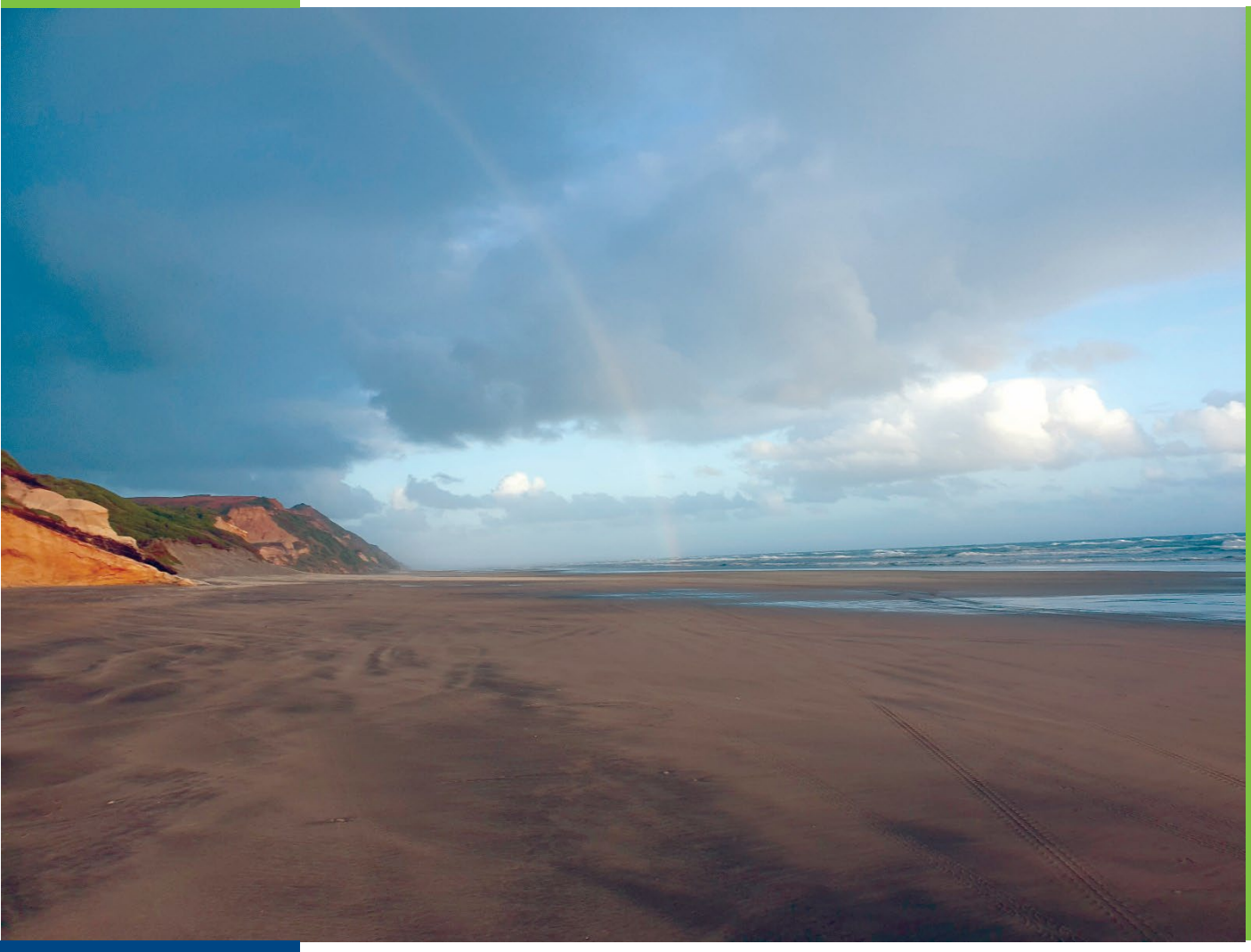
KAIPARA DISTRICT
Kaipara te Oranganui • Two Oceans Two Harbours

Waste Management and Minimisation Plan 2024-2030



KAIPARA DISTRICT
Kaipara te Oranganui • Two Oceans Two Harbours

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Foreword

This plan is in three parts:

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

Part B: Action Plan: sets out the proposed actions to be taken to achieve the goals, objectives, and targets set out in Part A. Part B also shows how we will monitor and report on our actions and how they will be funded.

Part C: Supporting information: contains the background information that has informed the development of our Waste Management and Minimisation Plan (WMMP). Most of this information is contained in the joint Waste Assessment (WA).

Part A – Strategy

1 Introduction

Kaipara District Council (Council) has a statutory responsibility to promote effective and efficient waste management and minimisation within the Kaipara District (Section 42, Waste Minimisation Act 2008 (WMA)). In order to do this, Council is required to adopt a waste management and minimisation plan (WMMP) under Section 43 of the Act.

This WMMP is a guiding document which identifies Council's vision, goals, objectives, targets and methods for achieving effective and efficient waste management and minimisation. It also provides information on how Council intends to fund the activities of the WMMP over the next six years.

In addition to the legislative framework in which this WMMP has been developed, it has also been developed in the context of the New Zealand Waste Strategy 2023 (NZWS). The NZWS sets out the long-term policy priorities for waste management and minimisation and has a vision for 2050:

> By 2050, New Zealand is a low-emissions, low-waste circular economy.
> We cherish our inseparable connection with the natural environment and look after the planet's finite resources with care and responsibility.

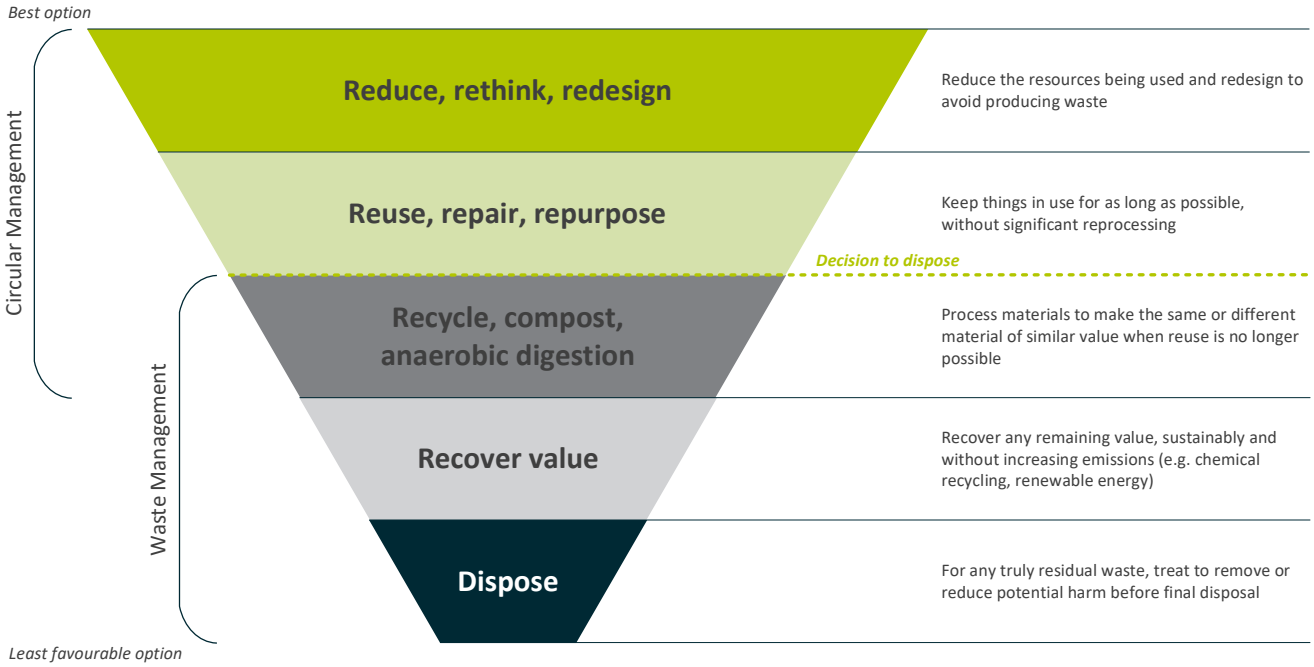
The NZWS has the following eight goals:

1. **Systems:**
   The strategic planning, regulatory, investment and engagement systems are in place and operating to drive and support change
2. **Infrastructure:**
   We have a comprehensive national network of facilities supporting the collection and circular management of products and materials
3. **Responsibility and accountability:**
   We all take responsibility for how we produce, manage and dispose of things, and are accountable for our actions and their consequences
4. **Using less:**
   We use fewer products and materials, and using them for longer, by making them more durable, and repairing, reusing, sharing and repurposing them
5. **Resource recovery systems:**
   Resource recovery systems are operating effectively for core materials and across all regions
6. **Recovering value:**
   We look for ways to recover any remaining value from residual waste, sustainably and without increasing emissions, before final disposal
7. **Emissions:**
   Emissions from waste are reducing in line with our domestic and international commitments

8. **Contaminated land:**
   Contaminated land is sustainably managed and remediated, to reduce waste and emissions and enhance the environment

Council has also considered the waste minimisation hierarchy of reduce, reuse, recycle, recover, treatment and disposal in the development of this WMMP (Figure 1). This plan should be read in association with the Waste Assessment (WA) attached as Part C to this WMMP.

Figure 1 Circular management and waste management within the waste hierarchy



2 What informs the plan?

There is a clear legislative and policy framework within which the Council provides waste services and facilities in Kaipara district. A summary of the applicable legislation is detailed below.

Key legislation affecting waste is:

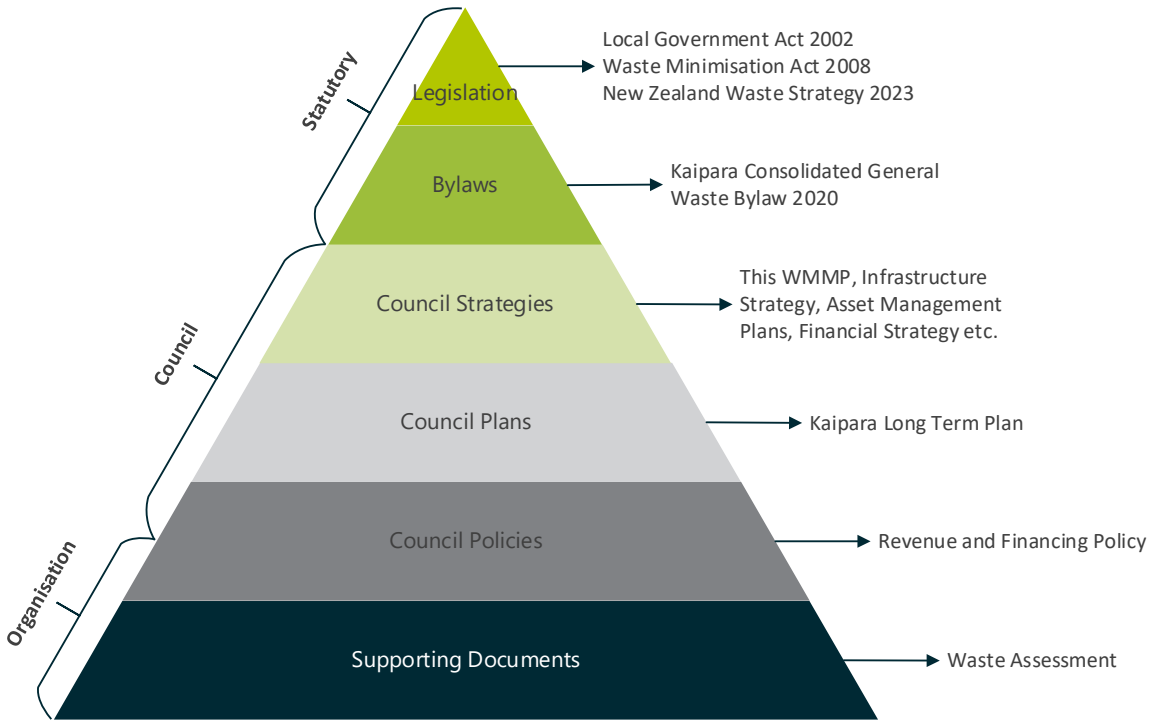
- Waste Minimisation Act 2008
- Local Government Act 2002
- Resource Management Act 1991
- Climate Change Response Act 2002 (Emissions Trading)
- Litter Act 1979
- Health Act 1956.

While the WMA sets out the legislative requirement for solid waste, the NZWS provides the government's strategic direction for waste management and minimisation in New Zealand. The goals of this WMMP replicate those from the NZWS.

Local, regional, and national plans and policies affect the Council's provision of waste and diverted material services. Primarily, they are requirements under the WMA and the Local Government Act 2002.

Figure 2 shows the council's planning and policy framework with alignment from legislative requirements to operational policies. There needs to be alignment between the council's key planning documents this WMMP, bylaws and the operational policies.

Figure 2 Planning framework for strategic documents



3 Vision, goals, objective, policies, and targets

Working together, Council and the community can achieve more effective and efficient waste management and minimisation in the District. Council is proposing the following vision, goals, objectives, and targets. Taken together these form the strategy for Council's WMMP.

