bring it up to a vestable standard so that it can be added to roading maintenance contract.

Table 43: Proposed Capital New Programmes for the Closed Landfills and Transfer Station

Prog. Type	Prog. No. & Name	Proposed 10 Year Plan Budgets				
Capital New	1371 - Closed Landfills and Transfer Stations - Safety, Security and Development	2024/25	2025/26	2026/27	2027/28	2028/29
		$20,000	$360,300	$89,000	$1,020,000	$-
		2029/30	2030/31	2031/32	2032/33	2033/34
		$50,000	$120,000	$-	$-	$-
Capital New	2337 - Tip Road Development	2024/25	2025/26	2026/27	2027/28	2028/29
		$-	$-	$120,000	$-	$-
		2029/30	2030/31	2031/32	2032/33	2033/34
		$2,000,000	$2,000,000	$-	$-	$-

Asset Disposal

There is no defined disposal process for closed landfill assets. Road resealing does not result in an asset being disposed of. Other assets such as fence materials and civil infrastructure are disposed of through staff judgement and experience.

When the weighbridge and kiosk were upgraded in 2013, the different assets were disposed of in separate ways. The old kiosk has not yet been disposed of; it currently sits at the Awapuni site but now in a different location. It is not currently in use. The electrical equipment was moved to the new weighbridge kiosk and was put in use there and therefore were not disposed of either.

9.10 Lifecycle Management Alternatives

As stated in the SAMP lifecycle decision making is an area of improvement for us. This includes consideration of lifecycle alternatives for Resource Recovery. Thus, for all types of Resource Recovery Assets lifecycle management alternatives will need to be considered. This will be addressed in the proposed lifecycle decision making improvements for us, which include risk-based analysis of alternatives and embedding of the business case development process.

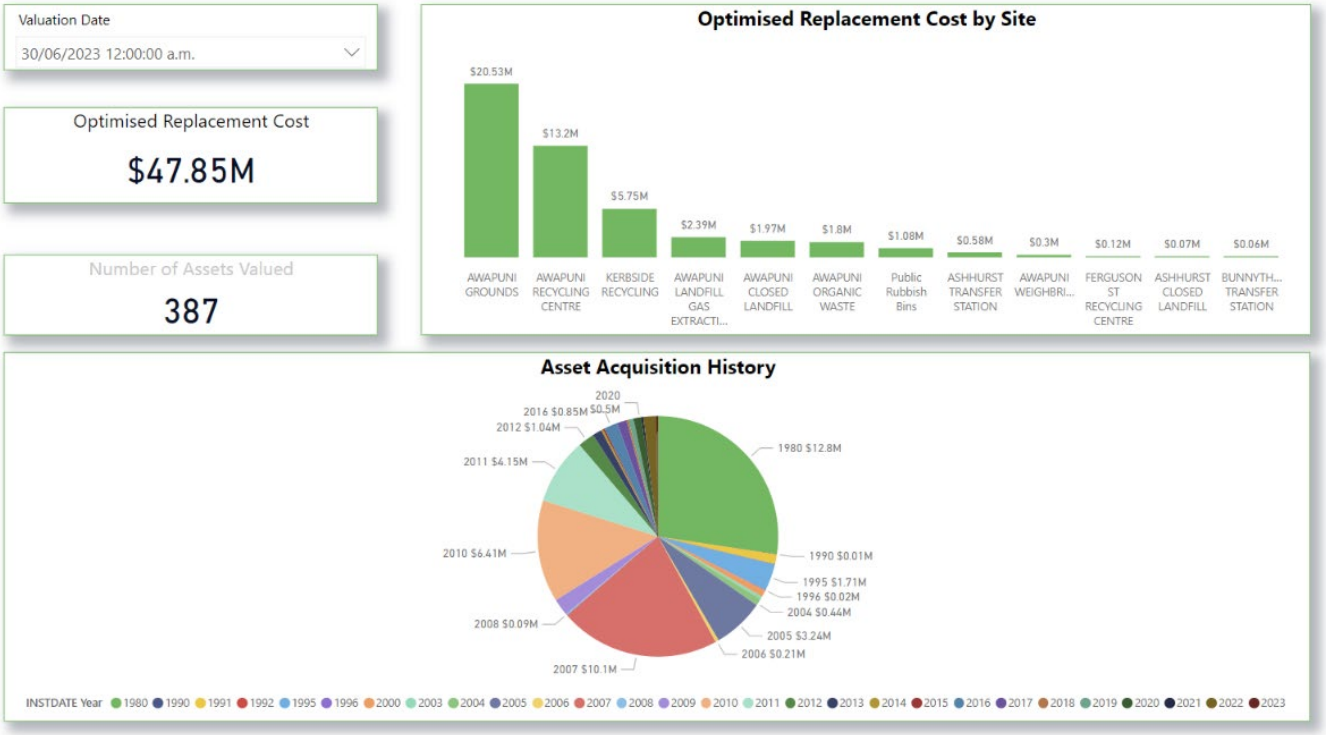
10. Financial Summary

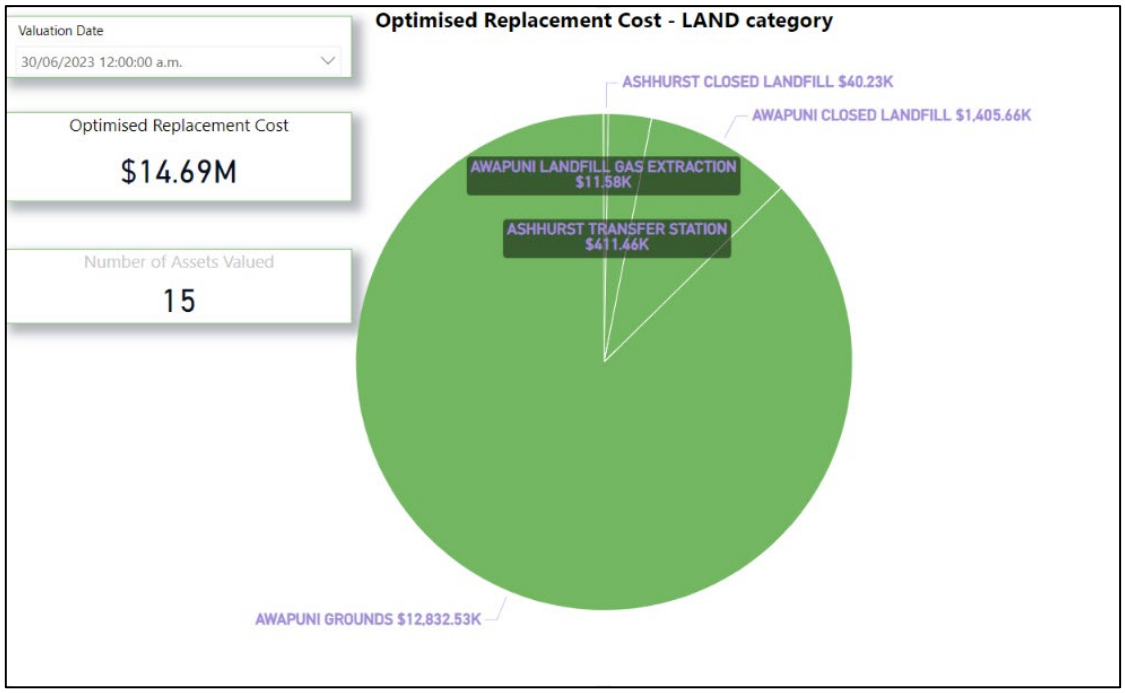
This section outlines the long-term financial requirements for the operations and maintenance, capital renewal and capital new investments to meet the agreed levels of service for the Resource Recovery Activity. These financial requirements have been identified and assessed individually throughout this AMP and are summarised in this section. This section includes a discussion on the strategies used to develop the financial budgets, as well as the assumptions and risks inherent in the budget forecasts.

10.1 Asset Valuation

We possess assets valued at $47 million to facilitate our Resource Recovery services. These assets are managed according to the materials we gather from customers at various locations.

As depicted in Figure 42, it is essential to note that not all our assets are linked to present services. Approximately 50% of our assets are focused on managing our closed landfills. Investing in waste minimisation assets is equally essential to align with our strategic direction of reducing waste sent to landfills. We have one remaining rubbish transfer station at Ashhurst, and while we provide a kerbside rubbish bag collection service, fleets are out of the scope of this AMP, and we do not own any other asset associated with the kerbside rubbish collection service. Our assets were revalued in June 2023.





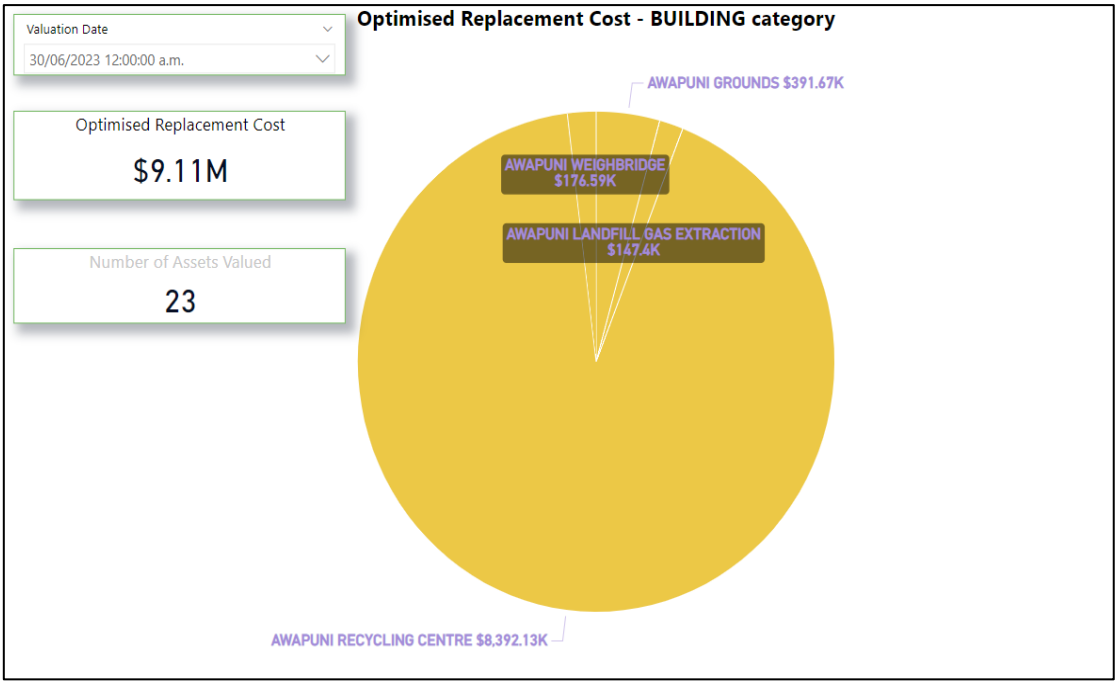


Figure 39: Optimised Replacement Cost (June 2023)

Key asset acquisitions include:

- In 1995 Awapuni Landfill was extended, with the closure of this landfill in 2007. The closed landfill was capped with clay and a landfill gas collection system.
- The Ashhurst Landfill was closed in 1995 and a refuse transfer station opened in Ashhurst.
- In 2007 the Material Recover Facility was constructed and for the next few years recycling was collected from the kerbside in boxes and bags until the kerbside recycling crates and bins were rolled out in 2010. The Material Recovery Facility continued to be upgraded over the next few years.
- Organic waste composting was also established in 2010.
- Note that the $8.5M in 1980 is nominal recognition of the Awapuni site.

10.2 Depreciated Replacement Cost

Type of Asset	Optimised Replacement Cost	Annual Depreciation
Land & Building	$212,308,000	$138,252
Rubbish Bins	$1,079,570	$50,019
Plant & Equipment	$25,477,474	$870,739

10.3 Financial Forecasts

Proposed Operations and Maintenance Expenditure

Existing operations and maintenance budgets were reviewed against historic expenditure and levels of service requirements. This was used to forecast future budget needs for existing services and assets, along with an estimate of the budget required for new services and assets programmed to be created.

Figure 40 below shows the breakdown of the proposed operations and maintenance budgets for the next ten years. The different colours in the columns show budgets for different expenditure categories:

- Maintain Service Level or MSL (green): budgets for the management, planning and operation and maintenance of the existing assets (existing budgets);
- Operational Programmes (orange): budgets for discrete operational programmes. For example, the collection of base asset condition data; and
- Consequential Opex (pink): budget allowance for operation and maintenance due to asset improvement and the creation of new assets each year.

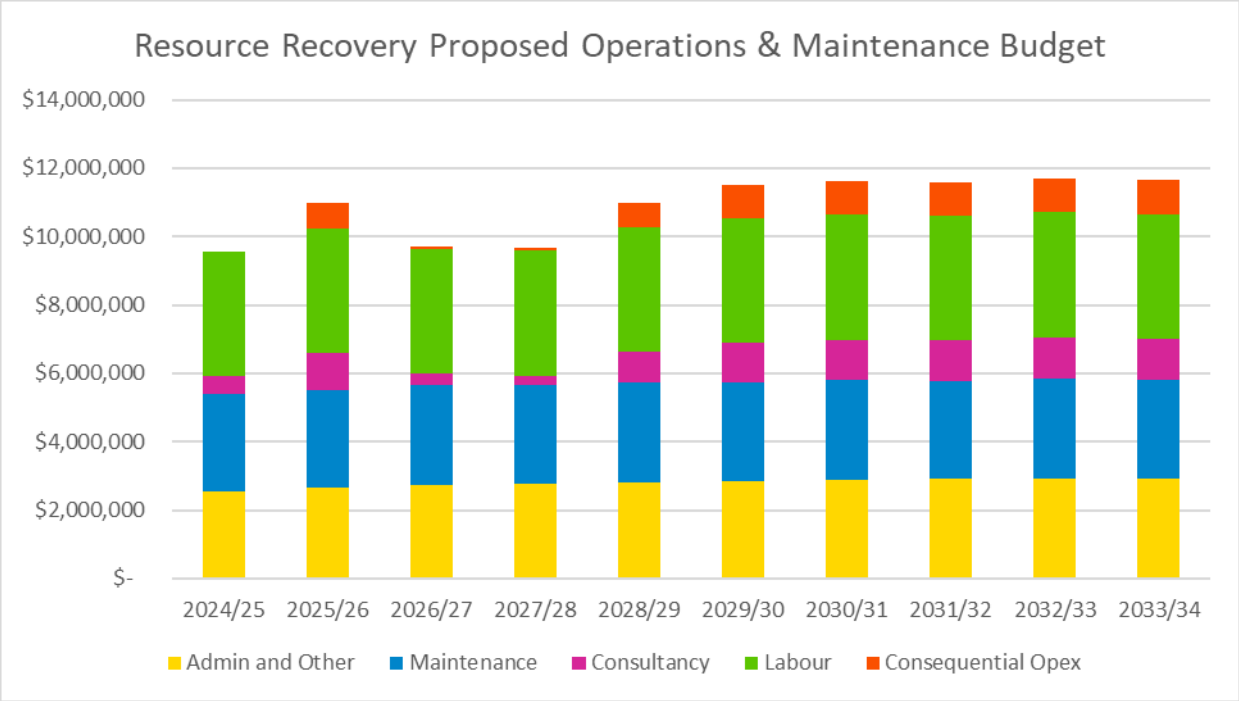


Figure 40: Proposed Ten-Year Operations and Maintenance Expenditure

Section 9 summarised the total level of investment required to deliver levels of service sought by the public. This did not consider existing budgets or what mechanism would be used to fund the service or proposed investment. However, it was evident there was a gap between existing levels of investment and what was required for the activity.