3.1 Vision for the future

Our approach for waste minimisation and management in Kaipara District aligns with the New Zealand Waste Strategy Vision:

"By 2050, Kaipara District is a low-emissions, low-waste society built upon a circular economy"

3.2 Goals, objectives, policies and targets

3.2.1 Goals and objectives

Council has adopted the NZWS 2030 goals and developed our own objectives that support the achievement of these goals. The NZWS states that "By 2030, our enabling systems are working well, and behaviour is changing". The NZWS goals are shown in Table 1, together with our objectives.

Table 1 NZWS goals and Kaipara objectives

#	New Zealand Waste Strategy Goals	Council Objectives
1	**Systems** The strategic planning, regulatory, investment and engagement systems are in place and operating to drive and support change	A. LTP and WMMP provide long-term guidance. B. Focus on services that enable staged goals by 2030, 2040, 2050 C. Collaborate and develop internal and external relationships that support initiatives and ultimately further waste diversion.
2	**Infrastructure** We have a comprehensive national network of facilities supporting the collection and circular management of products and materials	D. Council and private facilities support collection and circular management of products and materials. E. Local planning provisions support the circular economy.
3	**Responsibility and accountability** We all take responsibility for how we produce, manage and dispose of things, and are accountable for our actions and their consequences	F. Deliver behaviour change programmes to increase awareness and accountability to better support waste minimisation.
4	**Using less** We use fewer products and materials, and use them for longer, by making them more durable, and repairing, reusing, sharing and repurposing them	G. Support local redesign, repair, reuse, sharing and repurposing initiatives. H. Education programs to raise awareness in the community.
5	**Resource recovery systems** Resource recovery systems are operating effectively for core materials and across all regions	I. Kerbside services are supported by resource recovery for use in region (organics, C&D) or consolidation (plastics) of out of region circular processing.

#	New Zealand Waste Strategy Goals	Council Objectives
6	**Recovering value** We look for ways to recover any remaining value from residual waste, sustainably and without increasing emissions, before final disposal	J. Look to recover any remaining value from residual waste prior to disposal to landfill. K. Further opportunities in the residual waste sent to Puwera Landfill.
7	**Emissions** Emissions from waste are reducing in line with our domestic and international commitments	L. Organics collections in Dargaville and Mangawhai by 2030 will support emission reduction. M. Reduce organic waste production and disposal from both residents and businesses.
8	**Contaminated land** Contaminated land is sustainably managed and remediated, to reduce waste and emissions and enhance the environment	N. Identify and sustainably manage contaminated land in KDC, including vulnerable landfills. O. Encourage a reduction in soil disposal volumes to landfill. P. Identify and remedy closed landfill sites to withstand climate change impacts.

3.2.2 Our targets

Council's waste minimisation targets are set out in Table 2. The current performance is assessed, and targets are set to align with the NZWS.

Table 2 Kaipara District's waste minimisation targets

NZWS target	Local annual target (kg per capita, tonnes, %)	Kaipara District Council	
		2022/23	Target 2030
10% reduction in waste generation	Council received waste	261 kg per capita[1]	235 kg per capita
	Total material received transfer stations	>7,000 tonnes	<6,300 tonnes
30% reduction in final disposal	Disposal to landfill	166 kg per capita[2]	116 kg per capita
	Diversion in kerbside collections: 30% by 2026, 40% by 2028 and 50% by 2030	36%	>50%
	Disposal to landfill	>4,500 tonnes	<3,000 tonnes
30% reduction in biogenic methane emissions	% total organics in kerbside rubbish collection	>40%	<20%

[1] Calculation of kg per capita is based on all refuse and recycling through Council RTS' from July 2022 to June 2023 and an estimated population of 27,200 people.

2 Based on previous 12 months data (July 2022 to June 2023)

4 What happens with our waste?

4.1 Overview of existing waste management and minimisation infrastructure and services

A summary of the current services provided by Council and non-council providers is outlined below. For a detailed description of council and non-council solid waste services, refer to the joint WA in Part C.

4.1.1 Services provided by Council

Council provides weekly kerbside collections of refuse and recycling bags in most townships and to select rural properties on the collection routes. These services are contracted to Kaipara Refuse. Council also ensure that two transfer stations are operational to receive waste dropped off by residents, these are in Dargaville and Hakaru, and operated by Kaipara Refuse and Northland Waste respectively.

Council provides funding to Sustainable Kaipara for education and behaviour change programmes to encourage the community to take responsibility for their own waste. In order to promote waste minimisation and composting practices, Sustainable Kaipara provides awareness programmes, education initiatives, and organises events targeting local community groups, school and businesses.

Council also manages 20 closed landfills across the district, ensuring discharges are managed and the impacts of climate change minimised.

Council collections are funded predominantly through user charges, with a small annual subsidy for recycling services funded via the waste levy. Transfer stations are funded through a combination of general rates, and the gate fee charges applied by those disposing of their waste (Figure 7 shows Dargaville Transfer Station).

4.1.2 Non-council provided services and facilities

Kaipara Refuse, Northland Waste and other private waste companies offer a variety of private collection services within the district. These services cater to both residential and commercial entities. Residential services typically include refuse wheelie bins, green waste wheelie bins, recycling crates, and general waste skips for waste disposal. Commercial services typically include large refuse wheelie bins, front load bins, skip bins, hook bins, recycling-specific bins, tailored to the specific needs of businesses.

4.2 Public health protection

The range of public and private waste services in the Kaipara District ensures public health will be adequately protected in the future. The community has access to council or privately-owned collection services for refuse and recycling and can use the two transfer stations sites to drop off waste and diverted material, including hazardous waste. Further waste minimisation is achievable as outlined in this plan. The Waste Assessment of the Kaipara District Council has been forwarded to Te Whatu Ora Tai Tokerau District Health Board for comment. No feedback has been received by Council.

4.3 Volume and composition of our waste

During 2022, Kaipara achieved an overall diversion rate of 36%. This is above the national target for 30% kerbside diversion by 2026, but short of the increased targets of 40% by 2028 and 50% by 2030. There are opportunities for Council to maintain this performance and increase diversion to meet the future targets.

Total waste in Council-provided bags for refuse and recycling are shown in Figure 3.

Figure 3 Summary of waste in Kaipara[3]

The composition of kerbside refuse from Kaipara is shown in **Error! Not a valid bookmark self-reference.**. Of this, more than 80% of the waste in the refuse bags could be diverted to recycling or organic streams. Figure 5 shows that 40% of our waste is recyclable (paper & cardboard, plastic, glass, other recyclables) and 41% could be composted (putrescibles).

[3] For 2021/22.

Figure 4 Refuse bag composition from a waste audit in 2022

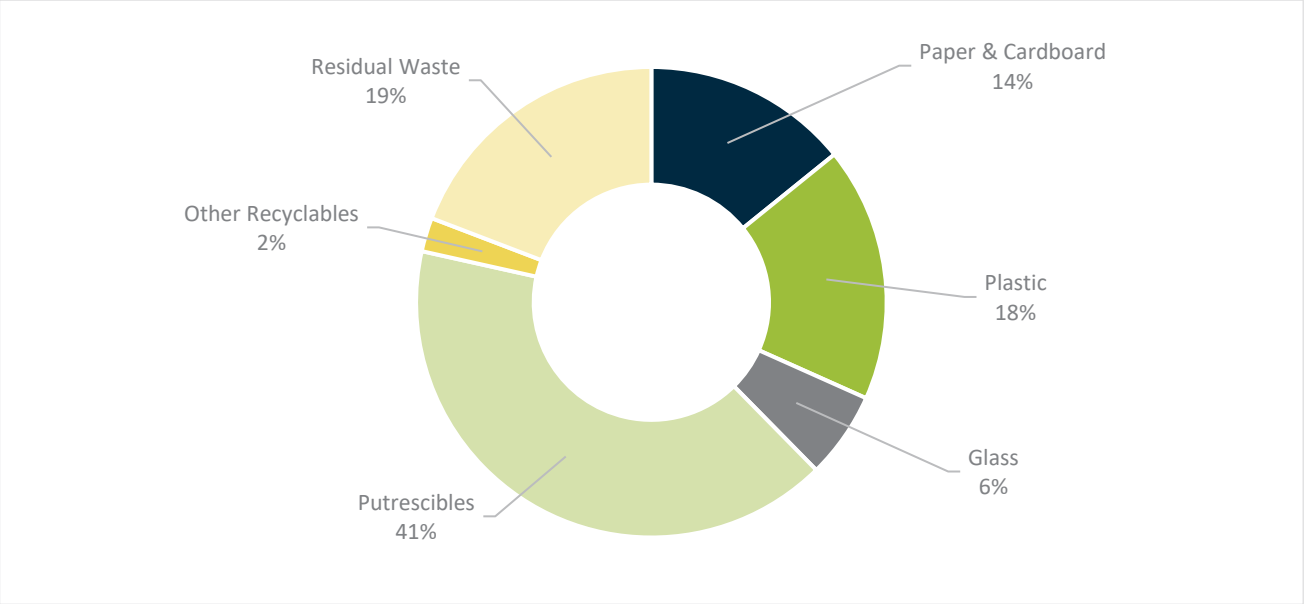
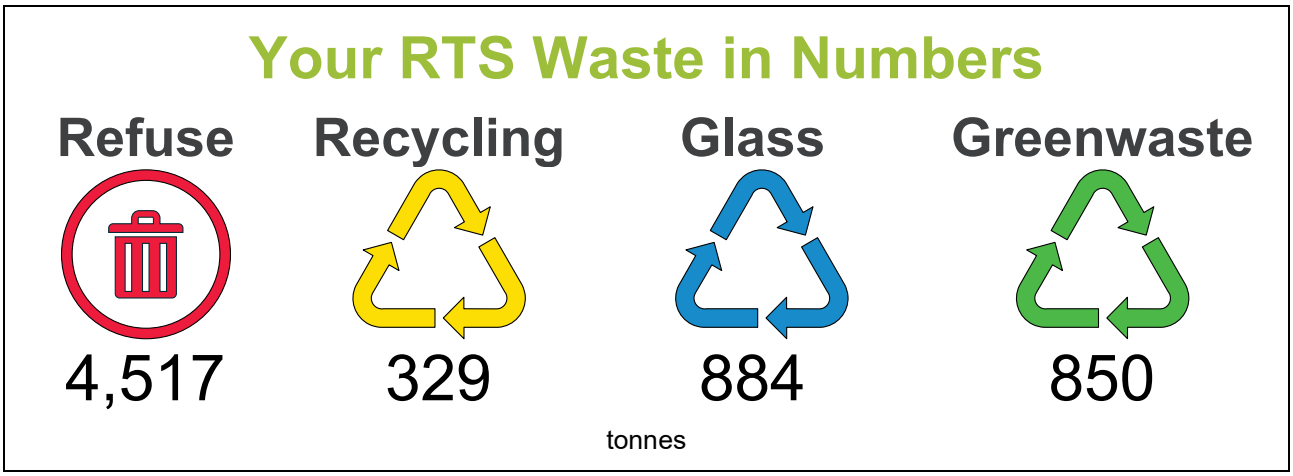


Figure 5 Diversion potential from refuse bags

Our two transfer stations receive, process, and enable efficient waste services for the community. The waste types and volumes processed through these facilities are highlighted in Figure 6.

Figure 6 Total waste from Kaipara's Refuse Transfer Stations



In addition to the four waste streams in Figure 6, 281 tonnes of scrap metal, 166 tonnes of wood and 63 tonnes of other material are diverted via the transfer stations. Other materials included silage wrap and other plastic from farmers and growers in the region, and diversion at the Dargaville RTS reuse shop (appliances, batteries and gas bottles). Dargaville Transfer Station reuse shop is shown in Figure 7.

Figure 7 Dargaville Transfer Station

4.4 Cost of the current level of service

Council provides its waste services and facilities at an annual cost of $1.1Million (FY2021/2022). Funding is predominantly provided through general and targeted rates, with some user charges (Table 3). Solid waste accounts for 1.4% of Council's total operating costs and 3.7% of Council's rates funding.

Table 3 Council services currently provided and their funding methods

Council Service	Funding Methods
Waste minimisation education, promotion, enforcement (e.g. by law), communication, monitoring and policy development	Waste levy, central government funds/ grants, general rates, fees and charges
Kerbside collection of refuse and recycling	User pays for purchasing Council bags
Transfer Station / Resource Recovery Parks	General rates, fees and charges
Provision of public rubbish bins	General rates

5 How much better could we do?

5.1 Council's role

In order for Council to achieve our future diversion targets set by the NZWS, the District needs to make substantial changes to how it manages and minimises waste. Council's role in supporting the community make this change includes a broad range of actions using the following approaches:

1. Influencing behaviours
2. Supporting actions by others
3. Providing Council waste services and facilities
4. Regulating how waste services are provided.

5.2 Identified district waste opportunities

Council has identified a range of waste issues and opportunities that currently face our communities. The type of services and facilities required is changing based on the need to reduce waste generation, extract more value from our waste materials and reduce biogenic methane emissions from waste.