The graph above shows a forecast increase in investment occurring at year six (2029/30). This is primarily being driven by the proposed kerbside food waste collection and processing service development (programme 1910 – Kerbside Food Waste Collection and Processing Service Development). This investment would introduce a whole new recycling service and costs associated with this. Other operations and maintenance costs are forecast to remain relatively steady throughout the first ten years.

Consequential Opex

We have several new assets and additional resource recovery services being proposed. Year two has a substantial cost operating costs increase of around $730,000 and further proposed increases in outer years amounting to just over $1 million per year. There will be an increase in operating costs associated with:

- additional wheelie bins and crates,
- food waste bins and crates
- safety improvements in our collection vehicles and transfer station sites
- development of kerbside food scraps collection services and additional food waste bins and caddie assets
- developing our recycling and drop off facilities
- and contamination monitoring development

Operational and Maintenance Forecast Reliability

As a service heavy activity (i.e. operational and maintenance expenditure makes up most of the overall investment) forecasts on delivering existing levels of service are reasonably reliable. It is where levels of service change, such as with the introduction of a new service, that expenditure will show a more significant change.

As the operational and maintenance procedures are collected and documented, there will be more certainty and reliability in forecasting the cost of delivery by creating a bottom-up approach rather than extrapolating previous costs.

There is however uncertainty related to external influences such as government policy on revenue from the waste levy, the cost to dispose of waste and volatile commodity prices for recyclables.

Proposed Renewal Expenditure

The renewals expenditure forecast is mostly based on the asset information out of IPS. Renewal budget for different asset types was created using the asset install date, estimated useful life, and the replacement cost from the recent asset revaluation.

Figure 42 shows the total proposed rubbish and recycling renewals budget for the next ten years. The graph shows a steady increase over the ten years with some spikes to accommodate individual asset renewals of the associated actvities. In 20231/32 there is an increase in renewals – mainly attributed to renewing a trommel screen for our composting service activity.

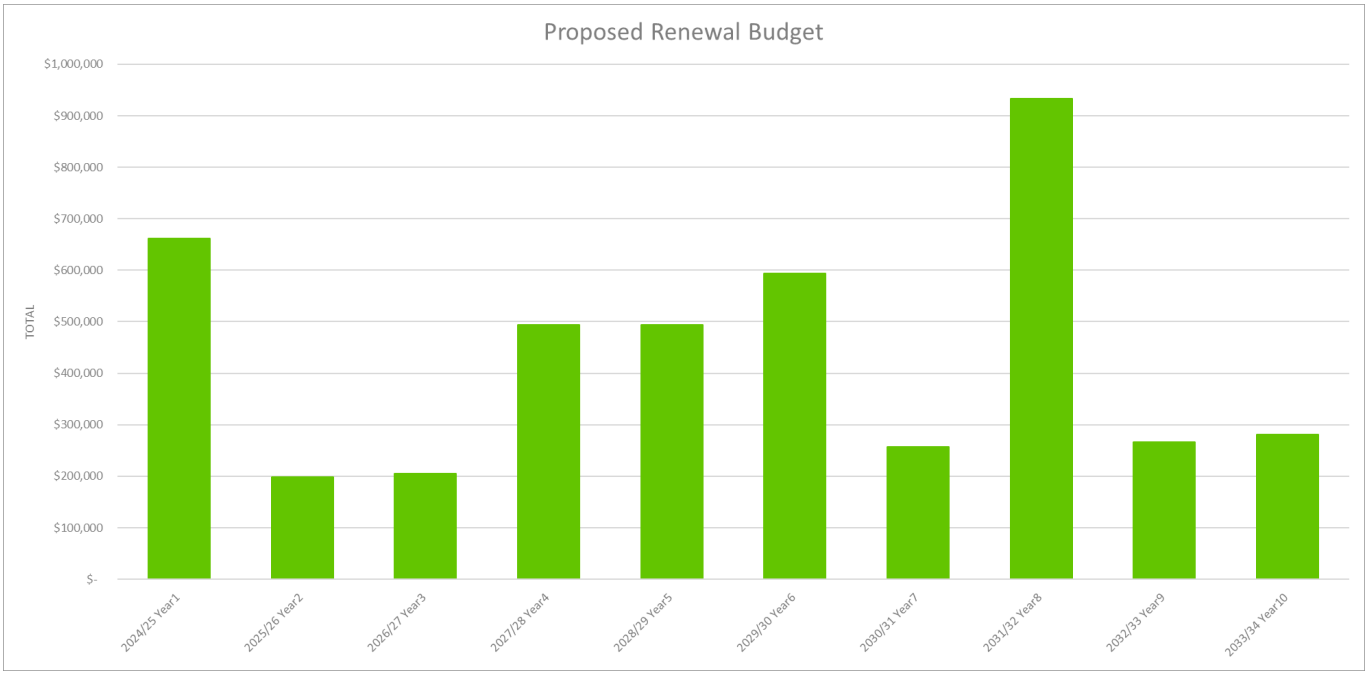


Figure 41: Proposed 10-Year Renewal Expenditure

Capital Renewal Forecast Reliability

There is uncertainty when using the estimated useful life of any asset for forecasting renewals budget.

The reliability of the renewals forecast will improve once asset condition and performance data are obtained. However, the budgets are expected to be of the right quantum over 30 years, with the condition data changing the date of renewal of specific assets as opposed to the overall budgets.

Another factor that may affect the certainty of the long-term renewals forecast is the rate of increase in the value of the assets. If the overall valuation increases at the same rate as inflation, then the forecast renewals budget with an inflation adjustment will adequate. If the asset value increases at a greater rate than inflation, as has occurred in the last three years, then the forecast renewals budgets will need to be revised.

Proposed New Capital Expenditure

Figure 40 shows that the overall level of expenditure proposed varies significantly throughout the ten years. The significant spike in years three and four is due to the proposed food collection service. A new RDOP is planned for 2025/26 and a major upgrade of the Material Recovery Facility is assumed to occur in 2025/26. Every year there is generally some minor works associated with providing for growth (new bins and crates), landfill landscaping and public space bins.

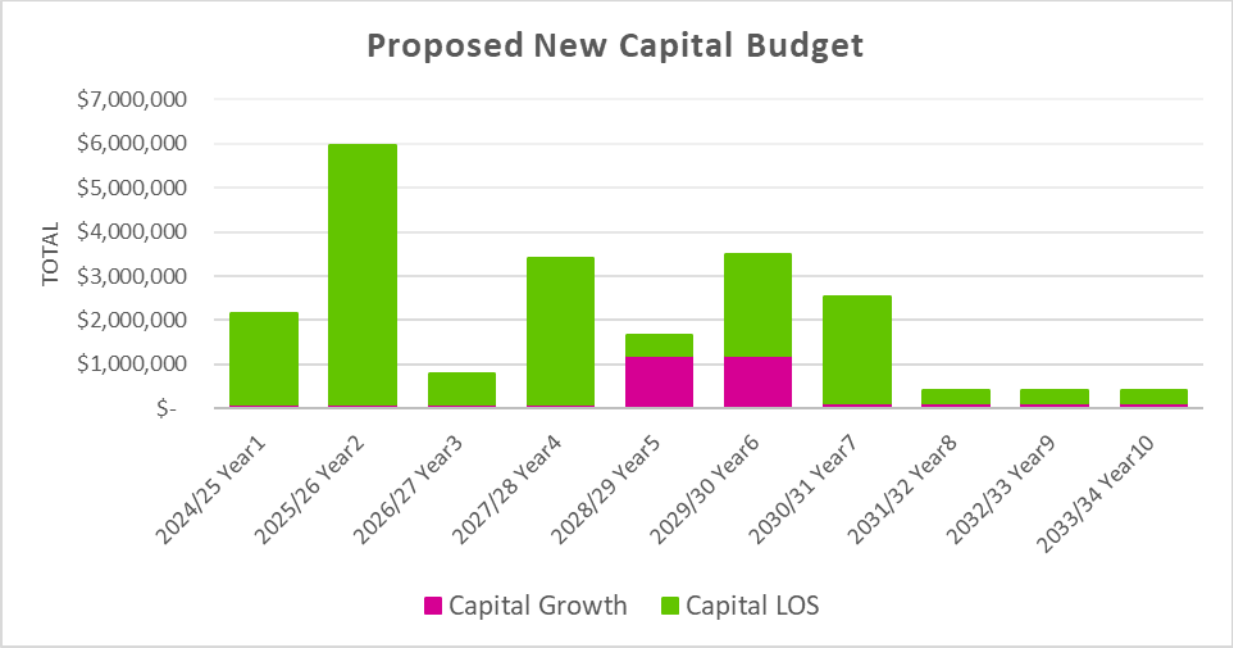


Figure 42: Proposed Ten-Year New Capital Expenditure

Capital New Forecasts Reliability

The budget forecast for each capital new programme is based on the assumptions and information available for that programme, and thus reliability varies between programmes. The data associated with each programme indicates the reliability of the budget for that programme.

There is an increase in year 2 of the proposed capital new budget for programme 727 - The Material Recovery Facility Development in year 2. In year 4 there is a proposed budget for programme 1910 Kerbside Food Scraps Collection And Processing Service Development. In year 5 and 6 we are proposing to continue development of city-wide Drop Off Facilities via programme 1373.

10.4 How we Will Pay for it

This AMP focuses on identifying the optimum (lowest lifecycle) cost for waste management assets necessary to produce the desired LoS. Current funding sources available for waste management assets include rates and revenue from rubbish disposal charges and levies, sale of recyclable material and gas cogeneration. Further information can be found in our Financial Strategy.

- **Operations and maintenance** - The process for funding rubbish and recycling operations and maintenance is as follows:
  - The total operations and maintenance cost are estimated;
  - Revenues from rubbish bag sales, gate charges, leases and material sales are estimated;
  - The shortfall between the costs and revenues is funded through a targeted rate over those ratepayers receiving the service;
- **Capital Renewal -** Funded from targeted rates revenue collected to cover renewal costs.
- **Capital New development** - Funded from subsidies and grants (when available), user contributions, reserves and, where necessary, from borrowing.

There is a move to reduce the impact on rates-funding of this activity through increased emphasis on user pays, with surplus funds applied to waste minimisation strategies.

Implementation of new waste minimisation initiatives depends upon the merit of business cases specific to each proposal. Costs associated with those projects will need to be matched by a corresponding increase in generated revenue.

Development Contributions

No development contributions are sought for the Resource Recovery Activity because:

- Recycling bin provision does not fall within the LGA definition of network or community infrastructure able to be funded from development contributions. Per our Revenue and Financing Policy, expenditure is funded from borrowing, which will be serviced and repaid from rates over the average expected life of the bins.
- Although the Material Recovery Facility is an important facility, at this stage, we have determined that the development contributions policy will not extend to funding community infrastructure (other than buildings and works on parks and reserves). Therefore, growth-related upgrades to the Material Recovery Facility will be funded by borrowing per our Financial Strategy.

10.5 Financial Forecast Uncertainty

Potential Effects of Uncertainty

Generally, expenditure forecasts are based on the best available information. The longer-term development budgets will be refined both in scope and cost as these programmes get closer to implementation. Those programmes that are for growth form the basis for development contributions assessed over a period of thirty years. Periodic revision and adjustment to the schedule of works in the three-year rolling programme mitigate any negative effect of uncertainty of the financial forecasts.

Should the required level of funding not be available then there is a potential risk of deferred maintenance or renewal or development that would not be noticeable immediately, but which could build up over some time and result in not meeting agreed levels of service. This is mitigated through an extensive review and revision of asset management requirements that take place on a three-yearly cycle enabling corrective action to be taken before a substantial backlog is built up.

The ideal cost accuracy for any programme (operational, renewal and new) is based on when the programme first appears in the LTP. These ideal accuracies are as follows:

- **Years 1 to 3 (2024/25 -2026/27)**: The scope and pricing of work should be reliable, based on good market information for unit rates, etc.
- **Years 4 to 6 (2027/28 - 2029/30)**: Estimates should be reliable, with detailed design work has not been carried out.
- **Years 7 to 10 (2030/31 - 2033/34)**: Estimates generally based on a high-level idea of what the programme will involve.
- **Years 11 to 30 (2034/35 onwards)**: Rough order costing based on the estimated quantum of work; forecasts could change significantly with further investigation.

Capital Programme Deliverability

We are proposing capital investment is in the plant and equipment required to support a kerbside food waste collection and processing service, and a new RDOP. As standalone pieces of work, there are no perceived issues relating to deliverability, should funding for it be approved.

11. How We Manage the Resource Recovery Activity

11.1 Asset Management Leadership and Teams

The Resource Recovery Division is primarily accountable for the management of the Activity. Our inaugural Asset Planning Division (Infrastructure Unit) was formed in 2019 and provides centralised asset management leadership for the Resource Recovery Activity by providing the Resource Recovery Division with:

- Asset Management advice,
- Asset Information services; and
- Asset Planning support including lifecycle planning.

The Resource Recovery Division is also supported by functions that sit within other Units of Council as summarised in Table 39. In time, Asset Management leadership will largely transfer to a cross-functional Steering Group (yet to be established).

Table 44: Asset Management Functions and Teams

Function	Type	Unit / Division / Team
Leadership		Elected Members Executive Leadership Team
		Infrastructure Unit / Resource Recovery Infrastructure Unit / Asset Planning Division/ Infrastructure Leadership Team
Finance	Support Services	Finance
		Infrastructure Unit / Asset Planning Division / Asset Planning
Digital Solutions	Support Services	People and Performance / Digital Solutions (IT)
HR	Support Services	People and Performance / HR Services
Asset Management	Forward Focus	Infrastructure Unit / Asset Planning Division / Asset Management
		Infrastructure Unit / Resource Recovery
Risk Management	Forward Focus	Customer / Risk and Resilience
Performance Management	Forward Focus	Strategy and Planning People and Performance
Continual Improvement	Forward Focus	Infrastructure Unit / Asset Planning Division / Asset Planning and Investigations
Construction	Present Day Focus	Infrastructure Unit / Resource Recovery
Operations	Present Day Focus	Infrastructure Unit / Resource Recovery
Maintenance	Present Day Focus	Infrastructure Unit / Resource Recovery
Customer Interface	Present Day Focus	Customer
Technical Specialists		Various Internal and External
GIS	Data and Information	People and Performance / Digital Solutions
Asset Management System	Data and Information	Infrastructure Unit / Asset Planning Division / Asset Management
		Infrastructure Unit / Asset Planning Division / Asset Information
		People and Performance / Digital Solutions
Records	Data and Information	People and Performance / Digital Solutions

An organisation chart is provided for reference in Figure 44 below.

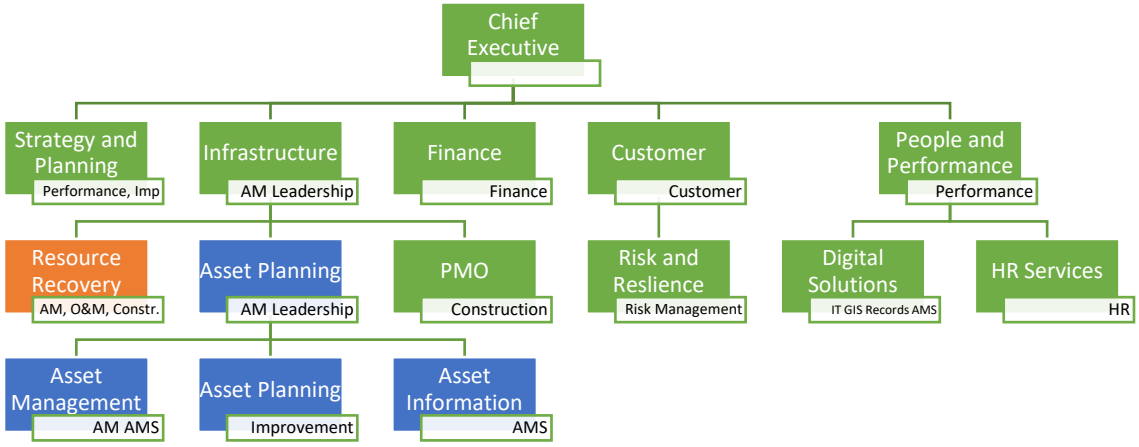


Figure 43: Organisation Chart with Asset Management Functions

11.2 Service Delivery Model

Overview of Service Delivery Model

Not many Councils provide Resource Recovery services. Of those that do, most have outsourced their service delivery. However, we have developed and retained significant capability in-house, as summarised in Table 40 below. Essentially, only more specialist activities, such as the design and construction of new buildings, hazardous waste handling, and electric and mechanical maintenance works, are delivered through the procurement of external contractors. Landfill management is also carried out by inhouse resources, this scope consists of maintaining the structural integrity of the closed landfills and operating the gas collection system and requires little to no design and construction of assets.

External contractors are procured in line with our Management Team Policy for procurement and are managed predominantly by in-house Project Managers.

Note that external consultants are also engaged to carry out specialist investigations or provide technical advice on planning, including Waste Assessments and Waste Minimisation and Management Plans, consenting and policy matters.

Table 45: Service Delivery Model by Sub-Activity

Sub-Activity	Service Delivery Function	Internal Service Delivery Team	Internal Capabilities	Scope of External Service Delivery
Waste Minimisation Waste Management	Design	Property Division	Minor architectural	Most other projects
	Construct	Resource Recovery Division > Activities Team	Project Management	All projects
	Operate	Resource Recovery Division > Operations Team	Most	Hazardous waste events
	Repair	Resource Recovery Division > Operations Team	Minor repairs	Property Electrical and mechanical
Landfill Management	Operate	Resource Recovery Division > Operations Team	All	None
	Repair	Resource Recovery Division > Operations Team	Most	Landfill gas utility

Section 17A Review of Service Delivery Model

The service delivery model was reviewed in 2017 per Section 17A of the Local Government Act. Resource Recovery and Waste Management were considered separate but intertwined services. This is because other companies offer rubbish collections, but we are the only provider of comprehensive recycling services. However, we do need to look at refuse and recycling services holistically when it is trying to influence people's behaviour to minimise waste.

After considering the information presented in the Stage 1 Review, elected Members were of a view that a Stage 2 Review was not warranted and that refuse and recycling services should be governed, funded and delivered directly by Council. This is because of the strong contribution these services jointly make to Council's strategic goals for waste minimisation.

This maximises the opportunities to change people's behaviour and hence reduce the amount of waste that they generate. Also, without our involvement, there may be limited recycling collections because of a lack of commercial opportunities for some recyclables.

Table 41 summarises the current arrangement for service delivery.

Table 46: Service Delivery Arrangements

Function	Model	Details
Professional Design and Professional Services	Internal delivery	In 2019 our internal Service Level Agreement was ended with the merging of City Networks and City Enterprises into a single Infrastructure Unit.
	External contracts (typically lump sum)	External resources are procured where internal capability or capacity is insufficient to provide specialist services such as architectural, financial, engineering and legal.
Operation and Maintenance	Internal delivery	Mostly provided by the Resource Recovery Division and the Property Division
	External contracts (typically lump sum)	Mechanical plant maintenance (especially at the Material Recovery Facility) is contracted externally on an as-needed basis.
Construction and Major Renewals	External contracts (typically buildings)	Major construction is mostly associated with the buildings used to provide recycling services.
General Operations	Internal delivery	Collections Operators, Business Development, Project Support, Weighbridge Operators, Awapuni Site and Compost Operators, Sorting Line Operators are based at the Awapuni Resource Recovery Park.
	External contracts	We have a contract with MidWest for the disposal of solid waste from the Waste Management Activities ((Kerbside bag service, waste from illegal dumping, transfer stations, public litter bins and MRF) to the Bonny Glen Landfill via the Matthews Avenue Transfer Station in Palmerston North. Labour is contracted for security and cover for operators. We contract Manawatu District Council (MDC) to undertake investigations and enforcement under the Litter Act for incidents of illegal dumping.
	Shared services	
Supply of materials and equipment, and plant	External contracts (typically lump sum)	Purchase orders are raised to supply as needed. Work order management will be improved under our new ERP, Authority Altitude.

11.3 Asset Management Planning

The Asset Management Maturity Assessment (2022) found that the challenges facing the Resource Recovery Activity regarding Asset Management Planning were shared at an organisational level. Previous versions of the AMP have been shaped by limited engagement across the organisation. Thus, a key recommendation of the Maturity Assessment was to ensure that the AMP development is a collaborative process.

The development of this Asset Management Plan was led by the Asset Management Team and sponsored by the Resource Recovery Division. Teams responsible for the asset management functions that support the Resource Recovery (see Table 39 above) were engaged as key stakeholders to update the 2021 Resource Recovery AMP to this document.

11.4 Management Systems

For Resource Recovery, there are few processes mapped and heavy reliance on key people. Standard Operating Procedures however are well established where there are risks to quality or health and safety. This is expected to improve once the Asset Management Policy is adopted.

11.5 Asset Management Maturity Levels

The Resource Recovery Activity has an overall asset management maturity target of 80% and in 2022 the Activity was assessed and scored 55%, (just up from 52% in 2019) or Core level, described as:

"Well defined and clearly linked processes and practices are in place."

Figure 45 below shows how each of the Asset Management elements scored for the Activity.

Overall, the Resource Recovery activity has not made the progress in asset management maturity it had anticipated at the time of the last review. This is primarily due to insufficient staff resource in the Division. An improved Division structure has now been established, and recruitment is underway to secure additional staff to make the improvements. Once in place, it is expected that initiatives that are underway particularly to improve data and formalise maintenance contracts will see an improvement over the next three years.

The most important improvement is to undertake a detailed assessment of the existing Materials Recovery Facility (MRF) assets given their unique nature and criticality, and for lifecycle plans to be developed accordingly.

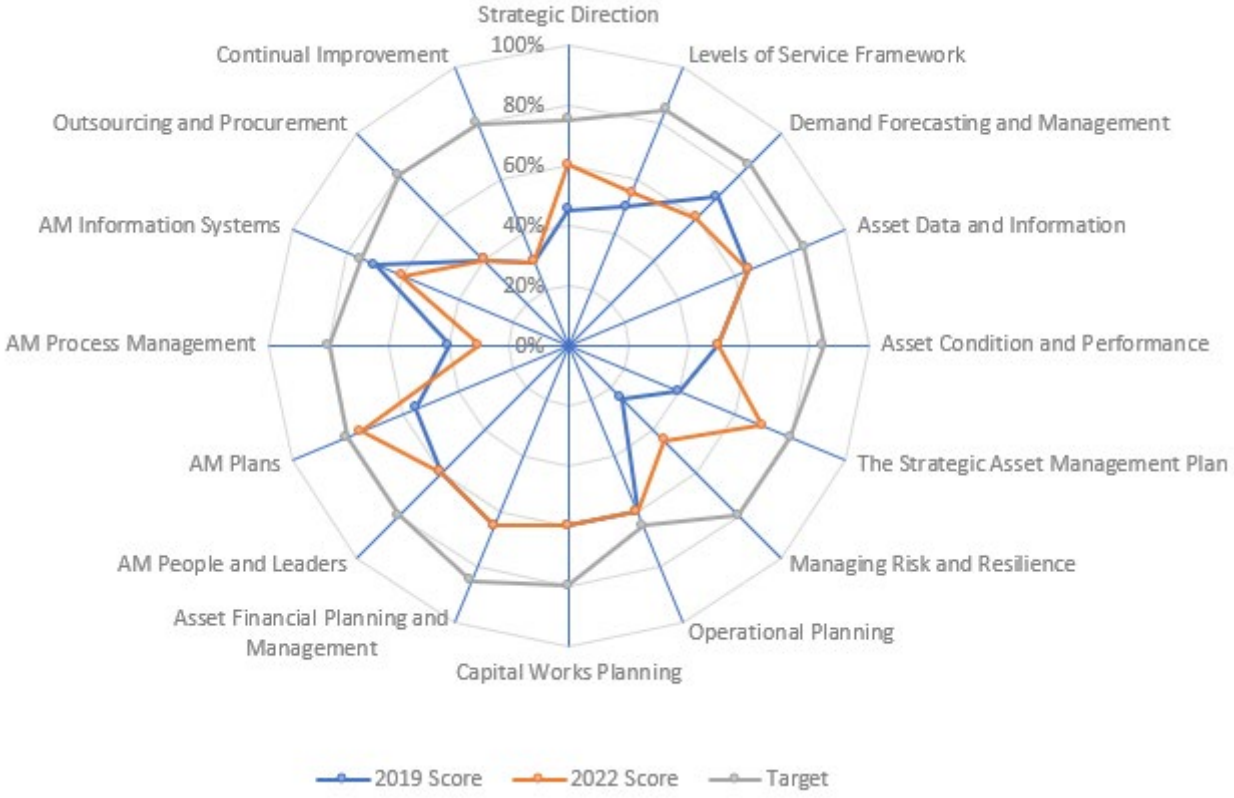


Figure 44: Asset Management Maturity Assessment Scores (2022)

11.6 Information Systems and Tools

Table 42 below contains a summary of the Asset Information System used by this Activity and commentary on recent improvements or issues. Further commentary on software specific to the Activity and data is provided below.

Table 47: Asset Information Systems

Component Type	Components	Improvements and Issues
Procedures and Standards	The Resource Recovery Division has begun documenting procedures in ProMapp. Standard Operating Procedures are saved in OASIS (document management system).	Procedures for asset information collection need to be developed for the Resource Recovery Division and staff training. Standard Operating Procedures however are well established where there are risks to quality or health and safety.
People	Dedicated role in Asset Information Team for asset data – Asset Information Analyst (3 Waters and Resource Recovery). Dedicated roles in Resource Recovery Division for service demand data – Resource Recovery Analyst and Waste Minimisation Officer.	The role of Asset Information Analyst regarding asset service demand data is not defined. Asset information integration with financial and customer service systems is limited and largely manual. Asset Information Analyst is now required to provide much needed Business Intelligence. Role of Information Management Staff and Waste Management staff not well defined.

Component Type	Components	Improvements and Issues
Data	Asset hierarchy in place. Asset naming convention in place. The asset register is now complete enough for valuation purposes. Data confidence has been assessed.	The Mechanical Electrical Maintenance Contract is now in place (awared to Max Tarr in 2023). This contract is designed to improve understanding of the condition and performance of the assets as well improve the capture and recording of asset data. Data needs not fully scoped (i.e. criticality and condition data are not missing). Master data sets not identified (i.e. property addresses). No structured interview processes with staff to document asset knowledge.
Software	IPS Hansen, RAMM, SPM (asset as-built attributes, condition, maintenance, criticality, valuation details) Authority Altitude (financial, corporate valuation) Kbase (Customer Requests) RCMonitoring App (consent management) ArcGIS (geographical information system) PowerBi New weighbridge software TBC (Landfill 3000 until that is replaced) Excel???	There is little integration of software and data movement relies on manual processes. Limited reporting and analytics.