1. Promote local circular economy initiatives

Currently, there are limited local circular initiatives promoted by businesses or Council. There is an opportunity to provide support to local and national initiatives to enable local circular developments. Community involvement and collaboration with neighbouring councils present opportunities to enable circular economic activity. Funding for these initiatives could be supported by government grants.

2. Promote better waste minimisation and recycling behaviour

There is an opportunity to promote waste minimisation and improve the recycling behaviour of residents, visitors and businesses across the District.

Including the community voice in what services are offered and how those services are implemented is important for sustained behaviour change.

3. Improve services for rural communities and holiday makers

Given the geographic spread of the region including rural communities, isolated marae and coastal holiday homes, there is a need to explore alternative Council services to meet community expectations, whilst also meeting waste reduction targets. Council can explore opportunities to better service rural and holiday communities.

4. Modernise waste services

There is an opportunity to improve diversion by aligning the Council's services with the NZWS to recover more recycling and organics from kerbside collections. A survey of refuse collected in the district showed 40% could be recycled and 41% composted.

Council's prior engagement with the community indicate strong support for modernising kerbside collections.

5. Manage environmental risks associated with closed landfills

The issue facing Council with closed landfills, both known and yet to be discovered, is the limited knowledge of these sites. Some of these closed landfills are located in coastal areas, at risk of contaminating the environment as a result of changes to climate conditions. The ongoing management of these risks and remediation efforts remain a priority for Council.

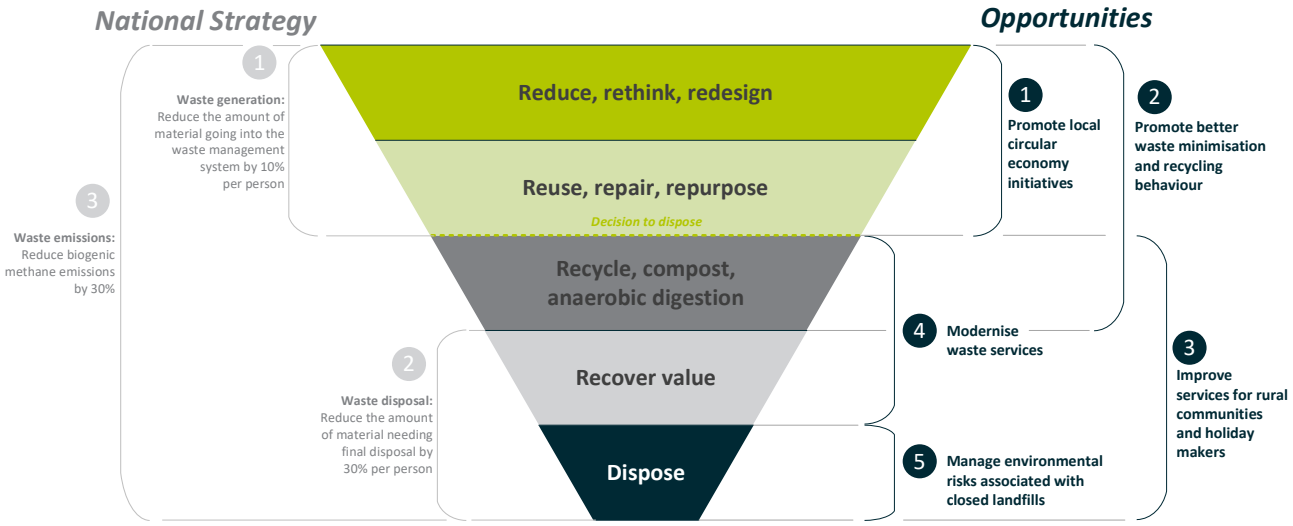
Part B – Action Plan

1 Action Plan Overview

Through the assessment of waste within the region, Council has identified five opportunities to reduce waste and recover more material from our waste stream. The opportunities are aligned with the waste hierarchy and the three NZWS goals, as shown in Figure 8.

Actions have been identified for each of these opportunities which are outlined in Table 4.

Figure 8 Opportunities aligned to the national waste strategy



Highlighting Our Guiding Principles:

Council also has a set of guiding principles that it will use when developing solid waste initiatives:

- Implementing a circular economy (by reducing waste).
- Managing impacts and adapting to climate change (by reducing greenhouse gas emissions and protecting infrastructure from the effects of climate change).
- Encouraging the community to take responsibility for minimising their own waste.
- Providing services that are safe (for collectors and public) and protect the environment from harm.

Table 4 Action items for Council to address and implement during the 2024-2030 WMMP *(All timeframes and funding methods are dependent on the final adopted Long Term Plan 2024 – 2027 and future Long Term Plans, consulted with rate payers with clear guidance regarding potential costs for the user)*

Action	New or Existing	Funding	Timeframe
1. Promote local circular economy initiatives			
1.1. Fund education programmes that raise awareness of circular economy principles	New	General rates	2024 to 2026
1.2. Promote local circular products and services and support these through grants (e.g. local composting initiative)	New	Waste Levy Funds	From 2025/2026
1.3. Support the implementation of national product stewardship schemes at a local level through awareness campaigns and use of Council facilities as part of collection networks	New	Product Stewardship Scheme Funds (not funded by Council)	Ongoing
2. Promote better waste minimisation and recycling behaviour			
2.1. Continue to provide Kaipara-specific education programmes that target community and businesses to help reduce waste and recycle correctly	Existing	General rates & Waste Levy Funds	Ongoing
2.2. Support Northland Regional Council's environmental education activities	Existing	General rates, NRC funding	Ongoing
2.3. Publish data on district waste diversion on Council's website	New	General rates	Implement from FY2025/2026 onwards
3. Improvements to rural communities and holiday maker services			
3.1. Investigate and implement Council approved options for new services that align with the NZ Waste Strategy direction.	New	Could be a combination of User pays, general or targeted rates (to be determined during LTP process)	Investigate FY2024/2025. Implement from FY2025/2026 onwards alongside kerbside service changes
3.2. Increase services during peak holiday periods			
3.2.1. Continue to service holiday areas at the start of the week	Existing	Targeted rates	Implement changes alongside

Action	New or Existing	Funding	Timeframe
3.2.2. Provide additional collections during peak periods in known holiday destinations	New	Targeted rates	kerbside service changes from FY2025/2026 (from July 2026)
3.2.3. Investigate introduction of put-back service for holiday homes	New	User charges	
3.2.4. Increase advertisement of existing drop-off facilities during peak periods (transfer stations)	Existing	General rates	
3.3. Rubbish bins service			
3.3.1. Continue to provide rubbish bins services in selected locations across Kaipara	Existing	General rates	Ongoing
3.3.2. Develop a new rubbish bins policy in consultation with the community	New	General rates	Develop in FY2024/2025, implementation thereafter
3.2.3. Investigate compacting rubbish bins to reduce maintenance requirements, and implement preferred approach	New	General rates and capital	Investigate in FY2024/2025, implement preferred option
4. Modernise waste services			
4.1. Improve waste services to align with New Zealand Waste Strategy and targets			
4.1.1. Implement Council approved kerbside collection option for general refuse	New	Determined through LTP consultation (User pays, government grant funding, General and/or Targeted rates	LTP consultation on options FY2023/2024 Implement preferred refuse and recycling collection option FY2026/2027 and food waste collection FY2029/2030
4.1.2. Implement Council approved kerbside collection option for recycling			
4.1.3. Implement food waste collections in mandated areas			
4.2. Update the District's Solid Waste Bylaw to support the change in collection services	New	General rates	FY2025/2026, following consultation on new kerbside services
4.3. Provide targeted information to affected residents on kerbside	New	Targeted rates	FY2025/2026 onwards, aligned

Action	New or Existing	Funding	Timeframe
service changes.			to introduction of new services
4.4. Encourage greater diversion at transfer stations			
4.4.1 Upgrade Dargaville RTS to enhance traffic flow, improve data collection and facilitate further diversion	Existing (Operate RTS) New (Upgrade RTS)	Fees and charges, general rates	Ongoing operation Upgrades: FY2024/2025 to 2026/2027
4.4.2. Upgrade Hakaru RTS (if land ownership transfer to Council) OR develop new Southern RTS (if Hakaru is not retained)	Existing (Operate RTS) New (Upgrade RTS)	Fees and charges, general rates	Ongoing operation Upgrades: 2025/2026
4.5. Continue to clear illegally dumped rubbish and abandoned vehicles	Existing	General rates	Ongoing
4.6 Investigate (with other local councils) Waste to Energy options	New	TBA	TBA
5. Manage environmental risks associated with closed landfills			
5.1. Continue to assess risks associated with closed landfills, including climate change adaptation, and quantifying the risk associated with unknown closed landfills	Existing	General rates	Ongoing
5.2 Continue to manage known closed landfills	Existing	General rates	Ongoing

1.1 Forecast future demand

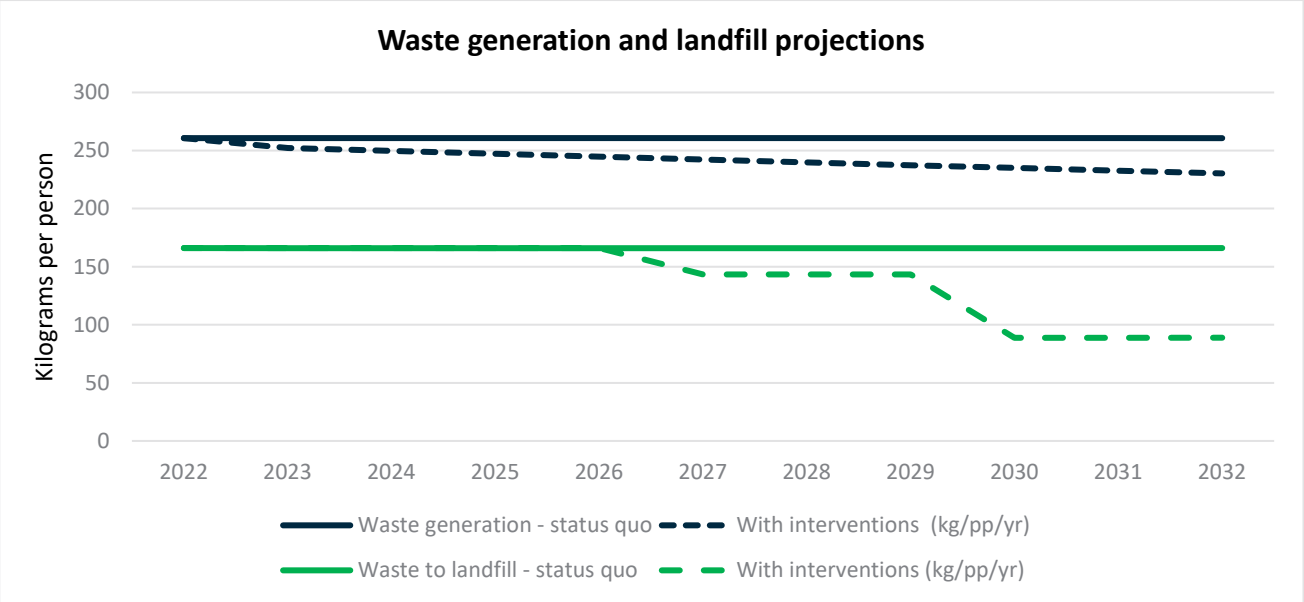
Demand on waste services and facilities is expected to growth along the same trend as population growth, at around 1.4% per annum in the short- to medium-term. In the long-term, the population of Kaipara district is predicted to increase from 27,200 in 2022 to around 35,500 by 2050.

The NZWS focuses on the urban-rural divide for household kerbside collections. Currently, only Dargaville and Mangawhai meet this classification, listed as small urban areas. Kaipara will need to roll out kerbside recycling collections by 2027 and organic collections by 2030 to meet the District and NZWS targets.

The reduction of waste generation by 10% and disposal to landfill by 30% is shown in Figure 9. The two step changes in reduced volume to landfill include an increase in recycling collections by 2027 followed by the introduction of organics collections by 2030.

The status quo scenario with no intervention would result in continued waste generation of around 260kg per person per year, with two thirds disposed directly to landfill. In order to achieve our updated targets, we will need to reduce total waste generated by 10%, to around 235kg per person per year by 2030. While doing this, we will also be required to achieve 30% diversion at the kerbside by 2026, increasing to 40% by 2028 and 50% by 2030. Currently, Kaipara achieves a total diversion rate of 36% which is higher than the 2026 target, however without implementing Council funded kerbside collection(s) in urban areas, together with additional interventions, we are unlikely to achieve the latter goals.

Figure 9 Projected waste generation and residual waste sent to landfill to meet targets



2 Funding

2.1 Funding the plan

The action plan will be funded using the suite of tools available to Council in the delivery of solid waste services. The activities will be funded by:

- General rate
- Targeted rate
- Fees and charges (including gate fees and user charges)
- Subsides and grants, including the Waste Levy Fund and other MfE grants
- Debt (if required for capital works).