11.7 Quality of Data Supporting the Plan

Asset Data Requirements

The quality of our asset data is the foundation to staff making evidence-based decisions when managing this Activity. The business processes for the capture and recording of data are not recorded. This includes when to collect data, what data is collected, how the data is collected and who should collect the data.

A data gap analysis can be carried out once Asset Information has established a framework for carrying out an asset data gap analysis.

Asset Hierarchy

An Asset Hierarchy for the activity has been established (refer to OASIS 2931127 and 2927045). Since the previous AMP, the heirarchy was modified in order to group plant and equipment by process. All plant and equipment assets have been categorised using a single placeholder process until such point that they can be moved into categories that reflect the process they are part of. This will be particularly useful for the MRF for planning, maintenance and operations.

Data Management and Confidence Levels

Table 43 contains the data confidence levels for different asset attributes, which have been assessed using the confidence categories in Table 44. As data requirements are specified and data collection prioritised, it is expected that data

confidence levels will increase. Apart from criticality, no material change in confidence levels has occurred in the three years since the previous AMP.

Table 48: Summary of Asset Data Confidence Levels

Asset	As-Built Attributes	Condition	Repairs and Maintenance	Utilisation	Demand and Forecasts	Criticality	Risk	Resilience	Service Performance	Valuation	Financial Performance
Public space bins	4	3	2	1	1	0	0	0	3	5	0
Ashhurst Transfer Station and RDOP	3	0	2	3	4	5	3	0	1	5	0
Wheelie bins and crates	3	0	2	4	4	5	3	0	1	5	4
Ferguson Street RDOP	3	2	2	2	4	5	3	0	1	5	0
Awapuni RDOP	3	5	2	2	4	5	3	0	1	5	0
MRF including glass sorting (excluding building)	3	0	2	4	4	5	3	0	0	5	1
Awapuni composting	3	0	2	4	3	5	3	0	0	5	0
Awapuni grounds	3	0	2	0	0	5	3	0	0	5	0
Awapuni landfill gas extraction	3	0	2	1	1	5	3	0	0	5	0
Awapuni closed landfill	3	2	2	5	5	5	3	0	0	5	0
Ashhurst closed landfill	3	2	2	5	5	5	3	0	0	5	0
Bunnythorpe closed transfer station	3	2	2	5	5	5	3	0	0	5	0

Table 49: Asset Data Confidence Level Grading System

Confidence Grade	Description	Processes	Asset Data
5	Highly reliable/ Audited	A strictly formal process for collecting and analysing data. The process is documented and always followed by all staff. The process is recognised by the industry as the best method of assessment.	Very high level of data confidence. Data is believed to be 95 to 100% complete and ±5% accurate. Regular data audits verify a high level of accuracy in data received.
4	Reliable/ Verified	Strong process to collect data. It may not be fully documented but usually undertaken by most staff.	Good level of data confidence. Data is believed to be 80 to 95% complete and ±10 to 15% accurate. Some minor data extrapolation or assumptions has been applied. Occasional data audits verify a reasonable level of confidence.
3	Less Reliable	The process to collect data established. It may not be fully documented but usually undertaken by most staff.	Average level of data confidence. Data is believed to be 50 to 80% complete and ±15 to 20% accurate. Some data extrapolation has been applied based on supported assumptions. Occasional data audits verify a reasonable level of confidence.
2	Uncertain	A semi-formal process usually followed. Poor documentation. The process to collect data is followed about half the time.	Not sure of data confidence, or data confidence is good for some data, but most of the dataset is based on extrapolation of incomplete data set with unsupported assumptions.
1	Very uncertain	Ad hoc procedures to collect data. Minimal or no process documentation. Process followed occasionally.	Very low data confidence. Data based on very large unsupported assumptions, cursory inspection and analysis. Data may have been developed by extrapolation from small, unverified data sets.
0	No data	No process exists to collect data.	No data is available.

12. Plan Monitoring and Improvements

12.1 Achievements

Over the past three years a number of identified Asset Management improvement items have been completed by the Resource Recovery team. The most significant of these is the alignment of all planning documents, the Waste Manangement and Minimisation Plan (WMMP, required under the Waste Minimisation Act 2008), the Long Term Plan and the Asset Management Plan, to ensure alignment and to be adopted in just a single Council decision. Previously, preparation of the WMMP occured out of step with the two other major planning documents, resulting in two separate approval processes and actions adopted in the WMMP which were not able to be reflected in the AMP and the LTP until the next planning cycle.

The second of the two major AM improvements was the award of a mechanical and electrical maintenance contract for the materials processing plant at the MRF. This contract has an initial requirement for condition assessment of all items of mechanical and electrical plant, including updating of the asset register to include all items of plant. Subsequently critical spares will be identified and purchased, and a preventative maintenance programme will be developed. Throughout the contract, maintenance activities will be recorded. All of the above work will result in improved information about Resource Recovery assets, and the preventative maintenance programme should reduce unscheduled downtime and increase budget forecast accuracy.

Pan-Infrastructure work has also been carried out to develop Asset Condition and Performance policies for all activity groups.

Further work has been completed to develop a Criticality Framework for all activity groups and asset classes, however the framework has yet to be applied to all assets.

12.2 Next steps

In order to align with pan-Infrastructure Asset Management improvement items, as well as anticipated legislative change, the Resource Recovery team have identified four Improvement Items to focus on over the next three years. Many of these programmes and associated improvement activities have already been identifed in the Infrastructure Asset Managment Improvement Plan. As follows;

Table 50 - 2021 AMP Improvement Plan Progress

	Proposed Improvement Action	Status	Comment
1.	Review asset data and determine where gaps are. Work with new asset data team to fill gaps.	In progress	The RR team are currently looking at operational data and working with our Digital Services team to improve capture, management, and reporting. Knowledge of fixed asset data is improving, and gaps are being identified, now that the new maintenance contract is in place. Will feed into item 2, Performance Measures
2.	Review rubbish and recycling levels of service performance measures and subsequently develop LoS scenarios to test through the Waste Minimisation Management Plan (WMMP) and Long Term Plan (LTP) processes.	To be completed in alignment with new legislation Not started	New legislation (anticipated to come into law in 2025) is expected to impose performance targets and mandate an enforcement regime. PNCC level of service performance measures should be aligned with these new rules.
3.	Cost to Serve	Not started	Development of “zero base” budgets. Determine inputs required to deliver promised

	Proposed Improvement Action	Status	Comment
			Levels of Service. This will be an Infrastructure wide programme of work, and will enable forecast growth impacts for Resource Recovery to be more accurately quantified.
4.	Promapp of processes	Not started	Documentation of AM and operating and maintenance processes. This will occur in parallel with Item 3 and will help to inform both Items 2 and 3.

12.3 Asset Management Maturity Assessment

Recent external reviews of Council's asset management practice were undertaken in July 2019 and May 2022. Both reviews were carried out by Infrastructure Associates Ltd using the New Zealand Treasury framework. The broader discussion of the results of these are outlined in the SAMP. One of the outputs of the reviews was a list of activity specific improvement items. Many of the more generic improvement items have and are continuing to be addressed by the Asset Planning Division, alongside the development of the Asset Management Policy and Strategic Asset Management Plan.

The maturity assessment improvement items are listed in **Error! Reference source not found.**. For each item there is comment on the status and progress that has been made, as well as where it is addressed; either in the SAMP or this AMP.

Table 51 -Resource Recovery Specific Improvement Items from Maturity Assessment

AM Function	Recommended Improvements	AMMA Priority	Progress	AMP/SAMP
Levels of Service Framework	Develop LoS scenarios to test through the Waste Minimisation Management Plan (WMMP) and Long Term Plan (LTP) processes.	High Yr1	Not started	This AMP refer to Section 4
Demand Forecasting and Management	Undertake review of new growth areas in the future to determine number of trucks, staff, estimated waste volumes and impact on recycling	High	Not started	This AMP refer to Secton 5.4
Asset Performance and Condition	Complete condition assessment of Material Recovery Facility (MRF) and any other critical assets.	High Yr1	In progress	This AMP refer to Section 7.3
The Strategic Asset Management Plan	Review how the SAMP can contribute to improved decision making	Medium	Not started	This AMP refer to Section 2
Operational Planning	Develop a more proactive inspection and maintenance plan for critical assets.	High Yr1	In progress	This AMP refer to Section 8.2
Asset Register Data	Review asset data and determine where gaps are. Work with Asset Information team to fill gaps.	High Yr2	In progress	This AMP refer to Section 11.7

12.4 Improvements identified in this AMP

Table 52 - Improvements identified in this AMP

AM Function	Recommended Improvements	AMP section
Levels of service	While our maturity assessment indicates we are at a Core level of maturity for Levels of Service for Resource Recovery, there is a significant opportunity to: Introduce Levels of Service objectives that cover a wider range of the issues raised by customers; and Formalise the recording and reporting of technical ("intervention") performance measures.	**4.5**
Demand	Forecast Future Demand - Increase Event demand forecasting accuracy by improving reporting.	**5.11**
Risk	An improvement item is to include more condition and risk assessment information about resource recovery plant assets in this AMP.	**7.6**

12.5 Improvement Plan

Section 7.2 of the SAMP describes how the Asset Management Improvement Plan (AMIP) has been developed and is being implemented. This plan captures, contains and tracks progress of all identified improvement items for each Activity Area, including Resource Recovery, as well as for Council and Infrastructure wide improvements.

A. Key Assumptions

The following assumptions have been adopted for this AMP.

Inflation

Financial projections are based on July 2020 estimated costs. No inflation factors have been applied.

BERL inflation factors will be applied to the programmes and budgets in the 10 Year Plan. Budgets for successive years of the Annual Budget are based on the corresponding year of the 10 Year Plan.

Depreciation

Average asset lives at a project level for new works have been used to calculate depreciation.

New works are a small percentage of total depreciation. Differences from actual due to averaging of lives are relatively minor.

Vested Assets

On average the same level of assets are gifted to the Council as a result of subdivision as has occurred over the last 5 years.

Note that the rate of change of development will be taken account of in future revisions of the AMP and subsequent O&M and depreciation taken into account.

Service Potential

Service potential of the asset is maintained by the renewal and maintenance programme.

There is low risk that the service potential of the asset will not be maintained by implementation of the renewal programme since this is based on reliable asset and condition information from the asset management system.

Asset lives

Asset lives are accurately stated.

The risk that lives are inaccurate is low. Lives are based on generally accepted industry values modified by local knowledge. The asset database gives a good knowledge of asset condition and an extensive field assessment has recently been undertaken.

Natural Disasters

That there are no major natural disasters during the planning period requiring additional funds.

There is medium risk of a natural disaster occurring during this period requiring additional funds to repair or reinstate assets. Some further provision for increasing the resilience of the assets has been built into this plan but there is still further work to be undertaken to determine the desired level of resilience and the further asset improvements to achieve this.

Council Policy

No significant change to Council policy that impacts on assets and services.

Any significant change will require a full review of the AMP and implications identified at the time.

Interest Rate

Interest on term debt is calculated using an interest rate of 5% for the first three years of the LTP and 5.2% thereafter. To allow for anticipated timing of capital expenditure, interest is provided for on only 50% of forecast new loan amounts in the year of the capital expenditure, but on the full amount in each year thereafter.

B. 30 Year Financial Forecasts

Proposed Operations and Maintenance (MSL) Budgets 30 Year Forecast

Operations and Maintenance Budgets - MSL	2024/25 Year1	2025/26 Year2	2026/27 Year3	2027/28 Year4	2028/29 Year5	2029/30 Year6	2030/31 Year7	2031/32 Year8	2032/33 Year9	2033/34 Year10
54405. Resource Recovery - Landfill Management	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000
54410. Resource Recovery - Waste Management	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
54415. Resource Recovery - Waste Minimisation	$283,955	$188,955	$278,955	$238,955	$243,955	$223,955	$293,955	$188,955	$278,955	$238,955
54431. Overhead - Collections	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723
54432. Overhead - Awapuni Site Activity	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105
54433. Overhead - Recycling	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413
54434. Overhead - RR Operations	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715
Labour	$3,623,727	$3,647,569	$3,648,001	$3,648,378	$3,648,785	$3,649,201	$3,649,615	$3,650,034	$3,650,450	$3,650,866
Total	***$4,140,638***	***$4,069,480***	***$4,159,912***	***$4,120,289***	***$4,125,696***	***$4,106,112***	***$4,176,526***	***$4,071,945***	***$4,162,361***	***$4,122,777***

Operations and Maintenance Budgets - MSL	2034/35 Year11	2035/36 Year12	2036/37 Year13	2037/38 Year14	2038/39 Year15	2039/40 Year16	2040/41 Year17	2041/42 Year18	2042/43 Year19	2043/44 Year20
54405. Resource Recovery - Landfill Management	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000
54410. Resource Recovery - Waste Management	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
54415. Resource Recovery - Waste Minimisation	$238,955	$238,955	$238,955	$238,955	$238,955	$238,955	$238,955	$238,955	$238,955	$238,955
54431. Overhead - Collections	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723
54432. Overhead - Awapuni Site Activity	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105
54433. Overhead - Recycling	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413
54434. Overhead - RR Operations	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715
Total	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***

Operations and Maintenance Budgets - MSL	2044/45 Year21	2045/46 Year22	2046/47 Year23	2047/48 Year24	2048/49 Year25	2049/50 Year26	2050/51 Year27	2051/52 Year28	2052/53 Year29	2053/54 Year30
54405. Resource Recovery - Landfill Management	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000	$185,000
54410. Resource Recovery - Waste Management	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
54415. Resource Recovery - Waste Minimisation	$238,955	$238,955	$238,955	$238,955	$238,955	$238,955	$238,955	$238,955	$238,955	$238,955
54431. Overhead - Collections	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723	$19,723
54432. Overhead - Awapuni Site Activity	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105	$8,105
54433. Overhead - Recycling	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413	$15,413
54434. Overhead - RR Operations	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715	$2,715
Total	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***	***$471,911***