2.2 Waste minimisation levy funding expenditure

Council will continue to use the Waste Minimisation Levy funding income to fund waste education, investigations, trials, and to fund capital expenditure for diversion facilities.

2.3 Waste Levy Grants

Section 47 of the WMA gives councils the ability to make grants to a person, organisation, or group to promote or achieve waste management and minimisation. Under this WMMP the Council will continue to give grants at its discretion and on any terms or condition it deems appropriate provided there is an allocated and approved budget for that activity. Specific grants (e.g. for local circular economy initiatives) will also be explored.

3 Monitoring, evaluating and reporting progress

3.1 Monitoring and evaluation

The Council intends to monitor and report on progress regarding the WMMP and will develop and implement a clear, transparent monitoring and reporting system. Accurate information on how services provided by council are performing is essential for monitoring the effectiveness of the Plan's vision, objectives, goals and targets, and planning for future demand.

Council's current level of service and performance measures are aligned with the 2021-2031 LTP and are focussed on reducing the residential waste to landfill. Council will review its performance measures as part of the 2024-2034 LTP to align with this WMMP.

Measures that provide a broader picture of the waste situation and how to minimise the amount of waste going to landfill will assist Council in identifying more targeted actions in the future. Data will be gathered through:

- Annual resident and ratepayer surveys
- Contractor reporting against key performance indicators
- Solid Waste Analysis Protocol Audits (SWAPs)
- Waste Assessments
- Consent compliance systems

3.2 Reporting

The Council will report progress of the implementation and effectiveness of this WMMP through:

- Annual Reports
- Monthly performance reports
- Council's website

The Council will also provide progress reports of expenditure of its waste levy funds to the Ministry for the Environment and provide data in accordance with the national reporting systems.

Glossary

Term	Definitions and abbreviations
Clean fill/clean fill material	Inert materials disposed of, into or onto land, at a consented cleanfill. Materials typically include construction and demolition waste such as concrete, uncontaminated soil and rock.
Commercial waste	Waste from premises used wholly or mainly for the purposes of trade or business, recreation or entertainment, excluding, mines, quarries and agricultural waste. May also include some household waste collected by commercial operators.
Diverted material	Anything no longer required for its original purpose and, but for commercial or other waste minimisation activities, would be disposed of or discarded, and includes any materials that are recyclables, compostable, or can be recovered and/or re-used, as determined by the Council by resolution.
Hazardous waste	Waste that is potentially harmful to human and/or environmental health. It typically has one or more of the following hazard properties: explosive, flammable, oxidising, corrosive, radioactive, toxic or ecotoxic, or it may react with air or water to have one of these properties.
Household waste	Solid waste generated by households. Household waste does not include divertible waste, hazardous waste, commercial waste, prohibited waste, trade waste or liquid waste of any nature.
Organic waste	Compostable materials that are organic in origin and appropriate to be used as feedstock for composting and includes greenwaste and food waste.
Recycling	The reprocessing of waste or diverted material to produce new materials.
Resource Recovery Park (RRP)	A facility where solid waste materials such as residual waste, construction and demolition waste, recyclables, organic wastes, and household hazardous wastes are delivered for sorting or before being taken away for treatment, processing, recycling or disposal, and which may also include a retail outlet for the re-sale of used goods and materials deposited at the site.
Reuse shops	Items that are salvaged or diverted from the waste stream undergo little or no modification and are sold at shops run by the community or territorial authorities.
Solid Waste Analysis Protocol (SWAP)	A study to determine the composition of waste as described by Ministry for the Environment.
Refuse Transfer Station (TS)	A facility where solid waste materials such as residual waste, construction and demolition waste, recyclables, organics waste and household hazardous wastes are delivered for consolidation before being taken away for treatment, processing, recycling or disposal.
Waste	Anything disposed of, or discarded, and: • includes a type of waste that is defined by its composition or source (for example, organic waste, electronic waste, or construction and demolition waste), and • to avoid doubt, includes any component or element of diverted material, if the component or element is disposed of or discarded.
Waste disposal levy	A levy imposed under the Waste Minimisation Act 2008 on waste.
Waste minimisation	The reduction of waste and the reuse, recycling and recovery of waste and diverted material.

Part C – Supporting Information

Waste Assessment

MorrisonLow

KAIPARA DISTRICT

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Kaipara District Council

Waste Assessment

July 2023

Document status

Job #	Version	Written	Reviewed	Approved	Report Date
275702	Draft for discussion	Darren Tiddy	Alice Grace	04 July 2023	04 July 2023
275702	Final draft	Darren Tiddy	Alice Grace	24 July 2023	24 July 2023

Contents

Tables

Figures

1 Introduction

Territorial authorities are legally required to conduct a Waste Assessment and consider it in the review and preparation of their Waste Management and Minimisation Plans (WMMP). The Waste Minimisation Act 2008 (WMA) (s44) also requires that a Waste Assessment be notified with the draft WMMP for public consultation. This process is required every six years. This Waste Assessment is prepared for Kaipara District Council (KDC).

The recently announced New Zealand Waste Strategy (NZWS) provides a clear national strategy and targets for territorial authorities to work towards. This Waste Assessment provides a planning foundation for the updated WMMP draft prior to public consultation. KDC previously published a WMMP in November 2017 that will be updated based on this Waste Assessment, incorporate the NZWS and provide a clear waste management and minimisation plan going forward. The finalised WMMP will inform the development of the next Long Term Plan (LTP). This Waste Assessment was prepared as prescribed in section 51 of the WMA details:

- existing waste services and facilities provided in Kaipara District Council
- waste quantities, composition, and flows
- identified waste issues
- forecast future demand
- Councils' vision, goals, objectives and targets for waste management and minimisation
- an assessment of options to address the identified waste issues (a statement of proposals).

1.1 Document and accuracy

The tonnage information in this document was prepared using data gathered from Kaipara District Council records, the recent Solid Waste Analysis Protocol (SWAP) reports and Council's 2017-2022 WMMP.

The data presented in this document does not represent all the waste and diverted materials generated in the district. The amount of waste and diverted material can only be determined from the data managed by the Council and its contracted waste services providers. Only limited data was available from the private and commercial sector.

It is acknowledged a Waste Assessment is only a snapshot in time of the data collected for the purposes of future waste planning and preparation of the WMMP. Every effort has been made to provide a complete and accurate assessment. In some cases, data has been estimated or there are data gaps such as the volume and composition of privately collected rubbish. Details regarding any limiting factors in preparing the Waste Assessment that are deemed to have materially impacted on the completeness or accuracy of the data, forecasts, estimates or options assessment have been noted where appropriate.

The information contained in this Waste Assessment was considered appropriate when giving regard to:

- the significance of the information
- the costs of, and difficulty in, obtaining the information
- the extent of Councils resources
- the possibility Councils may be directed under the Health Act 1956 to provide the services referred to in that Act.

1.2 Acronyms

Key Term/Acronym	Definition
AIP	Action and Investment Plan
CERF	Climate Emergency Response Fund
CRS	Container return scheme
ETS	Emissions Trading Scheme
KDC	Kaipara District Council
LGA	Local Government Act
LTP	Long Term Plan
MfE	The Ministry for the Environment
MRF	Material Recovery Facility
NES	National Environmental Standards
NRC	Northland Regional Council
NZWS	New Zealand Waste Strategy 2023
PA	Per Annum
RMA	Resource Management Act 1991
RRP	Resource Recovery Park
RTS	Refuse Transfer Station
SWAP	Solid Waste Analysis Protocol (SWAP). Ministry for the Environment-led baseline programme to provide solid waste composition information
TA	Territorial Authority as defined in the Local Government Act 2002 as a city or district council
WA	Waste Assessment as defined by Section 51 of the Waste Minimisation Act 2008.
WMA	Waste Minimisation Act 2008
WMF	Waste Minimisation Fund
WMMP	Waste Management and Minimisation Plan as defined in Section 43 of the Waste Minimisation Act 2008

2 Legislative and Strategic Context

This section contains a short summary of the legislative and strategic context within which KDC will develop their Waste Assessment and WMMP.

2.1 Key legislation

The legal framework for waste management and minimisation in New Zealand is found in the combination of several Acts of Parliament. These Acts provide the legislative imperative and tools to support progress toward the high-level direction outlined in the NZWS. Therefore, careful attention is given to these in developing the Waste Assessment. The Acts that drive waste management and minimisation planning are:

- Waste Minimisation Act 2008
- Climate Change Response Act 2002
- Climate Change Response (Emissions Trading Reform) Amendment Act 2020 that updates the NZ ETS
- The Climate Change Response (Zero Carbon) Amendment Act 2019
- Local Government Act 2002
- Resource Management Act 1991 (RMA, as well as District and Regional Plans and designations and consents)
- Hazardous Substances and New Organisms Act 1996
- Health Act 1956
- Litter Act 1979
- Health and Safety at Work Act 2015.

It is noted that the RMA, WMA, and Litter Act 1979 are currently being revised or replaced with new legislation. Appendix B provides links to the primary legislation for further information.

2.2 New Zealand Waste Strategy

Waste management and minimisation in New Zealand is underpinned by the Government's 2023 NZWS. The NZWS sets out the long-term policy priorities for waste management and minimisation and has a vision for 2050:

> By 2050, New Zealand is a low-emissions, low-waste circular economy
> We cherish our inseparable connection with the natural environment and look after the planet's finite resources with care and responsibility

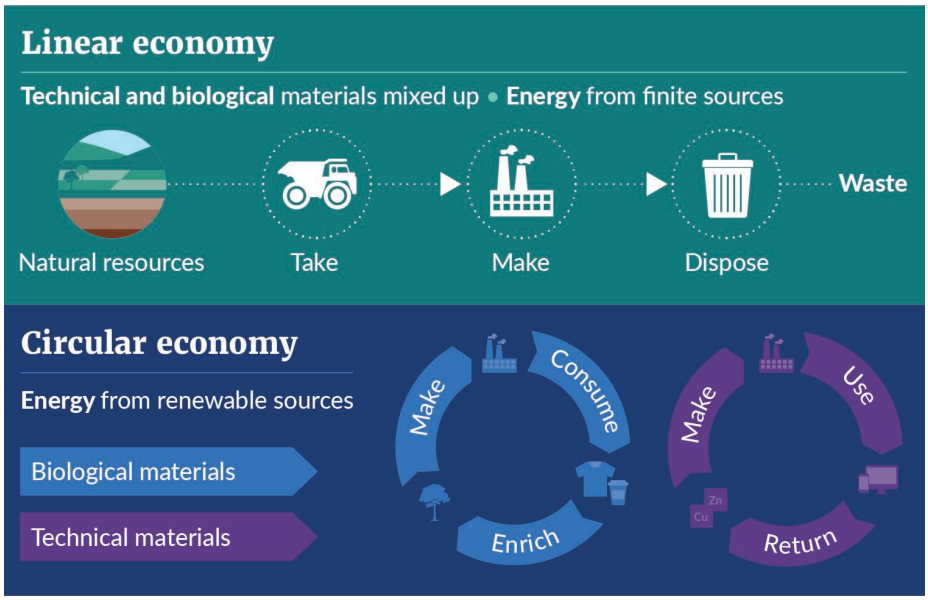
When developing updated targets and WMMPs, Councils must take into account the targets set in the NZWS. These targets encompass both kerbside waste, which focuses on standardized recycling, and the broader waste streams. Together, these NZWS targets play a vital role in guiding local councils waste management initiatives. They highlight the importance of waste reduction, recycling, and diversion across both kerbside waste and the broader waste streams. Achieving these targets will contribute to a more sustainable and environmentally conscious waste management system that benefits both present and future generations.

2.2.1 Linear and circular economies

Taking natural resources, making them into something, using and then disposing of it – is referred to as a 'linear economy'. In contrast, a 'circular economy' is a system where extracted materials are used and reused

for as long as possible. For technical or synthetic materials, the ideal scenario is that they are reused forever. Biological (organic) materials will eventually be returned to the soil to enrich it (see Figure 1).

Figure 1 Characteristics of linear and circular economies



The Ellen MacArthur Foundation has led international thinking on the circular economy since it was created in 2010. This is the Foundation's description of the circular economy:

The circular economy is based on three principles, driven by design:

- Eliminate waste and pollution,
- Circulate produce and materials (at their highest value),
- Regenerate nature.

It is underpinned by a transition to renewable energy and materials. A circular economy decouples economic activity from the consumption of finite resources. It is a resilient system that is good for business, people and the environment (Ellen MacArthur Foundation, n.d.).

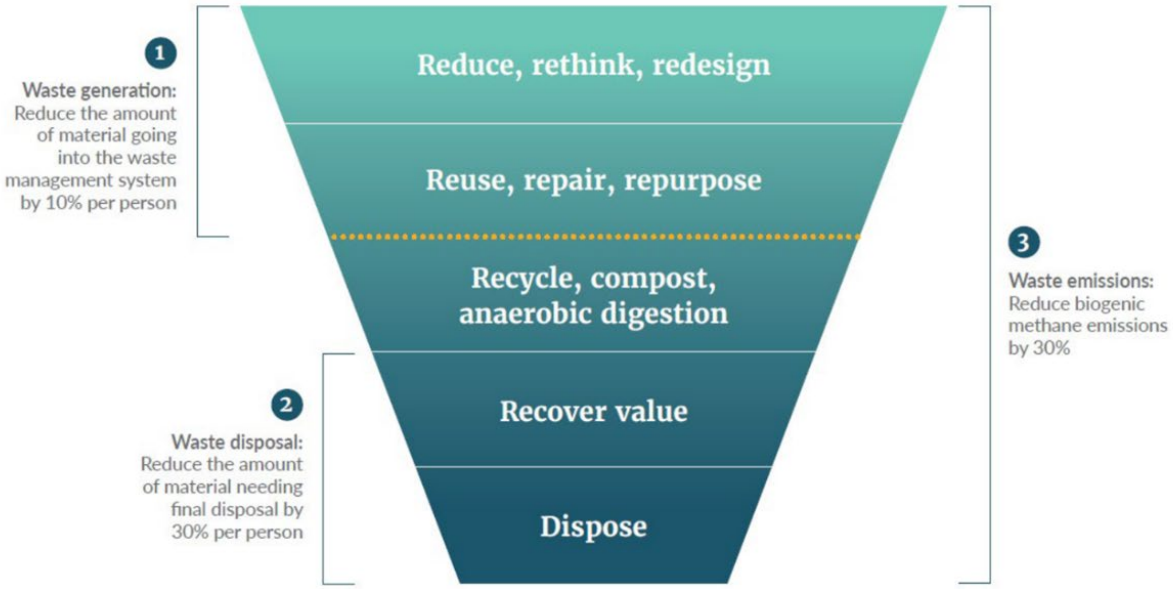
Committing Aotearoa New Zealand to a circular economy means we stay in step with many of our major trading partners. We have already committed to developing a full circular economy and bioeconomy strategy in the emissions reduction plan. This waste strategy is an essential first step. It builds on internationally recognised circular economy principles and adapts them for our context.

2.2.2 National targets

The NZWS sets three national targets to be achieved by 2030:

- 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.
- The NZWS aims for a 10% reduction in waste generation at the kerbside, while the 30% diversion target is set across all waste categories.
- The three goals above are shown in Figure 2 in relation to the waste hierarchy.

Figure 2 NZWS waste hierarchy with national targets



2.2.3 National goals

The NZWS has the following eight goals:

1. **Systems:**
   The Strategic planning, regulatory, investment and engagement systems are in place and operating to drive and support change.
2. **Infrastructure:**
   We have a comprehensive national network of facilities supporting the collection and circular management of products and materials.
3. **Responsibility and accountability:**
   We all take responsibility for how we produce, manage and dispose of things, and are accountable for our actions and their consequences.
4. **Using less:**
   We use fewer products and materials, and using them for longer, by making them more durable, and repairing, reusing, sharing and repurposing them.
5. **Resource recovery systems:**
   Resource recovery systems are operating effectively for core materials and across all regions.
6. **Recovering value:**
   We look for ways to recover any remaining value from residual waste, sustainably and without increasing emissions, before final disposal.
7. **Emissions:**
   Emissions from waste are reducing in line with our domestic and international commitments.
8. **Contaminated land:**
   Contaminated land is sustainably managed and remediated, to reduce waste and emissions and enhance the environment.

2.2.4 Local government actions

The NZWS includes the following actions for local government:

- Get involved in implementing the NZWS and the process to develop an action and investment plan (AIP). Use the NZWS as the starting point for their next WMMP.

- 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.

Note that councils will need to align their next WMMPs with the NZWS. Once the AIP is developed, they will also need to align to it. As such, the AIP will inform later WMMP reviews e.g. 2029 for Kaipara District Council. In the meantime, the government's early investment signals through the Waste Minimisation Fund (WMF) take priority.

2.3 National initiatives

Many waste minimisation initiatives are more suitably implemented at a national level. Work here is needed with the national bodies, such as WasteMINZ and the Ministry for the Environment (MfE), to encourage ongoing support for and the implementation of national waste minimisation activities through a coordinated advocacy approach to government and industry. National initiatives include:

- Development of the government's first AIP 2024-2028.
- Government investment in diversion infrastructure via the Waste Minimisation Fund and Climate Emergency Response Fund (CERF). The current funding round focuses on organic waste diversion e.g. infrastructure for food waste collection for residents and businesses, processing facilities for food waste and other organics, and the sorting of construction and demolition (C&D) waste with a focus on timber.
- Standardisation of the kerbside collection system including:
  - Standardised list of materials collected.
  - Introduction of kerbside recycling collection in urban areas by 2027.
  - Introduction of kerbside organics collection by 2030.
  - Meeting minimum targets; including diversion of 50% of kerbside waste by 2030.
- Establishment of a Container Return Scheme (CRS) for beverage containers. This has been deferred but may be re-introduced following the 2023 national elections.
- Banning of specific grades of plastics for packaging and some single-use plastics.
- Introduction of priority product stewardship schemes e.g. tyres, agrichemicals, e-waste and plastic packaging.
- Ongoing implementation of increases to the Waste Disposal Levy and Emissions Trading Scheme costs, as well as expansion of the Levy application to Class 2-5 Landfills (e.g. construction and demolition, managed or controlled fill and cleanfill disposal facilities).
- Introduction of the mandatory reporting (transfer stations, collections) using an agreed National Waste Data Framework.

2.4 Kaipara District Council Strategic Plans and Regulations

2.4.1 Strategic Context

The Kaipara District is one of the most northern territorial local authorities in New Zealand and is in the Northland Region. It shares borders with the Whangarei and Far North Districts and Auckland region. It has an estimated residential population of 27,200. The district has several holiday destinations which results in fluctuating population over holiday seasons, particularly on the East Coast at Mangawhai and Mangawhai Heads during the summer months.

In addition to national legislation, strategies, plans and initiatives, the region has local strategies, plans and regulations that also govern direction on waste management and minimisation. The previous WMMP was developed for the period 2017-2022. The district also has a Waste Minimisation Strategic Activity Management Plan (SAMP) for the period 2021-2031.

2.4.2 Long Term Plan

KDC's vision within its Long Term Plan Mahere Wā Roa 2021-2031 (LTP) is:

'Growing a better Kaipara: Nurturing our people and place by inspiring a vibrant, healthy and caring community'.

The plan includes the following community wellbeing outcomes:

- Climate Smart
- Healthy Environment
- Celebrating Diversity
- A Trusted Council
- Prosperous Economy
- Vibrant Communities

In relation to managing infrastructure, Part 4 of the LTP details various waste minimisation approaches in the Solid Waste Activity Management Plan (AMP). The AMP states that KDC will focus on:

- Customer-centric design, the circular economy and Te Aranga design principles.
- Identifies a key disadvantage to not addressing residual waste to landfill will result long-term financial impacts to the council, community and operators.
- Capital expenditure in waste minimisation of $1.9m in 2021-2026 followed by an increase to $3.2m in 2026-2031 to further enable the long-term shift to a low waste, circular economy.

Waste minimisation through improved recycling collections is listed as one of the key decisions in the 2021 LTP:

- LTP consultations show that the community supports the introduction of recycling crates to improve recycling and divert more waste away from landfills. A total of 77% of the responses support a rates funded recycling collection service.
- Uncertainty around waste minimisation initiatives from central government was listed as a challenge in the LTP. This was prior to the 2023 NZWS being released. More certainty should be an outcome of this Waste Assessment and WMMP which will align with the NZWS.

The LTP 2021-2031 expects a substantial increase in council spending on waste services, this includes capital expenditure (on RTS facility upgrades and closed landfill management) and operating expenditure (on recycling collection services).

2.4.3 Section 17A review

A Section 17A service delivery review, as permitted by the LGA, was carried out by Council in October 2021. It covered the solid waste operation and maintenance services contracted out by Council. It did not recommend any change to these service delivery arrangements, with a continuation of out-sourced services recommended.

2.4.4 Solid Waste Bylaw

The WMA requires councils to review their waste bylaws at least every ten years. Waste-related bylaws must not be inconsistent with a council's WMMP, which is reviewed every six years. With a review of KDC's WMMP to be completed in 2023, Council will need to ensure that the existing waste bylaws remain fit for purpose. The Council's waste bylaws were last updated in 2020[1]. An updated WMMP will require consultation and if substantial changes are planned, then a review of the bylaw will be required. Changes to the WMA may also require waste bylaws to be updated once the new legislation is passed, which MfE have indicated could be by 2025 (MfE, 2023).

2.4.5 Regulatory functions

In addition to managing waste facility assets and providing services, KDC also holds regulatory responsibilities and powers under the Waste Minimisation Act (WMA). As a regulatory body, councils play an important role in several areas, including:

- Management of litter and combating illegal dumping, governed by the Litter Act 1979.
- Enforcement of trade waste requirements.
- Implementation of nuisance-related bylaws.

While targeted education programs are generally more effective in influencing residents and businesses to adopt desired behaviours, it is recognised that enforcement actions serve as a necessary backup when other approaches have been exhausted.

To promote responsible behaviour among residents and businesses in Kaipara, it is essential to make it convenient for them to do the right thing. This can be achieved by providing purpose-built services and facilities at easily accessible locations. Clear messaging, signage, and directions play a vital role in altering behaviours and encouraging waste minimisation efforts by the community. KDC primarily carries out these regulatory functions using in-house staff, ensuring efficient and effective enforcement of waste management regulations.

2.4.6 Regional Collaboration

All Northland-based councils will likely face similar challenges with adapting to the NZWS. Solid waste management is an area that has been identified through Northland | Forward Together as having potential for regional improvement through increased regional cooperation and communication. This has resulted in the formation of the Northland Regional Solid Waste Working Group (Northland Regional Council, 2015). Meeting the future requirements for diversion of foods scraps is a good example where greater efficiency is likely to be achieved by the councils in the region working collaboratively to deliver service changes, including consideration of a regional processing facility.

Services currently provided by the two other Northland territorial authorities are:

[1] KDC consolidated general bylaw 2020 requires solid waste. Available from: *https://www.kaipara.govt.nz/uploads/bylaws/2021/Consolidated%20General%20Bylaw%2020%20December%202021.pdf*

- Far North District Council
  - No kerbside collection, private services only
  - Network of drop-off points including sixteen transfer stations and twelve community recycling centres
- Whangarei District Council
  - Rates-funded kerbside recycling service using crates
  - Pre-paid refuse bag collection service
  - No kerbside food collection service
  - Seven council-owned transfer stations across the district

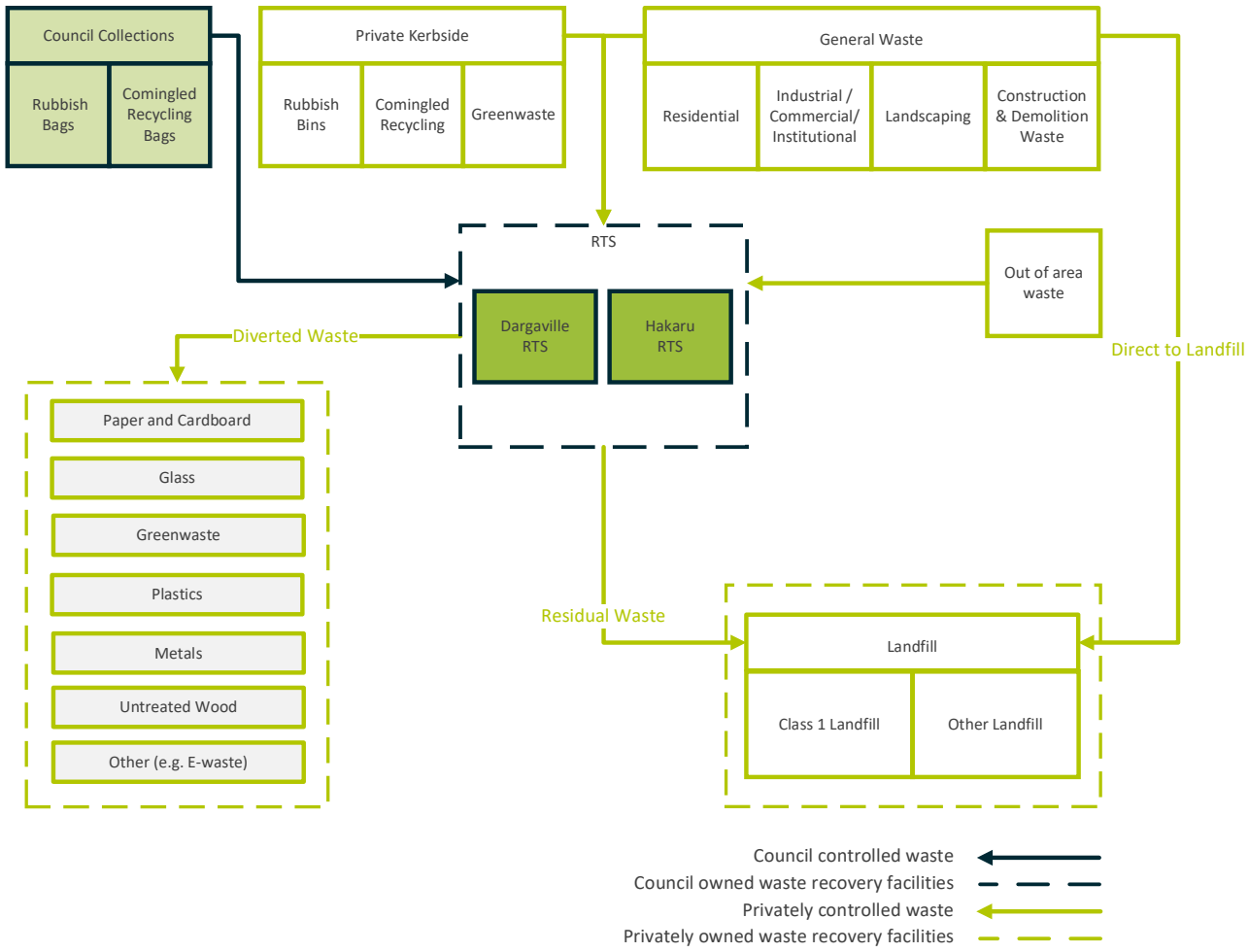
A significant portion of refuse from the region goes to Puwera landfill, opened in 2010 and owned by a public-private partnership between Whangarei District Council and Northland Waste.