Proposed Operational Programmes

Proposed Operational Programmes	2024/25 Year1	2025/26 Year2	2026/27 Year3	2027/28 Year4	2028/29 Year5	2029/30 Year6	2030/31 Year7	2031/32 Year8	2032/33 Year9	2033/34 Year10
2328 - Resilience of the Closed Landfills - Investigation	$-	$100,000	$-	$-	$-	$-	$-	$-	$-	$-
2461 - Food Scraps - Detailed Analysis of Programme Delivery	$75,000	$25,000	$-	$-	$-	$-	$-	$-	$-	$-
2506 - Resource Recovery - Data Platform to Licence Waste Collectors	$-	$-	$ 50,000	$-	$-	$-	$-	$-	$-	$-
2462 - Resource Recovery - Service Delivery Model Review	$200,000	$-	$-	$-	$-	$-	$-	$-	$-	$-
Total	**$275,000**	**$125,000**	**$50,000**	**$-**	**$-**	**$-**	**$-**	**$-**	**$-**	**$-**

Proposed Renewals Programmes Budgets 30 Year Forecast

Programme Name	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)	Year6 (2029/30)	Year7 (2030/31)	Year8 (2031/32)	Year9 (2032/33)	Year10 (2033/34)
185 -Closed Landfills and Transfer Stations - Site Renewals	$291,350	$19,000	$25,000	$74,000	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000
612 -Recycling - City-wide Wheelie Bin and Crate Renewals	$100,000	$100,00	$100,000	$300,000	$350,000	$450,000	$100,000	$100,000	$100,000	$100,000
1368 -City-wide - Public Space Rubbish & Recycling Bins Renewals	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000
1374 - City-wide - Recycling Drop Off Facilities - Renewals	$15,000	$15,000	$15,00	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
1721 - Composting Activity Site Renewals	$10,000	$10,00	$10,000	$10,000	$15,000	$15,000	$15,000	$691,500	$25,000	$38,500
2341 - City-Wide - Food Scraps Bin and Caddie Renewals	$-	$-	$-	$-	$-	$-	$13,000	$13,000	$ 13,000	$13,000
Total	**$461,350**	**$189,000**	**$195,000**	**$444,000**	**$444,000**	**$544,000**	**$207,000**	**$883,500**	**$217,000**	**$230,500**

Programme Name	Year11 (2034/35)	Year12 (2035/36)	Year13 (2036/37)	Year14 (2037/38)	Year15 (2038/39)	Year16 (2039/40)	Year17 (2040/41)	Year18 (2041/42)	Year19 (2042/43)	Year20 (2043/44)
185 -Closed Landfills and Transfer Stations - Site Renewals	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000
612 -Recycling - City-wide Wheelie Bin and Crate Renewals	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000
1368 -City-wide - Public Space Rubbish & Recycling Bins Renewals	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,00	$45,000
1374 - City-wide - Recycling Drop Off Facilities - Renewals	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
1721 - Composting Activity Site Renewals	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
2341 - City-Wide - Food Scraps Bin and Caddie Renewals	$13,000	$13,000	$13,000	$13,000	$13,000	$13,000	$13,000	$13,000	$13,000	$13,000
Total	**$325,000**	**$325,000**	**$325,000**	**$325,000**	**$325,000**	**$325,000**	**$325,000**	**$325,000**	**$325,000**	**$325,000**

Programme Name	Year21 (2044/45)	Year22 (2045/46)	Year23 (2046/47)	Year24 (2047/48)	Year25 (2048/49)	Year26 (2049/50)	Year27 (2050/51)	Year28 (2051/52)	Year29 (2052/53)	Year30 (2053/54)
185 -Closed Landfills and Transfer Stations - Site Renewals	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000
612 -Recycling - City-wide Wheelie Bin and Crate Renewals	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000
1368 -City-wide - Public Space Rubbish & Recycling Bins Renewals	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000
1374 - City-wide - Recycling Drop Off Facilities - Renewals	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000
1721 - Composting Activity Site Renewals	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
2341 - City-Wide - Food Scraps Bin and Caddie Renewals	$13,000	$13,000	$13,000	$13,000	$13,000	$13,000	$13,00	$13,000	$13,000	$13,000
Total	**$325,000**	**$ 325,000**	**$325,000**	**$325,000**	**$325,000**	**$325,000**	**$ 325,000**	**$325,000**	**$325,000**	**$325,000**

Proposed Capital New Programmes Budgets 30 Year Forecast

Programme Name	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)	Year6 (2029/30)	Year7 (2030/31)	Year8 (2031/32)	Year9 (2032/33)	Year10 (2033/34)
506 -City-wide - Public Space Rubbish & Recycling Bins Development	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000
657 -Urban Growth - Recycling - City-wide Wheelie Bins and Crates	$90,000	$90,000	$90,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000
727 -Recycling - Materials Recovery Facility Development	$200,000	$5,200,000	$100,000	$520,000	$25,000	$-	$-	$-	$-	$-
1371 -Closed Landfills and Transfer Stations - Safety, Security and Development	$1,270,000	$360,300	$69,000	$-	$-	$-	$120,000	$-	$-	$-
1373 - Urban Growth - Recycling - City-wide Drop Off Facilities - Development	$-	$-	$-	$-	$1,100,000	$1,100,000	$-	$-	$-	$-
1410 - Recycling - City-wide Recycling Services to Commercial/organisational Properties Development	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
1892 - City Reserves - Manawatu River Park - Hokowhitu Lagoon Development Plan	$-	$-	$130,000	$-	$-	$-	$-	$-	$-	$-
1910 - City-Wide - Kerbside Food Scraps Collection and Processing Service Development	$-	$-	$-	$992,500	$137,000	$-	$-	$-	$-	$-
2337 - Tip Road Development	$-	$-	$120,000	$-	$-	$2,000,000	$2,000,000	$-	$-	$-
2338 - Recycling Contamination Monitoring Development	$55,000	$-	$-	$-	$-	$-	$-	$-	$-	$-
2342 - Urban Growth – Food Scraps - City-Wide Food Waste Bins and Caddies	$-	$-	$-	$-	$-	$-	$26,000	$26,000	$26,000	$26,000
2503 - Collection Vehicles - Safety and Security Development	$245,000	$-	$-	$-	$-	$-	$-	$-	$-	$-
Total	**$2,160,000**	**$5,950,300**	**$809,000**	**$ 1,907,500**	**$1,657,000**	**$3,495,000**	**$2,541,000**	**$421,000**	**$421,000**	**$421,000**

Programme Name	Year11 (2034/35)	Year12 (2035/36)	Year13 (2036/37)	Year14 (2037/38)	Year15 (2038/39)	Year16 (2039/40)	Year17 (2040/41)	Year18 (2041/42)	Year19 (2042/43)	Year20 (2043/44)
506 -City-wide - Public Space Rubbish & Recycling Bins Development	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000

657 -Urban Growth - Recycling - City-wide Wheelie Bins and Crates	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000
727 -Recycling - Materials Recovery Facility Development	$-	$-	$-	$-	$-	$-	$-	$-	$-	$-
1410 - Recycling - City-wide Recycling Services to Commercial/organisational Properties Development	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
2342 - Urban Growth – Food Scraps - City-Wide Food Waste Bins and Caddies	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000
Total	**$171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**
Programme Name	**Year21 (2044/45)**	**Year22 (2045/46)**	**Year23 (2046/47)**	**Year24 (2047/48)**	**Year25 (2048/49)**	**Year26 (2049/50)**	**Year27 (2050/51)**	**Year28 (2051/52)**	**Year29 (2052/53)**	**Year30 (2053/54)**
506 -City-wide - Public Space Rubbish & Recycling Bins Development	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000
657 -Urban Growth - Recycling - City-wide Wheelie Bins and Crates	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000
1410 - Recycling - City-wide Recycling Services to Commercial/organisational Properties Development	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$0,000
2342 - Urban Growth – Food Scraps - City-Wide Food Waste Bins and Caddies	$26,000	$26,000	$26,000	$26,000	$6,000	$26,000	$26,000	$26,000	$26,000	$26,000
Total	**$ 171,000**	**$ 171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**	**$171,000**

Consequential Opex Programmes

Consequential Opex Programmes	**Year1 (2024/25)**	**Year2 (2025/26)**	**Year3 (2026/27)**	**Year4 (2027/28)**	**Year5 (2028/29)**	**Year6 (2029/30)**	**Year7 (2030/31)**	**Year8 (2031/32)**	**Year9 (2032/33)**	**Year10 (2033/34)**
506 -City-wide - Public Space Rubbish & Recycling Bins Development	$2,000	$4,000	$6,000	$8,000	$10,000	$12,000	$14,000	$16,000	$18,000	$20,000
657 - Urban Growth - Recycling - City-wide Wheelie Bins and Crates	$5,000	$10,000	$15,000	$20,000	$25,000	$30,000	$35,000	$40,000	$45,000	$50,000
727 -Recycling - Materials Recovery Facility Development	$-	$672,000	$-	$-	$-	$-	$-	$-	$-	$-
1371 - Closed Landfills and Transfer Stations - Safety, Security and Development	$20,000	$20,000	$20,000	$20,000	$20,000	$22,000	$2,000	$22,000	$22,000	$22,000
1373 - Urban Growth - Recycling - City-wide Drop Off Facilities - Development	$-	$-	$-	$-	$-	$250,000	$250,000	$250,000	$250,000	$250,000
1410 -Recycling - City-wide Recycling Services to Commercial/organisational Properties Development	$500	$1,000	$1,500	$2,000	$2,500	$3,000	$3,500	$4,000	$4,500	$5,000
1910 -City-Wide - Kerbside Food Scraps Collection and Processing Service Development	$-	$-	$-	$-	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000
2338 - Recycling Contamination Monitoring Development	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
2342 - Urban Growth – Food Scraps - City-Wide Food Waste Bins and Caddies	$-	$-	$-	$-	$-	$5,600	$11,200	$16,800	$22,400	$28,000
2503 - Collection Vehicles - Safety and Security Development	$-	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
Total	**$37,500**	**$737,000**	**$ 72,500**	**$80,000**	**$687,500**	**$952,600**	**$965,700**	**$978,800**	**$ 991,900**	**$1,005,000**

Consequential Opex Programmes	Year11 (2034/35)	Year12 (2035/36)	Year13 (2036/37)	Year14 (2037/38)	Year15 (2038/39)	Year16 (2039/40)	Year17 (2040/41)	Year18 (2041/42)	Year19 (2042/43)	Year20 (2043/44)
506 -City-wide - Public Space Rubbish & Recycling Bins Development	$22,000	$24,000	$26,000	$28,000	$0,000	$32,000	$34,000	$36,000	$38,000	$40,000
657 - Urban Growth - Recycling - City-wide Wheelie Bins and Crates	$55,000	$60,000	$65,000	$70,000	$75,000	$80,000	$85,000	$90,000	$95,000	$100,00
727 -Recycling - Materials Recovery Facility Development	$-	$-	$-	$-	$-	$-	$-	$-	$-	$-
1371 - Closed Landfills and Transfer Stations - Safety, Security and Development	$22,000	$22,000	$2,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000
1373 - Urban Growth - Recycling - City-wide Drop Off Facilities - Development	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
1410 -Recycling - City-wide Recycling Services to Commercial/organisational Properties Development	$5,500	$6,000	$6,500	$7,000	$7,500	$8,000	$8,500	$9,000	$9,500	$10,000
1910 -City-Wide - Kerbside Food Scraps Collection and Processing Service Development	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000
2338 - Recycling Contamination Monitoring Development	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
2342 - Urban Growth – Food Scraps - City-Wide Food Waste Bins and Caddies	$33,600	$39,200	$44,800	$50,400	$56,000	$61,600	$67,200	$72,800	$78,400	$84,000
2503 - Collection Vehicles - Safety and Security Development	$20,000	$-	$-	$-	$-	$-	$-	$-	$-	$-
Total	**$1,018,100**	**$1,011,200**	**$ 1,024,300**	**$ 1,037,400**	**$1,050,500**	**$1,063,600**	**$ 1,076,700**	**$1,089,800**	**$1,102,900**	**$1,116,000**

Consequential Opex Programmes	Year21 (2044/45)	Year22 (2045/46)	Year23 (2046/47)	Year24 (2047/48)	Year25 (2048/49)	Year26 (2049/50)	Year27 (2050/51)	Year28 (2051/52)	Year29 (2052/53)	Year30 (2053/54)
506 -City-wide - Public Space Rubbish & Recycling Bins Development	$42,000	$44,000	$46,000	$48,000	$50,000	$52,000	$54,000	$56,000	$58,000	$60,000
657 - Urban Growth - Recycling - City-wide Wheelie Bins and Crates	$105,000	$110,000	$115,000	$120,000	$125,000	$130,000	$135,000	$140,000	$145,000	$150,000
727 -Recycling - Materials Recovery Facility Development	$-	$-	$-	$-	$-	$-	$-	$-	$-	$-
1371 - Closed Landfills and Transfer Stations - Safety, Security and Development	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000	$22,000
1373 - Urban Growth - Recycling - City-wide Drop Off Facilities - Development	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
1410 -Recycling - City-wide Recycling Services to Commercial/organisational Properties Development	$10,500	$11,000	$11,500	$12,000	$12,500	$13,000	$13,500	$14,000	$14,500	$15,000
1910 -City-Wide - Kerbside Food Scraps Collection and Processing Service Development	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000
2338 - Recycling Contamination Monitoring Development	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
2342 - Urban Growth – Food Scraps - City-Wide Food Waste Bins and Caddies	$89,600	$95,200	$100,800	$106,400	$112,000	$117,600	$123,200	$128,800	$134,400	$140,000
2503 - Collection Vehicles - Safety and Security Development	$-	$-	$-	$-	$-	$-	$-	$-	$-	$-
Total	**$1,129,100**	**$1,142,200**	**$1,155,300**	**$1,168,400**	**$1,181,500**	**$1,194,600**	**$1,207,700**	**$1,220,800**	**$1,233,900**	**$1,247,000**

C. Resource Consents

Table C1: Summary of Resource Consents

Consent No.	Term [Yr]	Expiry Date	Type	Consent Subtype	Location	Description
105346 & 105405	23	1/07/2033	Discharge Permit	Discharge to Land	Ashhurst Closed Landfill	To discharge leachate and stormwater into land where it may enter water from the closed unlined Ashhurst landfill.
ATH-2006011460.01	12	19/07/2031	Discharge Permit	Discharge to Air	Awapuni Closed Landfill Flare	Discharge of contaminants to air at Awapuni landfill (backup landfill gas flaring operation).
3962 - 3967	35	1/02/2029	Water Permit	Divert	Awapuni Closed Landfill	Awapuni closed landfill suite - various discharge permits.
105458 & 105459	18	1/02/2029	Discharge Permit	Discharge to Land	Awapuni Composting	Compost operation.