There is no Materials Recovery Facility (MRF) in the Northland region, with most material either source-separated or manually sorted at consolidation facilities. Some partially sorted material from Whangarei is taken to the Auckland Council MRF in Onehunga.

3 Existing Facilities and Services

This section includes a summary of information regarding waste management and minimisation services and facilities provided in the Kaipara District. This includes Council services as well as private and commercial services, where known and applicable. An illustration of waste material sources, collection routes and transfer between council facilities, end markets and residual disposal is provided in Figure 3.

Figure 3 Source and destination of waste and diverted materials in Kaipara District Council



3.1 Council provided facilities and services

Council provided facilities and services are summarised in Table 1. Kaipara Refuse Ltd have secured the council contract for weekly refuse and recycling bag collections across the district. Kaipara Refuse also operate the Dargaville RTS under contract. Northland Waste Ltd is contracted to operate the Hakaru RTS. Council collections are funded predominantly through user charges, with a small annual subsidy for recycling services funded via the waste levy.

Table 1 Council provided waste facilities and services

Service Type	Kaipara District Council
Kerbside Collection	• Weekly kerbside collections for refuse (blue bags). • Weekly kerbside collections for recycling (yellow bags). • Kerbside collections are provided in most townships and to rural properties on routes between townships. Other rural residents can drop bags off at designated collection points.
Transfer stations	• Dargaville RRP is a council facility operated by Kaipara Refuse (Figure 4) that accepts a wide range of items such as general refuse, recycling, green waste, scrap metal, electronic waste (including batteries and whiteware). • Hakaru RTS is a council facility operated by Northland Waste. • Kerbside collections, drop-offs and private collections are consolidated at both RTS. • Recyclables are accepted at both RTS facilities. • Accepted recycling include household recyclables (glass, tin and aluminium cans, plastic bottles, paper and carboard), scrap metal, whiteware, timber, green waste and re-usable items. • The contractors are responsible for haulage and disposal for landfilled waste, and transport of recyclables to end markets. The contractors set gate fees (following consultation with and approved by Council) and retain all revenue, both gate fees and sale of recyclables. • Recently there has been an attempt to align fees between sites, however there are still some differences. Both contractors charge for acceptance of recyclables. KDC provides a small subsidy for the ongoing operation of the Dargaville site.
Litter bin services and Illegal dumping	• Litterbins are provided by council. This includes emptying litter bins and managing illegal dumping and abandoned vehicles. Litter bin services are currently contracted to Kaipara Refuse.
Class 1 landfills	• No operational class 1 landfills within the Kaipara District. Waste is predominantly transported to the Northland Regional Landfill (Puwera) near Whangarei and to Redvale Landfill (Dairy Flats).
Class 2-5 landfills	• There are no known class 2,3,4 or 5 landfills in the Kaipara District.
Closed landfill management (see Appendix E for a full list)	• Twenty known closed landfills, fourteen were council or consented landfills, six are illegal tips or unconsented landfills. Council manages residual leachate at some of the closed landfills. • Monitoring, consent reporting and future risk assessments provided by consultants together with Northland Regional Council.
Waste education and behaviour change	• Council funds education programmes from its waste levy funds. • Sustainable Kaipara had provided education on waste minimisation and composting across the region.

KDC has three waste service providers, with their contract details provided in Table 2. The Kaipara Refuse and Northland Waste contracts expire in July 2026, with outcomes of the waste assessment and WMMP set to be delivered through renewed contracts. Education and awareness services contracted to Sustainable Kaipara previously is expired and under review.

Table 2 Kaipara District Council current waste services contracts

Contract No.	Contractor	Waste Services	Expiry Date
484	Northland Waste	Hakaru transfer station operation	1 July 2026
706	Kaipara Refuse	Eastern and Western refuse and recycling collection Dargaville transfer station operation Litter services	1 July 2026
Contract for Service	Sustainable Kaipara	Promotion of Waste Minimisation	Expired, currently under review

Figure 4 Dargaville transfer station

3.2 Non-council facilities and services

Kaipara Refuse, Northland Waste and other private waste companies offer a variety of private collection services within the district. These services cater to both residential and commercial entities. Residential services typically include refuse wheelie bins, green waste wheelie bins, recycling crates, and general waste skips for waste disposal. Commercial services typically include large refuse wheelie bins, front load bins, skip bins, open hook bins, recycling-specific bins, and asbestos bags, tailored to the specific needs of businesses.

In order to promote waste minimization and composting practices, Sustainable Kaipara provides awareness programs, education initiatives, and organises events targeting local community groups, school and businesses. These initiatives are beyond the council-funded initiatives.

The Hakaru RTS facility is a council facility operated by Northland Waste. It accepts general refuse, recycling, green waste, scrap metal, vehicle and truck tires, electronic waste, whiteware, and gas bottles. Kaipara

Refuse operates a recycling delivery depot located at 7-9 Porritt Street, Ruawai. Some alternative recycling options are also available, limited services offered by the Scouts, Greenways Trust and Dargaville Primary School are also listed on the Council website.

3.3 Product stewardship schemes

The government is focused on developing regulated schemes for six priority products: plastic packaging, tyres, e-waste including large batteries, agrichemicals and their containers, refrigerants and other synthetic greenhouse gases, and farm plastics. In addition, product stewardship schemes can register for accreditation with the government. A summary of the current product stewardship schemes that have either been accredited or regulated by the government under the WMA is outlined in Appendix D. Over time more product stewardship schemes are expected to be added to this list and some of the existing accredited schemes are moving towards becoming regulated schemes. Unregulated schemes are not included in this list.

4 Waste data

The collection and use of waste data is important for the Council to understand the quantity and composition of waste generated, collected and processed through its facilities and to ensure the services are being provided as intended. It also gives Council the ability to identify opportunities to reduce waste to landfill and measure progress against targeted improvements.

This section contains a summary of the available data for waste collected, recycled, recovered, and disposed of via the Council's collection services and facilities. Waste volumes and tonnages leaving the RTS facilities are aggregated for kerbside collections and drop-offs. Private collections are not included within the totals. This aggregated data presents a challenge when considering targets set specifically for kerbside collections by the NZWS.

The Council requires that an annual SWAP is performed on kerbside collections. The most recent assessment was completed in October 2021 with no assessment completed in 2022.

4.1 Progress against the 2017-2022 WMMP targets

KDC prepared a WMMP for the period 2017-2022. Progress against this WMMP objectives, goals and targets is listed in Table 3 below. The Action Plan in the previous WMMP listed fifteen actions across infrastructure, education and policy. A summary assessment against these action items is provided in Appendix C.

Table 3 KDC waste objectives, goals and performance measures from WMMP 2017-2022 assessed

Objective	Relevant goal(s) 2017-2022	Target(s) 2017-2022	Assessment 2023
1. To reduce the quantity of recoverable material entering landfill. To maximise the diversion of waste from landfill.	To maximise the diversion of waste from landfill.	To decrease the annual quantity of waste disposed of to landfill from the Kaipara district to below 200kg per capita per year (equates to >30% diversion).	Achieved. Diversion 33% in 2021
		To increase the quantity of material recycled through Council-controlled services from 2014 figure of 530T.	Achieved. In 2022 2,574 tonnes received through council recycling initiatives
		To increase participation in kerbside recycling to over 70% of serviced households by 2020.	Not achieved. Kerbside changes not introduced.
2. To provide safe, environmentally sustainable and hygienic refuse collection and disposal.	To provide for services to residents that represent great value. To provide for the safe and efficient disposal and collection of residual waste.	2.1 Achieve resident satisfaction of >70% (refuse) and 55% (recycling).	76% for refuse and 50% for recycling measured in 2022.
		2.2 To implement licensing in accordance with the current (2016) bylaw no later than March 2018.	Not achieved. Licensing system now superseded by national reporting requirements.
3. To reduce illegal dumping and associated negative environmental impact.	To provide for services to residents that represent great value.	3.1 To respond to illegal dumping incidents within 72 hours.	All requests acknowledged within 72hrs - usually cleaned up within this period or when the refuse truck is in the area next.
		3.2 To report on the quantity of illegally dumped material each year.	Reported on request.

Objective	Relevant goal(s) 2017-2022	Target(s) 2017-2022	Assessment 2023
4. To improve available information on waste generation, diversion and disposal.	To provide for services to residents that represent great value. To maximise local employment and business.	4.1 To implement licensing including data provision required by 2018.	Not achieved. See 2.2.
		4.2 To publish a summary of available data on waste generation and management with each annual report from 2017/2018.	Partially achieved. Data is monitored but not published.
5. To avoid materials becoming waste.	To maximise the diversion of waste from landfill.	5.1 To support the provision of waste education to the community including supporting regional and national waste reduction programmes.	Achieved. Sustainable Kaipara contract.
		5.2 To support contractors in providing economic and sustainable recycling opportunities.	Achieved. Collection contracts issued and maintained.
6. To support combined local government and waste sector activities.	To ensure compliance and knowledge of current and relevant legislation.	6.1 To actively participate in the Waste MINZ forums.	Achieved. Participation in WasteMINZ Forum and Northland Waste Officers Forum.

4.2 Waste quantities and composition

4.2.1 Data accuracy and completeness

To track progress towards medium- and long-term goals and facilitate informed decision-making, it is important to have a comprehensive understanding of waste volumes and composition for the Kaipara District. This data plays an important role as a key enabling factor for future planning and actions. However, it is worth noting that the quality and standardisation of waste data reporting have been recognised as a national challenge by the Ministry for the Environment (MfE).

To ensure accurate and reliable information, it is essential to address the issue of data quality. This involves establishing standardised reporting practices that are consistent across different entities and waste management facilities. By implementing consistent reporting standards at a national level, we can enhance the reliability and comparability of waste data, making it more useful for monitoring progress and evaluating the effectiveness of waste management strategies.

Furthermore, it is important to ensure the completeness of the data streams. This means that all waste streams, including those from public and private collections, as well as public and private transfer stations and resource recovery facilities, should be accounted for. By including data from various sources, we can obtain a comprehensive picture of the waste landscape and make well-informed decisions based on the entire waste management system.

In summary, the availability of accurate and standardised waste data is crucial for monitoring progress, setting targets, and making informed decisions. Addressing the challenges of data quality and ensuring the inclusion of all waste streams will contribute to a more effective and comprehensive waste management approach.

Table 4 summarises the waste streams relevant to the Kaipara District and the availability of data to Council to enable waste management and minimisation planning. Aggregated data is available for Council-controlled refuse from the transfer stations, which combines blue bag Council volumes with RTS residual waste volumes. Likewise, recycling data for yellow bags and RTS drop-off is combined into one total.