D. Top Resource Recovery Actvity Risks

Resource Recovery Activity Area	Code	Process	Sub - Process	Potential Failure	Causes	Risk Category	Raw Risk Rating	Control Effectiveness	Residual Risk Rating	Target
Resource Recovery, Infrastructure	RSR01	Resource recovery Activity Management	Creation of understanding of asset landscape	1. Receipt of incomplete data on assets (Location, age, replacement requirements, life expectancy, current condition, fit for purpose attributes, material content) 2. Conditions inspections not initiated in timely manner 3. Budget allocation insufficient to engage inspection/survey companies 4. Condition inspections not identifying condition issues 5. Output from inspections not captured and documented against asset in IPS, SPM and RAMM 6. Data collection requirements not actioned 7. Missed opportunities to better source funding from Government (Waste Minimisation Fund) 8. Early or unexpected asset failure	1. Ambiguity on asset data ownership and custodianship 2. Poor quality data held on assets 3. Inability to identify records 4. Inspections not undertaken to adequate standard 5. No documented or adequate standard processes for timeline management of asset condition understanding 6. Engagement with inspections not properly termed on scope or works 7. Lack of understanding by officers of lifecycle terms and against asset categories 8. Silo approach to activity management 9. Inadequate methodology in determining needs-based renewals and maintenance 10. Inspection reports not actioned 11. Inadequate growth forecasting and resulted capacity growth	Service Delivery	Very High	1. 30-year asset renewal programme in place for activity Effective 2. Experienced and qualified inspection companies used Effective 3. Asset management in place and used to form renewal programme Effective	Medium	Low
						Financial	Very High		Medium	Low
						Reputational	Very High		Medium	Low
Resource Recovery, Infrastructure	RSR02	Investigations & Planning		1. Inadequate or incorrect data, or lack of data granularity 2. Ill-informed decisions 3. Failure points not identified 4. Inadequate remediation plans developed 5. Continued repetitive failures 6. Misalignment between regulatory services requirements and bylaws 7. Inadequate consultancy firms used 8. Investigation not comprehensive	1. Historical lack of AM data 2. Data not recorded correctly in respect to location, quality, age, materials, capacity, depth, length, gradient 3. Incorrect data or information provided 4. Lack of personnel competency and capacity 5. Inadequate investigation practises 6. Poor understanding of regulatory landscape 7. Lack of technical engineering competency	Service Delivery	Very High	1. 30-year asset renewal programme in place for activity Effective 2. Experienced and qualified inspection companies used Effective 3. Asset management in place and used to form renewal programme Effective 4. Quality data held on assets and effective data management Effective 5. Annual deliverables planned on needs and criticality Effective	Medium	Medium
						Financial	Very High		Medium	Medium
						Reputational	Very High		Medium	Medium
Resource Recovery, Infrastructure	RSR03	Waste Assessment & SWAP		1. Waste assessment output incorrect 2. Waste minimisation options under or overstated 3. Waste minimisation options not optimised or identified 4. Incorrect budgetary/investment allocations based on inaccurate data (under or over) 5. Increased costs in waste disposal verse recycle activities or vis versa	1. Waste data collected inaccurate 2. Lack of knowledge of disposal options 3. Poor consultancy advice 4. Inadequate data sampling techniques 5. Socio economic bias in sampling 6. Inadequate knowledge of legislative direction or current requirements 7. Poor cost benefit analysis	Strategic	Extreme	1. Experienced consultant used for assessment with RFP undertaken Effective 2. Follow standard guidelines laid down by MFE Effective 3. All consultant data reviewed before final report confirmed Effective 4. Experienced personnel checking reports Effective 5. Initial options and financial analysis prepared but subject to Mgt. Plan review Effective	Medium	Medium
						Financial	Extreme			Medium
						Reputational	Very High			Medium

Resource Recovery, Infrastructure	RSR04	Waste Minimisation Mgt. Plan		1. Inadequate understanding of options and feasibility 2. Community expectations unrealistic 3. Expectations on financial costs unrealistic 4. Poor community engagement 5. Lack of budgetary allocation	1. Inadequate understanding of options and feasibility 2. Community expectations unrealistic 3. Expectations on financial costs unrealistic 4. Poor community engagement 5. Lack of budgetary allocation	Strategic	Extreme	1. Experienced consultant used for large or costly proposals or significant changes Effective 2. Follow standard guidelines laid down by MFE Effective 3. Experienced personnel checking reports Effective 4. Financial assumptions peer reviewed by consultant or vis versa Effective 5. Use of Communications team to build community engagement Effective 6. Target interested groups Effective 7. LTP budgetary allocation Effective	Medium	Medium
						Financial	Extreme		Medium	Medium
						Reputational	Very High		Medium	Medium
Resource Recovery, Infrastructure	RSR05	Management of Closed Landfill	Mount Cleese	1. Sampling not undertaken in line with resource consent 2. Storm water levels exceed requirements for BOD 3. Odour levels exceed expected levels 4. Storm water erosion 5. Significant failure of landfill integrity	1. Poor management of sampling programme 2. Unmanaged landfill cracks 3. Poor stormwater flow management 4. Compost turning in poor environmental conditions 5. Extreme weather event or earthquake	Reputational	Very High	1. Periodic monitoring of requirements under resource consent Effective 2. Bore water quality sampling on quarterly with annual report to Horizons Effective 3. Infiltration ponds for collection of storm water Effective 4. Weekly checks of storm 3water infiltration ponds Effective 5. Sampling of infiltration ponds when water present Effective 6. Biosolids waste composting leachate dispatch to sewage treatment plant Effective 7. Gravity separation ensuring no cross contamination Effective	Low	Low
						Environmental	Extreme		Low	Low
Resource Recovery, Infrastructure	RSR06	Collections		1. Mechanical breakdown of collection vehicles 2. Lack of staff to undertake daily collection requirements	1. Insufficient redundancy in vehicle numbers 2. Poorly maintained vehicles 3. Inadequate personnel capacity 4. Inadequate remuneration for collections personnel	Service Delivery	Very High	1. Vehicle redundancy Partially Effective 2. Regularly maintained vehicles Effective 3. Market based remuneration Partially Effective 4. Agency temporary personnel supplies Effective 5. Changes to collections level of service in times of stress Effective 6. Public communications on collections delays and issues Effective	Medium	Medium
						Performance & Capability	Very High		Medium	Medium
						Reputational	Very High		Low	Low
Resource Recovery, Infrastructure	RSRS07	Processing of recycle materials		1. Mechanical breakdown 2. Excessive contamination 3. Inability to process day's collection 4. Lack of personnel resources	1. Inadequate mechanical servicing and maintenance 2. Reactive maintenance (lack of scheduled/proactive maintenance) 3. Inadequate daily personnel resources 4. Ill-informed public around recyclability 5. Inadequate bin audit 6. Inaction on poor compliance based on truck audit	Service Delivery	High	1. Temporary agency staff available Effective 2. Identified service company Effective 3. Small stock of spare parts held on hand Partially Effective 4. Weekly bearing greasing Partially Effective 5. Community education and communication Partially Effective 6. Landfill dumping backup Effective 7. Paper audits Effective	Low	Low
						Performance & Capability	High		Low	Low
						Reputational	Very High		Medium	Medium
	RSR08					Financial	High		Medium	Medium

Resource Recovery, Infrastructure		Disposal of recyclable materials		1. Product contamination 2. Lack of market delivery options 3. Reduced prices for product	1. Market participant disruption 2. Changing global and national recycling priorities 3. Changing technology for recyclables 4. Changing legislative requirements 5. Inadequate or ineffective sorting 6. Excessive rubbish contamination 7. Commodity price volatility	Reputational	Very High	1. Quality platform before bailer Effective 2. Paper audits Effective 3. Storage of non-paper on site outside for extended periods Effective 4. Multiple sources of offtakes Effective 5. Dispose of at landfill (or compost paper) Effective	Low	Low
Resource Recovery, Infrastructure	RSR09	Composting		1. Excessive bacteria load 2. Self-combustion 3. Excessive odour 4. Legionaries' contamination 5. Excessively composted materials	1. Excessive materials conducive to e-coli 2. Low row temperature 3. Dry or dusty compost or excessively dry compost 4. Inadequate turning and management 5. Inadequate temperature monitoring 6. Inadequate technical understanding of composting processes 7. Hidden, unwanted materials	Service Delivery	Extreme	1. Daily temperature monitoring Effective 2. Add additional green waste through re-blend to bring up temperature Effective 3. Lab testing at end of 9 months for e-coli Effective 4. Regular monitoring of materials Effective 5. Standard operating procedures for turning Effective 6. Application of compostable packing standards enforced for commercial intakes Effective	Medium	Medium
						Financial	High		Low	Low

E. Glossary

The following terms and acronyms (in brackets) are used in this Asset Management Plan.

Table D1: Glossary

Term or Acronym	Description
Action and Investment Plan (AIP)	Inaugral AIPs will focus on what is needed to deliver on the waste strategy including: • The immediate priorities for the next five years in different geographical areas, communities, material streams and risk areas; • The mix of regulatory, investment, infrastructure, systems and behavioural change and other actions planned to address the immediate priorities; and • The sequence of the actions and how they fit together.
Activity	An activity is the work undertaken on an asset or group of assets to achieve a desired outcome.
Advanced Asset Management (AAM)	Asset management practice that has evolved to a state that matches business needs. AAM employs predictive modelling, risk management and optimised renewal decision making techniques to establish asset lifecycle treatment options and related long term cashflow predictions. (See Core asset management).
Annual Budget	The Annual Budget provides a statement of the direction of Council and ensures consistency and co-ordination in both making policies and decisions concerning the use of Council resources. It is a reference document for monitoring and measuring performance for the community as well as the Council itself.
Asset	A physical component of a facility that has value, enables services to be provided and has an economic life of greater than 12 months.
Asset Management (AM)	The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.
Asset Management System (AMS)	A system (usually computerised) for collecting analysing and reporting data on the utilisation, performance, lifecycle management and funding of existing assets.
Asset Management Plan	A plan developed for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the lifecycle of the asset in the most cost effective manner to provide a specified level of service. A significant component of the plan is a long term cashflow projection for the activities.
Asset Management sStrategy	A strategy for asset management covering, the development and implementation of plans and programmes for asset creation, operation, maintenance, renewal, disposal and performance monitoring to ensure that the desired levels of service and other operational objectives are achieved at optimum cost.
Asset Management Team	The team appointed by an organisation to review and monitor the corporate asset management improvement programme and ensure the development of integrated asset management systems and plans consistent with organisational goals and objectives.
Asset Register	A record of asset information considered worthy of separate identification including inventory, historical, financial, condition, construction, technical and financial information about each.

Term or Acronym	Description
Benefit Cost Ratio (B/C)	The sum of the present values of all benefits (including residual value, if any) over a specified period, or the life cycle of the asset or facility, divided by the sum of the present value of all costs.
Business Plan	A plan produced by an organisation (or business units within it) which translate the objectives contained in an Annual Budget into detailed work plans for a particular, or range of, business activities. Activities may include marketing, development, operations, management, personnel, technology and financial planning
Capital Expenditure (CAPEX)	Expenditure used to create new assets or to increase the capacity of existing assets beyond their original design capacity or service potential. CAPEX increases the value of an asset.
Cash Flow	The stream of costs and/or benefits over time resulting from a project investment or ownership of an asset.
Components	Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.
Condition Monitoring	Continuous or periodic inspection, assessment, measurement and interpretation of resulting data, to indicate the condition of a specific component so as to determine the need for some preventive or remedial action
Core Asset Management	Asset management which relies primarily on the use of an asset register, maintenance history, condition assessment, defined levels of service, and simple risk and benefit/ cost assessments in order to establish work priorities and long term cashflow predictions.
Critical Assets	Assets for which the financial, business or service level consequences of failure are highest. Critical assets have a lower threshold for action than non-critical assets.
Current Replacement Cost	The cost of replacing the service potential of an existing asset, by reference to some measure of capacity, with an appropriate modern equivalent asset.
Deferred Maintenance	The shortfall in rehabilitation work required to maintain the service potential of an asset.
Demand Management	The active intervention in the market to influence demand for services and assets with forecast consequences, usually to avoid or defer CAPEX expenditure. Demand management is based on the notion that as needs are satisfied expectations rise automatically and almost every action taken to satisfy demand will stimulate further demand.
Depreciated Replacement Cost (DRC)	The replacement cost of an existing asset after deducting an allowance for wear or consumption to reflect the remaining economic life of the existing asset.
Depreciation	The wearing out, consumption or other loss of value of an asset whether arising from use, passing of time or obsolescence through technological and market changes. It is accounted for by the allocation of the historical cost (or revalued amount) of the asset less its residual value over its useful life.
Disposal	Activities necessary to dispose of decommissioned assets.
Economic Life	The period from the acquisition of the asset to the time when the asset, while physically able to provide a service, ceases to be the lowest cost alternative to satisfy a particular level of service. The economic life is at the maximum when equal to the physical life however obsolescence will often ensure that the economic life is less than the physical life.