Table 4 Overview of waste stream data and stakeholders for reporting

Waste Services and Facilities	Refuse	Recycling	Organics	Other
Council kerbside collections • **SWAP data on refuse**	Blue bags	Yellow bags	No current service	N/A
Council RTS drop-offs (car and trailer loads)	Residual waste drop-off (hook bins)	Sorted recyclables drop-off area	Greenwaste drop-off area	Drop-off areas for E-waste, scrap metal, whiteware, hardfill, hazardous waste
Private residential collection services	Bags or bins	Bins or crates	Greenwaste bins	N/A
Private commercial collection services	Bags, bins or skips	Bins, crates or specialised bulk recycling (e.g. cardboard flat pack bins)	Landscaping services	Specialised company-specific services

Colour legend:

Discrete data available to Council
Aggregated data available to Council
No current service or not applicable
Private data not available to Council

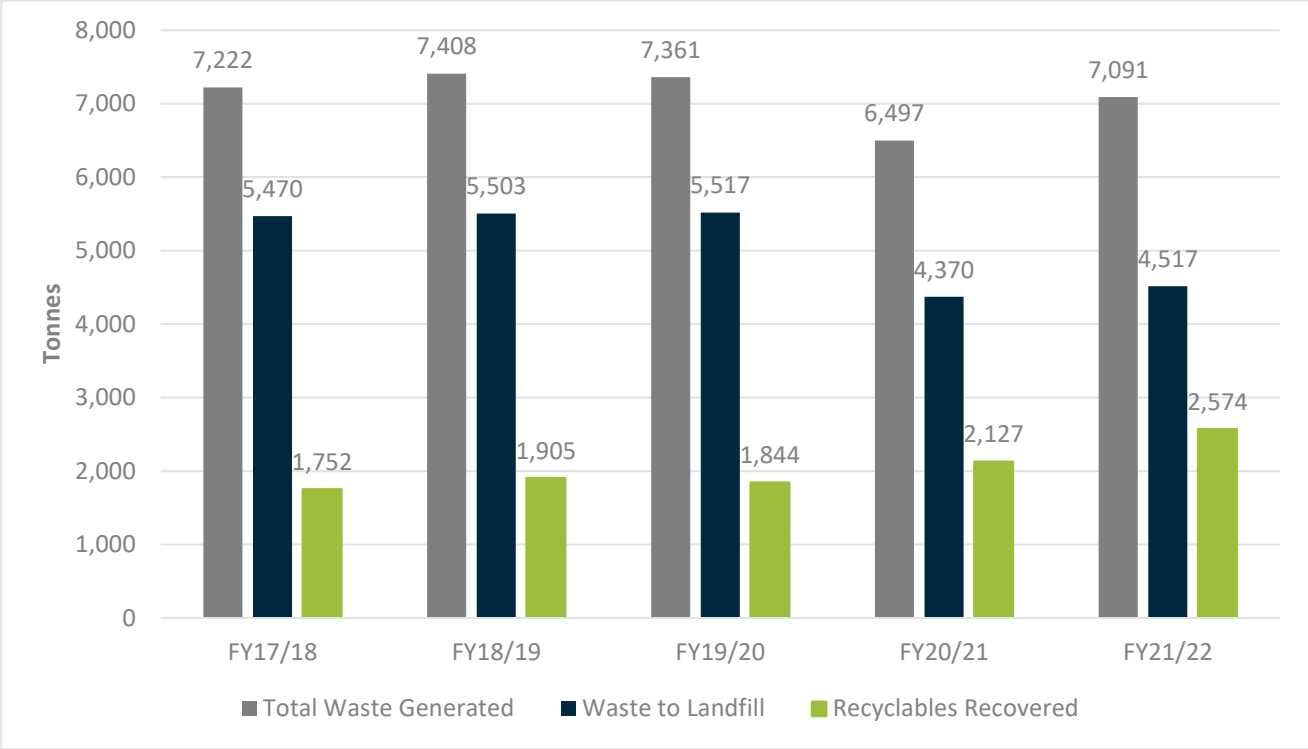
4.2.2 Overall waste generation diversion and disposal

Figure 5 shows the total waste received (for both recovery and disposal) at KDC's two RTS. It includes Council's kerbside collected waste as well as waste dropped off at the two sites. Private collections and out-of-district waste that is handled at Hakaru RTS is excluded from the total. The total waste received provides an indication of the total waste generated in Kaipara. Total waste generated has remained steady in recent years, fluctuating around 7,000 tonnes per annum with Covid lockdowns causing decreased holiday activities and subsequent waste generation.

Recyclables recovered have steadily increased over the past five years. Recycling diversion has increased steadily from 25% to 36% of the total waste generated. This notable increase can be attributed to several factors, including the successful performance of refuse and recycling contracts, and the influence of public awareness and education initiatives. These combined efforts have contributed to a significant improvement in recycling practices within the community.

Furthermore, the data also indicates a reduction in waste to landfill in the past two years. This is attributed to greater recycling recovery and the impact of Covid on visitor numbers, but also, since 2020/21 out-of-district waste that is handled as Hakaru RTS has been excluded from the data reported to KDC.

Figure 5 Waste volumes over the previous five years



4.2.3 KDC kerbside refuse and recycling

Kerbside refuse from collection services is subject to regular SWAP analyses, therefore the quantity and composition is known and trends can be assessed with a high degree of certainty. The quantity of recycling from both RTS facilities is also a reliable source of information, however no data on contamination levels in Council collected recycling is available.

4.2.4 Transfer Stations

The district has data available for total divertible waste and total residual waste from the two RTS facilities. The data does not distinguish between council kerbside collections, private drop-off or private collections within the region. Figure 6 illustrates the total diverted material from both RTS facilities.

Figure 6 Total diverted waste

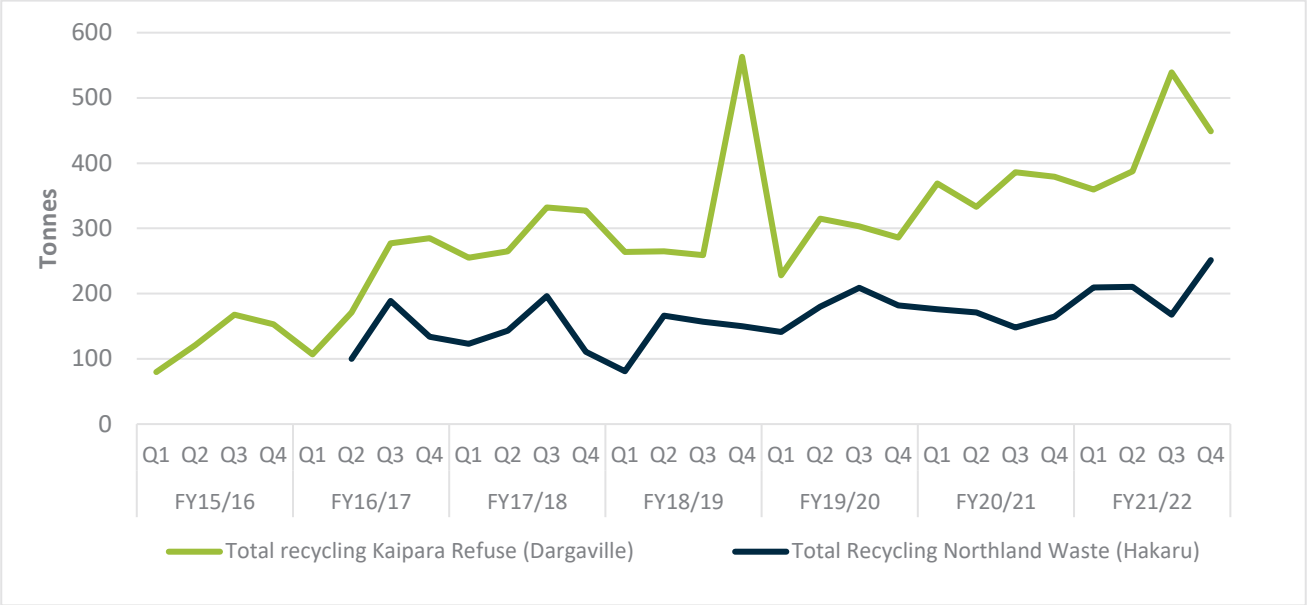
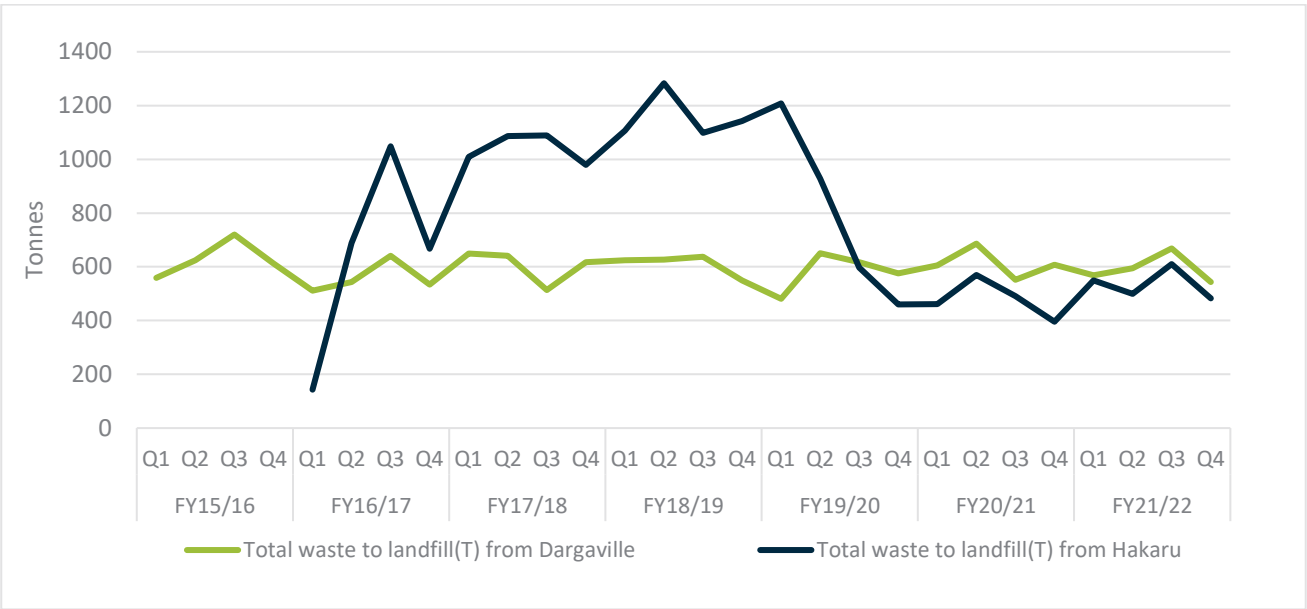


Figure 7 shows residual waste transferred to landfill from the Dargaville and Hakaru RTS's. Hakaru RTS opened in 2016 and initially had low diversion rates, as the facility continued operations improved diversion was achieved. Both RTS's in the region transport 500-600 tonnes of residual waste to landfill each quarter, 160-200 tonnes per month. The data in Hakaru waste was also associated with a change in reporting method (see Section 4.2.2).

Figure 7 Total residual waste to landfill



4.3 Composition of waste to landfill

The following analysis uses data obtained from the SWAP report for KDC. The methodology for the sort-and-weigh audit of kerbside rubbish was based on Procedure One of the Ministry for the Environment's Solid Waste Analysis Protocol 2002.

Figure 8 below illustrates the kerbside composition of waste disposed in KDC's refuse bags destined for landfill. Figure 9 compares the 2021 composition at different locations across the district. The composition does not vary greatly across the district.