Term or Acronym	Description
Facility	A complex comprising many assets (e.g. a hospital, water treatment plant, recreation complex, etc.) which represents a single management unit for financial, operational, maintenance or other purposes.
Geographic Information System (GIS)	Software which provides a means of spatially viewing, searching, manipulating, and analysing an electronic data-base.
Infrastructure Assets	Stationary systems forming a network and serving whole communities, where the system as a whole is intended to be maintained indefinitely at a particular level of service potential by the continuing replacement and refurbishment of its components. The network may include normally recognised 'ordinary' assets as components.
Infrastructure Strategy	A strategy for identifying the principal options for managing significant infrastructure issues expected to occur over a 30-year period
Level Of Service	The defined service quality for the Resource Recovery Activity or service area against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental acceptability and cost.
Life	A measure of the anticipated life of an asset or component; such as time, number of cycles, distance intervals etc.
Life Cycle	Life cycle has two meanings: The cycle of activities that an asset (or facility) goes through while it retains an identity as a particular asset i.e. from planning and design to decommissioning or disposal. The period of time between a selected date and the last year over which the criteria (e.g. costs) relating to a decision or alternative under study will be assessed.
Life Cycle Cost	The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
Maintenance	All actions necessary for retaining an asset as near as practicable to its original condition, but excluding rehabilitation or renewal.
Maintenance Plan	Collated information, policies and procedures for the optimum maintenance of an asset, or group of assets.
Maintenance Standards	The standards set for the maintenance service, usually contained in preventive maintenance schedules, operation and maintenance manuals, codes of practice, estimating criteria, statutory regulations and mandatory requirements, in accordance with maintenance quality objectives.
Net Present Value (NPV)	The value of an asset to the organisation, derived from the continued use and subsequent disposal in present monetary values. It is the net amount of discounted total cash inflows arising from the continued use and subsequent disposal of the asset after deducting the value of the discounted total cash outflows.
Objective	An objective is a general statement of intention relating to a specific output or activity. They are longer term aims and are not necessarily outcomes that managers can control.
Operation	The active process of utilising an asset which will consume resources such as manpower, energy, chemicals and materials. Operation costs are part of an assets life cycle costs.

Term or Acronym	Description
Optimised Renewal Decision Making (ORDM)	An optimisation process for considering and prioritising all options to rectify performance failures of assets. The process encompasses NPV analysis and risk assessment.
Performance Indicator (PI)	A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.
Performance Monitoring	Continuous or periodic quantitative and qualitative assessments of the actual performance compared with specific objectives, targets or standards.
Pipeline Asset Management System	Council uses an asset management system to store, collate and analyse asset data. The current Council system is IPS, a product which is supplied by Infor Global Solutions. The Council has used IPS (previously Hansen) since 1995. The current version deployed is IPS 8.3.0.
Planned Maintenance	Planned maintenance activities fall into 3 categories : Periodic - necessary to ensure the reliability or sustain the design life of an asset. Predictive - condition monitoring activities used to predict failure. Preventive - maintenance that can be initiated without routine or continuous checking (e.g. using information contained in maintenance manuals or manufacturers' recommendations) and is not condition-based.
Rehabilitation	Works to rebuild or replace parts or components of an asset, to restore it to a required functional condition and extend its life, which may incorporate some modification. Generally involves repairing the asset using available techniques and standards to deliver its original level of service (i.e. heavy patching of roads, slip-lining of sewer mains, etc.) without resorting to significant upgrading or replacement.
Renewal	Works to upgrade, refurbish, rehabilitate or replace existing facilities with facilities of equivalent capacity or performance capability.
Renewal Accounting	A method of infrastructure asset accounting which recognises that infrastructure assets are maintained at an agreed service level through regular planned maintenance, rehabilitation and renewal programmes contained in an asset management plan. The system as a whole is maintained in perpetuity and therefore does not need to be depreciated. The relevant rehabilitation and renewal costs are treated as operational rather than capital expenditure and any loss in service potential is recognised as deferred maintenance.
Repair	Action to restore an item to its previous condition after failure or damage.
Replacement	The complete replacement of an asset that has reached the end of its life, so as to provide a similar, or agreed alternative, level of service.
Remaining Economic Life	The time remaining until an asset ceases to provide service level or economic usefulness.
Resilient Infrastructure	Infrastructure that is able to deal with significant disruption and changing circumstances.
Risk	The product of the likelihood of an event occurring and the estimated impact (consequence) of the event.
Risk Cost	The assessed annual cost or benefit relating to the consequence of an event. Risk cost equals the costs relating to the event multiplied by the probability of the event occurring.

Term or Acronym	Description
Risk Management	The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.
Routine Maintenance	Day to day operational activities to keep the asset operating (replacement of light bulbs, cleaning of drains, repairing leaks, etc.) and which form part of the annual operating budget, including preventative maintenance.
Service Potential	The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset.
Strategic Plan	Strategic planning involves making decisions about the long term goals and strategies of an organisation. Strategic plans have a strong external focus, cover major portions of the organisation and identify major targets, actions and resource allocations relating to the long term survival, value and growth of the organisation.
Unplanned Maintenance	Corrective work required in the short term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.
Upgrading	The replacement of an asset or addition/ replacement of an asset component which materially improves the original service potential of the asset.
Valuation	Estimated asset value which may depend on the purpose for which the valuation is required, i.e. replacement value for determining maintenance levels or market value for life cycle costing.

F. Resource Recovery Addendum 2024

Introduction

Several changes have been made to the AMP budget through the 10 Year Plan - Long Term Plan process due to internal and external constraints. Draft AMP documents were finalised on 30 September 2023 and were based on a best for asset approach.

Elected members reviewed the plans in November and December 2023 during the preparation of the 2024 – 2034 Long Term Plan and the Consultation Document. During these discussions elected members were concerned about the affordability of what was proposed. In some cases, further information was available that provided more accurate view of budget requirements.

To address concerns programmes were deferred, reduced in scope, or removed from the LTP. In some cases new programme had to be inserted as a result.

The Addendum captures the changes and comments on the effects on Levels of Service and Risk that will result from the change in funding in the final Draft LTP and Consultation Document.

Each programme has two scenarios:

Proposed AMP Budget – The proposed budgets were set prior to **31 August 2023**. This AMP's operational and maintenance, renewals and capital new costs are informed the **31 August 2023.** budget scenario.

Adopted LTP Budget – The adopted budget reflects the budgets in the 10 Year 2024-34 Long Term Plan. They reflect the outcomes of internal and external consultation as part of the 10 Year Plan process.

Challenges in budget creation:

In 2023, we faced some challenges with finalising the asset management plan scenario for our budgets. This included upgrading our financial system which led to challenges with allocating the labour component to our operations and maintenance (MSL) budgets and growth timing for some programmes changed.

Types of changes to budgets:

Changes in any of our work programmes fall into one or more of the following categories:

- Budget decrease – Where there has been a significant decrease in budgets over the next 10 years.
- Budget increase - Where there has been a significant increase in budgets over the next 10 years.
- Not adopted – Where a programme has not been adopted for this 10 year plan.
- Introduced – Where a new programme has been introduced as result of consultation or when an existing programme has been recategorised, for example from a capital new growth programme to a capital new level of service programme.
- Programme timing change - Where there has been a programme timing change within a 10 year period.

Programmes that did not have any changes have been omitted from this addendum view.

Operations and Maintenance

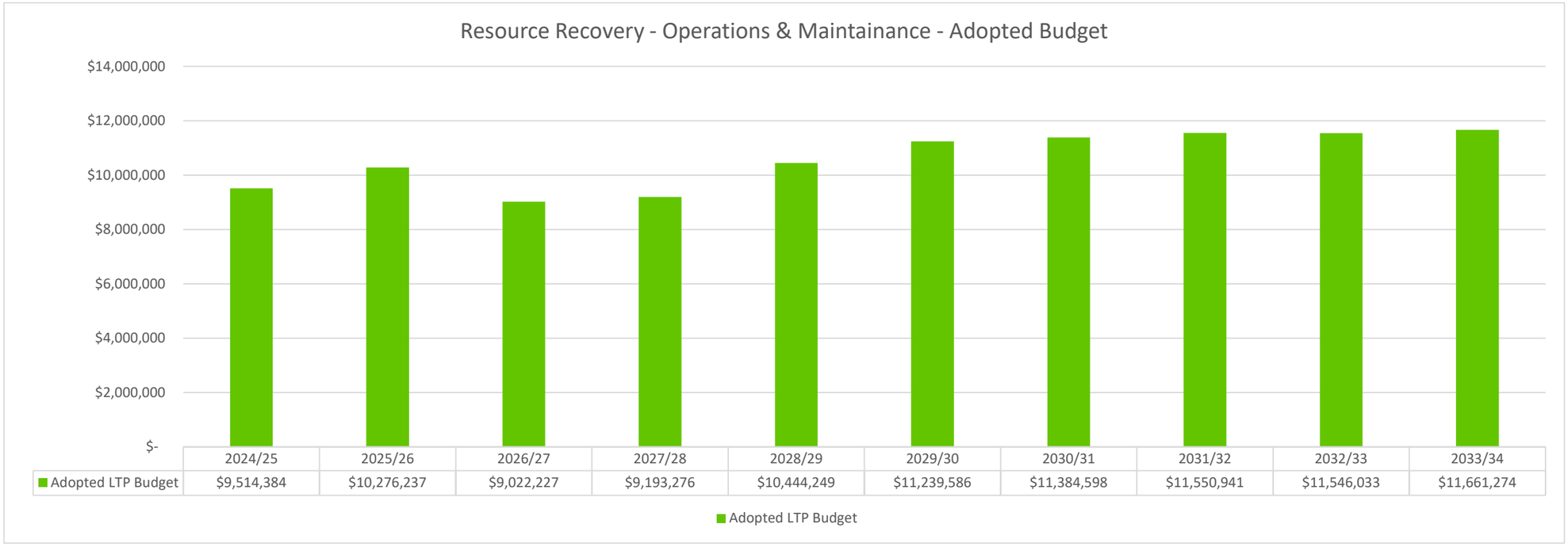
Operations and maintenance budgets contained in the Resource Recovery Asset Management Plan 2024 were based on best available data at 30 August 2023, when the draft plan was finalised. At that time internal overheads and were under development and were not included in estimates. Subsequently these budgets have been refined to ensure that they reflect a true and fair view of estimated expenditure.

There has been no material change to budgets except those relating to allocation of labour.

Consequential Operational budgets are operational costs associated with the operation of new assets built from Capital New LOS, and Growth. Change to Consequential Operational Budgets will follow any changes to Capital New budgets. Consequential Operational Budgets will follow any changes to timing of Capital New budgets.

A large proportion of the operational and maintenance is due to consequential operating costs. We will have several new assets (such as a new trommel for our and additional resource recovery services being proposed. The graph above shows a forecast increase in investment occurring at year six (2029/30). This is primarily being driven by the proposed kerbside food waste collection and processing service which is likely to become a legislative requirement. This investment would introduce a whole new recycling service and associated running costs. Other Operations and Maintenance costs are forecast to remain steady throughout the first ten years.

The graph below shows the adopted budget for operations and maintenance of our assets including consequential operating costs (Consequential OpEx) over the next 10 years.



The table below shows the breakdown of our operations and maintenance into key subcategories for:

Resource Recovery	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10
Adopted Budget LTP View	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**
Admin and other	$2,862,067	$2,641,342	$2,576,318	$2,702,166	$2,794,675	$2,999,618	$3,078,267	$3,257,267	$3,253,080	$3,302,379
Consultancy	$452,000	$205,077	$229,016	$180,466	$180,181	$179,671	$179,264	$178,800	$178,271	$177,837
Maintenance	$2,750,690	$3,215,715	$2,565,813	$2,607,860	$3,155,347	$3,476,072	$3,528,684	$3,498,626	$3,486,448	$3,537,978
Remuneration	$3,716,898	$3,630,639	$3,630,116	$3,629,558	$3,628,936	$3,627,712	$3,626,733	$3,625,579	$3,624,207	$3,623,059
Consequential OpEx	$0	$737,000	$72,500	$80,000	$687,500	$952,600	$965,700	$978,800	$991,900	$1,005,000
Resource Recovery Total	**$9,781,655**	**$10,429,774**	**$9,073,763**	**$9,200,050**	**$10,446,639**	**$11,235,673**	**$11,378,647**	**$11,539,072**	**$11,533,905**	**$11,646,253**

Operational programmes

Operational programmes fund one-time projects completed within a set period and for a specific purpose. Operational programmes are not part of the usual operation and maintenance of an asset. These programs include budgets for things like feasibility studies, resource consent applications, capacity modelling and management plans.

The tables below show changes to the proposed budgets for operational programmes during the development of the Long-Term Plan (LTP).

Operational programmes provide funding for specific operational activities that fall outside of the definition of operation and maintenance of the asset. They relate to programmes which are completed within a defined period of time and have a specific purpose, as distinct from general operations and maintenance. These programmes often support other capital programmes and may be capitalised in the future, if they are required to enable the capital works to take place. Examples include, but are not limited to:

- Feasibility studies and optioning for future capital works
- Resource Consent applications
- Capacity Modelling
- Reserve Management Plans

The tables below identify changes to proposed Operational Programme budgets through the development of the LTP.

Budget Decrease

There have been no budget decreases

Budget Increase

There have been no budget decreases

Programme Timing Change

There have been no timing changes to any programme

Introduced

Over the next 10 years we have only introduced one operational programme worth $50,000 which is a data platform to license waste collectors in the city.

Programme Type: Operational Programme															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels on Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
2506 - Resource Recovery - Data Platform to Licence Waste Collectors	LTP View	$0	$0	$50,000	$0	$0	$0	$0	$0	$0	$0	$50,000	This programme exists to meet an action in the resource recovery plan.	Will be unable to meet an action in the current Resource Recovery Plan	None

Not adopted

All operational programmes were adopted

Renewals

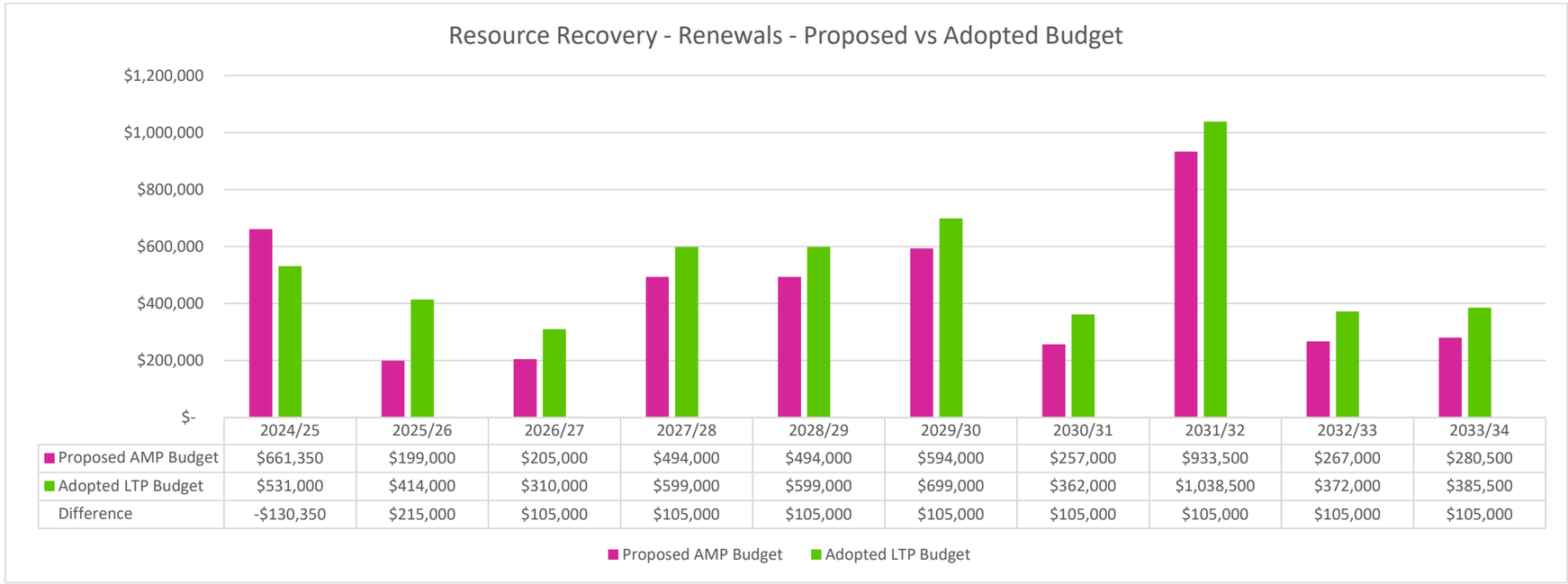
Funding overall across the LTP period are increasing for Resource Recovery renewals. The adopted renewals budget has increased by $925,000 over the next 10 years. The majority of the increase can be attributed to public space rubbish and recycling renewals. We will focus on bin /renewals rather than adding new locations for public space bins or 2031/32 there is a large increase in renewals compared to earlier years, which can be attributed to renewing our processing machinery for our composting service activity.

As mentioned above, part of the preparation of the draft LTP a resolution was passed to prepare draft budgets that stepped renewals from a Council wide prescribed budget value in Year 1 to a prescribed budget value in Year 10[8]. These draft budgets were prepared and subsequently accepted.

An analysis on the impacts of the resolution was also requested, which can be found here: Agenda of Council - Wednesday, 13 December 2023 (infocouncil.biz). The attachment entitled 'Impact and Risks of moderating the Capital Renewals Programme' details the impacts of the changes to the budgets, including risk implications and potential impact on levels of service. The primary impacts are:

- The overall condition of all our assets will continue to decrease resulting in increasing risk of asset failure and unplanned service disruptions
- Addressing the backlog of renewals will be deferred, so that the cost of those renewals will become an issue for future generations

The graph below visualises the changes between our proposed AMP budget and the adopted LTP budget.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Proposed AMP Budget	$661,350	$199,000	$205,000	$494,000	$494,000	$594,000	$257,000	$933,500	$267,000	$280,500
Adopted LTP Budget	$531,000	$414,000	$310,000	$599,000	$599,000	$699,000	$362,000	$1,038,500	$372,000	$385,500
Difference	-$130,350	$215,000	$105,000	$105,000	$105,000	$105,000	$105,000	$105,000	$105,000	$105,000

The tables below show changes to the proposed budgets for renewal programmes during the development of the Long-Term Plan (LTP).

Budget Decrease

There have been no budget decreases

[8] Minutes of Extraordinary Council Meeting 29 November 2023, Clause 193-23, Attachment 1a: That a version of the draft LTP Capital Renewal programme starting at $32M in Year 1 and stepping up to no more than $40M per annum by Year 5 and no more than $55M per annum by Year 10 be prepared for consideration alongside Opex programmes for Council meeting of 13 December 2023.https://palmerstonnorth.infocouncil.biz//Open/2023/11/COU_20231129_MIN_11232_EXTRA.PDF

Budget Increase

There will be an increase of $925,000 over the next 10 years in our public space and rubbish and recycling bin renewals.

Programme Type: Renewals Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
1368-City-wide - Public Space Rubbish & Recycling Bins Renewals	AMP View	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	$45,000	**$450,000**	We increased the budget so we can more accurately reflect the replacement programme. Renewals programme 506 to more accurately reflect the replacement programme.	Good opportunity to introduce rolling renewals every 10 years. New style bins are larger 80L and have smaller shoots, visually identifiable this will reduce the chances of household rubbish being disposed of. Colours based on general standards.	None
1368-City-wide - Public Space Rubbish & Recycling Bins Renewals	LTP View	75,000	$100,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	**$1,375,000**			

Programme Timing Change

There have been no timing changes

Not adopted

All renewal programmes were adopted.

Capital New

The overall level of proposed varies throughout the ten years. The significant increase in years three and four is due to the costs associated with the implementation of the food scrap collection service i.e. additional trucks, collection bins etc. A new recycling drop-off point is planned for 2025/26 and a major upgrade of the Material Recovery Facility, where we process the city's recycling, is proposed to occur in 2027/28. Every year there are minor new works associated with providing for growth (new bins and crates), landfill landscaping and public space bins.

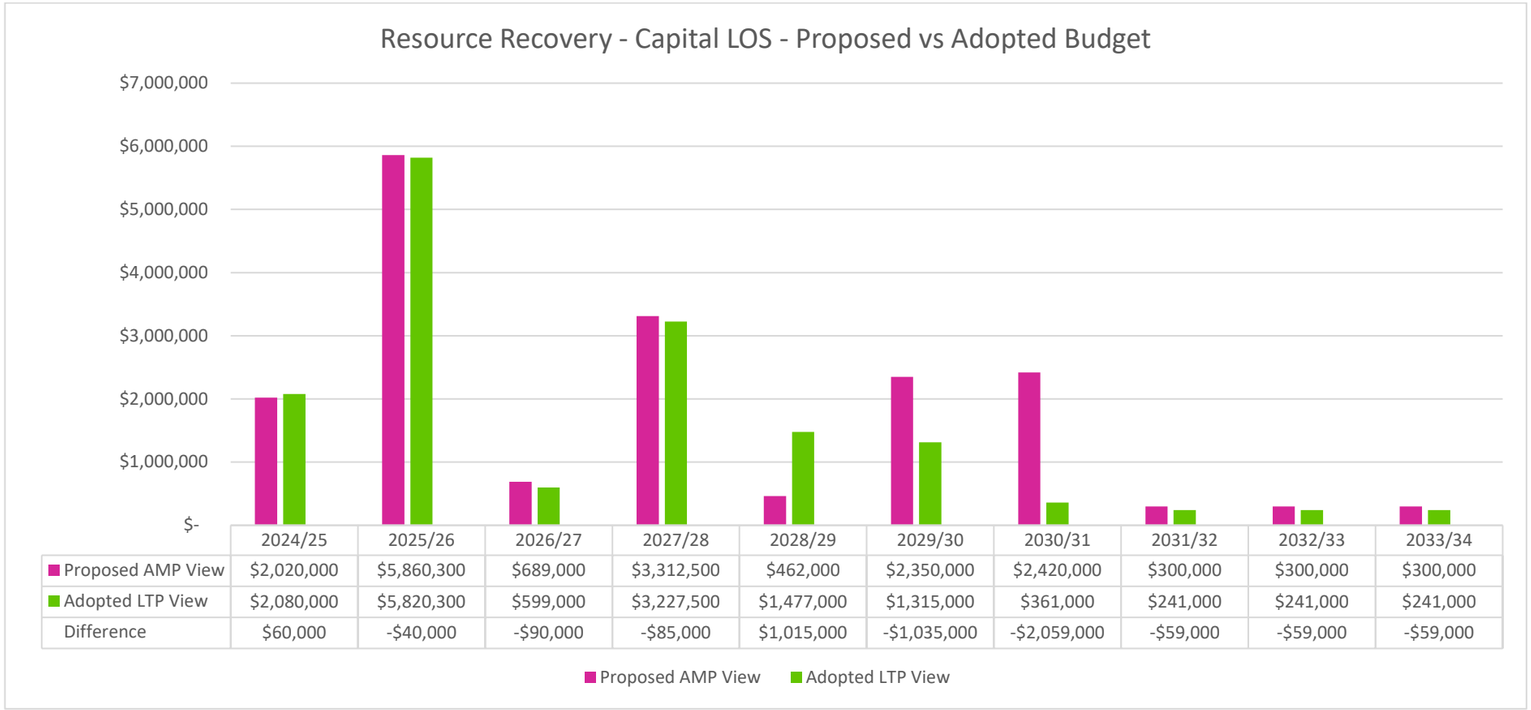
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Proposed AMP Budget	$2,110,000	$5,950,300	$779,000	$3,407,500	$1,657,000	$3,545,000	$2,541,000	$421,000	$421,000	$421,000
Adopted LTP Budget	$2,080,000	$5,820,300	$599,000	$3,227,500	$1,477,000	$1,315,000	$361,000	$241,000	$241,000	$241,000
Difference	-$30,000	-$130,000	-$180,000	-$180,000	-$180,000	-$2,230,000	-$2,180,000	-$180,000	-$180,000	-$180,000

Capital New - Growth

In our Resource Recovery Asset Management Plan – some programmes were re-categorised from a Capital New Growth programme to a Capital New Level of Service. All re-categorised programmes had no budget changes. Affected programmes are noted in the section - Capital New – Levels of service 'Introduced' programmes.

Capital New - Levels of Service

The graph below visualises the changes between our proposed AMP budget and the adopted LTP budget.



The tables below show changes to the proposed budgets for capital new programmes during the development of the Long-Term Plan (LTP).

Budget decrease

Over the next 10 years, there will be a budget decrease of $5,700,000 in our capital level of service programmes. A large portion of the decrease is programme 2337 – Tip Road Development. We have identified an opportunity for the majority of the programme to be completed via the Council Roading Maintenance Contract under the Transport and Development Team. The other portion of the decrease is programme 506 - City-wide - Public Space Rubbish & Recycling Bins Development. We reduced the budget and moved the rest of the budget into renewals.

Programme Type: Capital New - Levels of Service Programmes															
Program Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
2337 - Tip Road Development	AMP View	$0	$0	$120,000	$0	$0	$2,000,000	$2,000,000	$0	$0	$0	**$4,120,000**	The road will not be maintained under the roading contract.	Opportunity to create efficiency of cost and time in asset lifecycle management of this road	None
2337 - Tip Road Development	LTP View	$0	$0	$120,000	$0	$0	$0	$0	$0	$0	$0	**$120,000**			
506-City-wide - Public Space Rubbish & Recycling Bins Development	AMP View	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	$280,000	**$2,800,000**	Reduced programme and instead moved to renewals programme 1368 to more	Good opportunity to introduce rolling renewals every 10 years. New style bins are larger (80L) and have smaller chutes, visually	None

Programme Type: Capital New - Levels of Service Programmes														
Program Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
506-City-wide - Public Space Rubbish & Recycling Bins Development	LTP View	$150,000	$150,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	**$1,100,000**	accurately reflect the replacement programme.	identifiable; this will reduce the chances of household rubbish being disposed of. Colours based on general standards	

Introduced

The table below shows the summary of an introduced programme in our capital new budgets.

**This programme was recategorised from a 'Capital New Growth' programme to a 'Capital New Level of Service' programme. There was no budget change. These introduced programmes exist to meet level of service shortfalls or where central government regulations have changed which requires us to now provide a new service.

Programme Type: Capital New - Levels of Service Programmes														
Program Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
2227 - Resource Recovery Centre Resilience Improvements	LTP View	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$50,000**	Introduced a programme to help with continuous tracking inbound and outbound material volumes – so we can charge customers accurately. This will help us to report to MFE as this is likely to become a legislated activity in the future.	Failure of the current systems will result in the inability to track inbound and outbound material volumes. This is vital for reporting to MFE (potentially to be a legislated requirement in the coming years). Also, would prevent us from being able to accurately charge customers.	Able to meet agreed LOS
**1373 - Urban Growth - Recycling - City-wide Drop Off Facilities - Development	AMP View	$0	$0	$0	$0	$1,100,000	$1,100,000	$0	$0	$0	$0	**$2,200,000**	This programme was re-categorised from a Capital New - Growth programme within the AMP View Budget to a Capital New - Level of Service programme within the Adopted LTP Budget View. There was no budget change.	Better alignment with strategic actions to meet levels of service for waste diversion - via the provision of more drop-off facilities.	Able to meet agreed LOS
**1373 - Urban Growth - Recycling - City-wide Drop Off Facilities - Development	LTP View	$0	$0	$0	$0	$1,100,000	$1,100,000	$0	$0	$0	$0	**$2,200,000**			
**2342 - Urban Growth – Food Scraps - City-Wide Food Waste Bins and Caddies	AMP View	$0	$0	$0	$0	$0	$0	$26,000	$26,000	$26,000	$26,000	**$104,000**	This programme was re-categorised from a Capital New - Growth programme within the AMP View Budget to a Capital New - Level of Service programme within the Adopted LTP Budget View. There was no budget change. This has now changed to LOS introduced to meet legislative requirements from Central Government, which now requires all Councils with urban areas with a population over 1000 to provide a kerbside food waste collection service by 2030.	Better alignment with strategic actions to meet levels of service and meet legislative requirements for provision of food waste collection by 2030.	Able to meet agreed LOS
**2342 - Urban Growth – Food Scraps - City-Wide Food Waste Bins and Caddies	LTP View	$0	$0	$0	$0	$0	$0	$26,000	$26,000	$26,000	$26,000	**$104,000**			
**657 - Urban Growth - Recycling - City-wide Wheelie Bins and Crates	AMP View	$90,000	$90,000	$90,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	**$935,000**	This programme was re-categorised from a Capital New - Growth programme within the AMP View Budget to a Capital New - Level of Service programme within the Adopted LTP Budget View. There was no budget change.	Better alignment with strategic actions to meet levels of service for more provision of drop-off recycling facilities.	Able to meet agreed LOS
**657 - Urban Growth - Recycling - City-wide Wheelie Bins and Crates	LTP View	$90,000	$90,000	$90,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	**$935,000**			

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