Figure 8 Composition of KDC residual waste over time 2017-2021

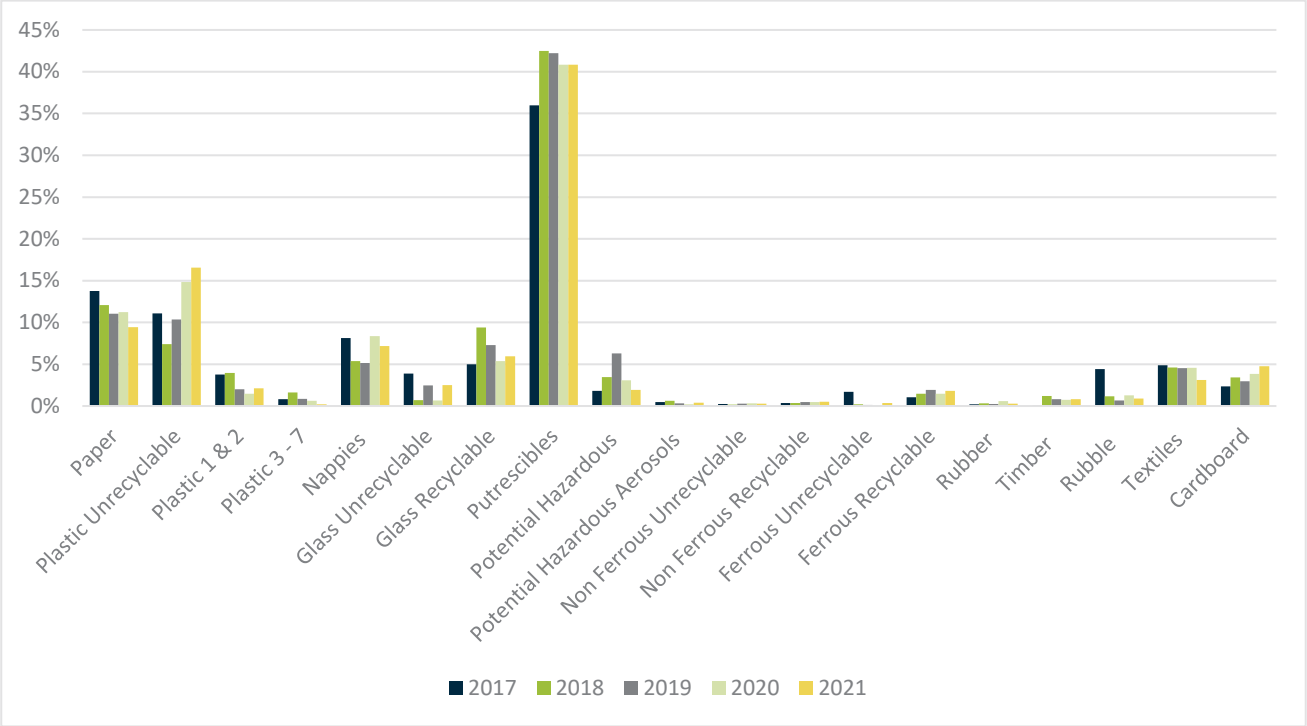
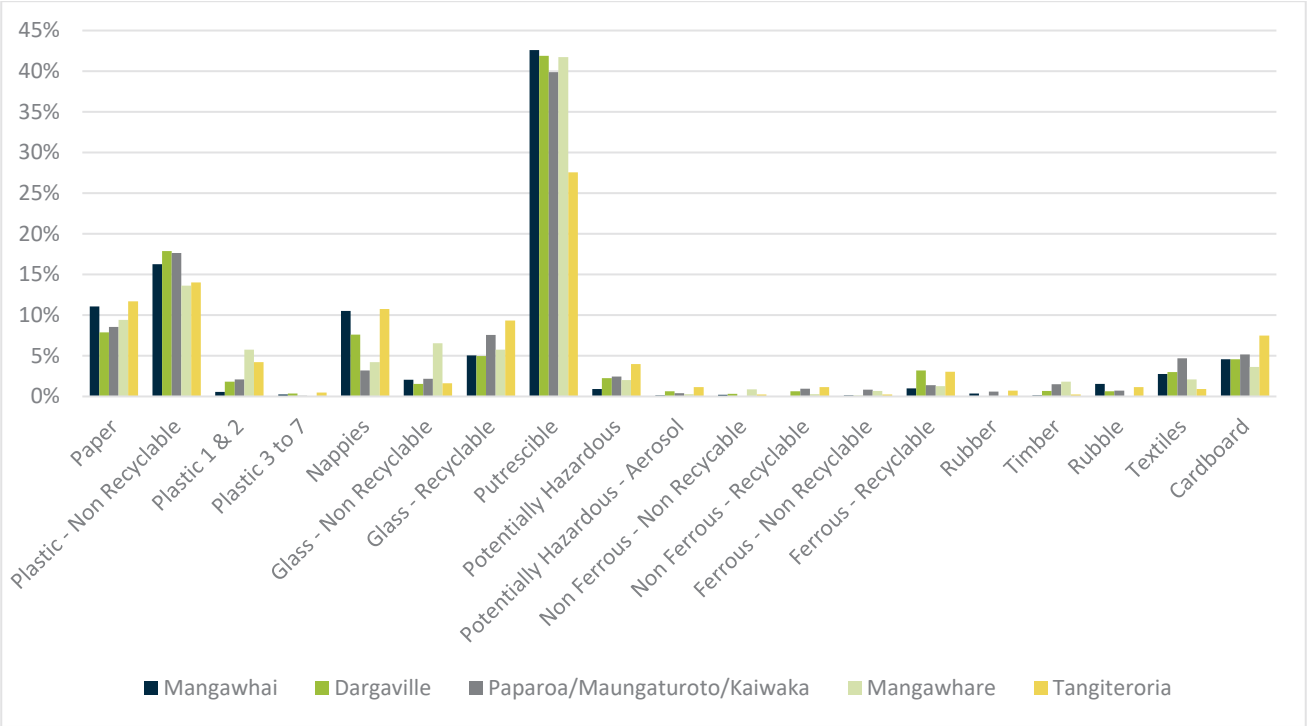
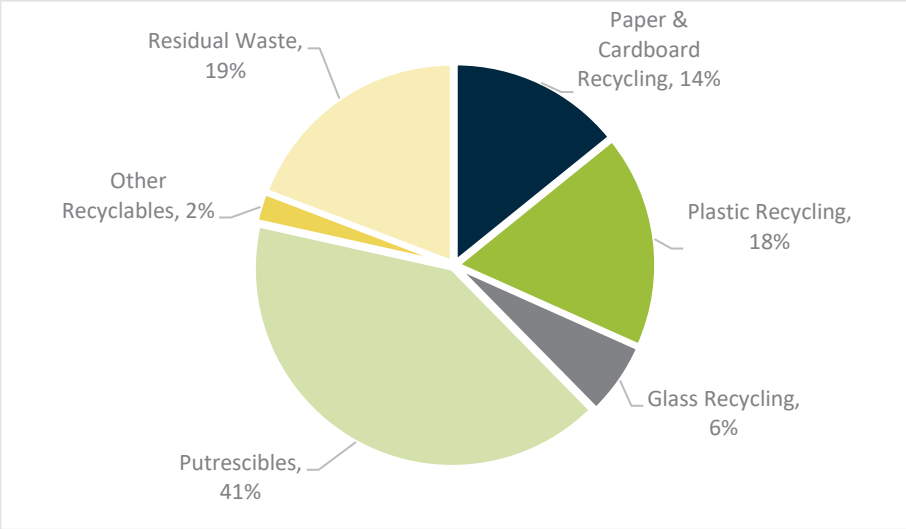


Figure 9 Residual waste composition in 2021 by area



The latest SWAP results from 2021 are shown in Figure 10. These results show that organics were the largest component, comprising 41% of the total. Recyclable plastic was the second largest component of the waste stream, comprising 18%, followed by paper and cardboard, comprising 14% and nappies, comprising 7% which is the main waste type in the residual category.

Figure 10 Kerbside refuse composition 2021



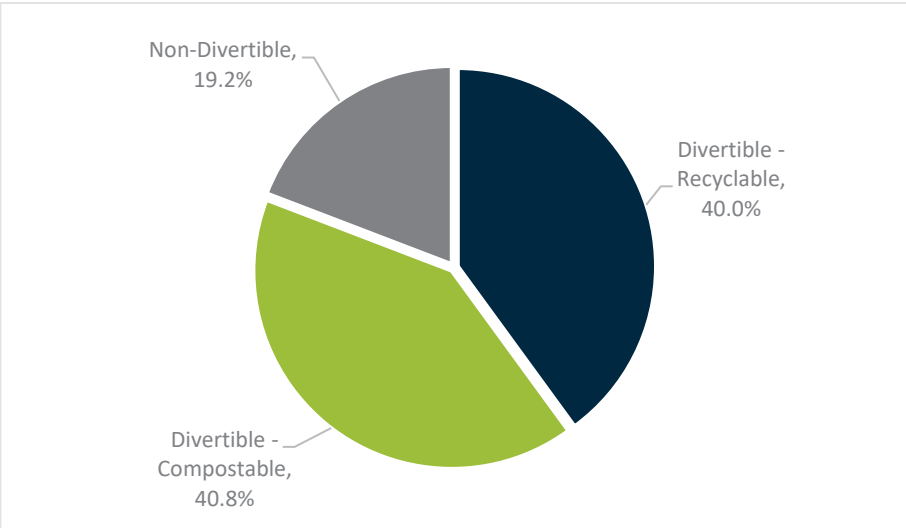
4.3.1 Diversion potential

There are opportunities to increase diversion and resource recovery potential from an improvement in recycling compliance. Current diversion rates in Kaipara are already at future target levels, which will be detailed further on. However, further improvements to diversion are possible and will be required by 2030. The SWAP analyses of kerbside refuse show the following categories of residual waste that could be diverted:

- Paper
- Plastics 1 and 2
- Glass
- Putrescible
- Non-ferrous recyclable
- Ferrous recyclable
- Cardboard

Overall, 81% of the residual waste could be diverted to either recycling or compost, as shown graphically in Figure 11.

Figure 11 Total divertible and non-divertible waste from Council kerbside refuse collections 2021



5 Future Growth and Demand for Waste Services

The future demand for waste services will be influenced by several key drivers including:

- demographic change
- change in economic activity
- impact of waste flows from other districts
- customer expectation, consumption patterns and product quality
- the occurrence of natural disaster events
- national policy and legislation change (refer to Section 2).

5.1 Demographic change

Kaipara District, with an estimated resident population of 27,200 as of 2022, has experienced notable population growth over the past decade. The recorded growth rate during this period stands at 3%. Looking forward, a range of growth models have been developed to project population trends in Kaipara from 2022 onwards. These models encompass low, medium, and high scenarios, with corresponding annual growth rates of 0.8%, 1.4%, and 2.0% respectively. Based on these growth models, the projected population range for Kaipara by 2032 is estimated from 29,437 to 33,029. These estimates reflect the potential population growth and emphasise the importance of strategic service planning to accommodate this expansion. To further illustrate, the medium growth model predicts that by 2052, the population of Kaipara will reach approximately 35,446. This projection indicates a significant increase of 30% over the next three decades.

It is worth noting that similar growth patterns are expected across the wider Northland region, with estimated growth rates ranging from 0.8% to 1.4%. These projections align broadly with the national growth rate of 0.8% observed across Aotearoa New Zealand as a whole (Infometrics, 2022).

The Kaipara Environment Scan (2023) presents a comprehensive evaluation of population dynamics throughout the district, highlighting specific growth hotspots such as Dargaville and the Mangawhai area, encompassing Mangawhai Heads, Mangawhai, and Mangawhai Rural. Conversely, the rural areas of Kaipara Coastal, Maungaru, Ruawai-Matakohe, Otamatea, and Maungaturoto are not anticipated to experience significant increases in population and may not surpass the threshold of a small urban area, defined as having more than 1,000 residents, in the foreseeable future.

However, it is important to note that Kaiwaka, another rural settlement, has previous population growth that has the potential to evolve into a small urban settlement over time. The district's waste strategy should allow provision for the changing status of towns according to the StatsNZ categories used in the NZWS.

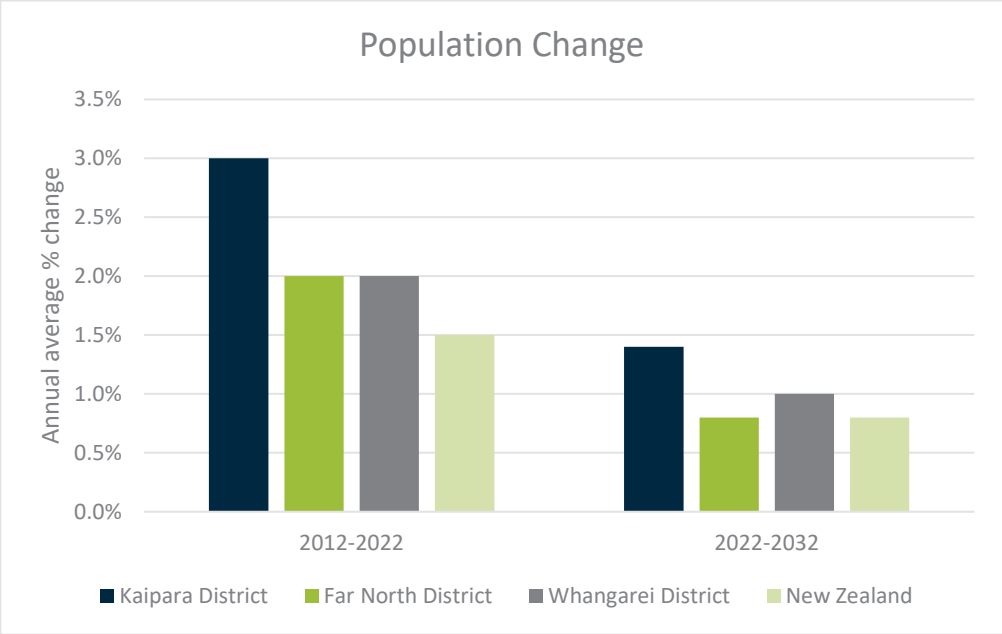
The findings from the Environment Scan provide valuable insights for planning and resource allocation within Kaipara. By understanding the projected growth areas and potential changes in settlement patterns, local authorities can adapt their strategies and policies to accommodate the evolving needs of the community. Table 5 provides a summary of past, current and potential population numbers and growth rates for the Kaipara and surrounding districts (Infometrics, 2023). This also provides relative inputs into regional waste volumes and where KDC falls on population size within Northland and the national population.

Kaipara has a higher annual growth rate compared with the other territorial authorities within Northland and the national average (see Figure 12) growth rates from 2012-2022 are actuals, 2022-2032 are projections from Infometrics, 2023). This growth is from a lower total population than adjacent districts and the proximity of Mangawhai to Auckland is likely a key driver.

Table 5 Population growth models for Northland Regions

	Growth models	Kaipara District	Far North District	Whangarei District	National
Population estimates	2012	20,300	60,400	82,800	4,408,100
	2022	27,200	73,800	100,500	5,124,100
	2032	31,281	79,594	110,807	5,549,105
Population growth (% per annum)	2012-2022	3.0%	2.0%	2.0%	1.5%
	2022-2032	1.4%	0.8%	1.0%	0.8%

Figure 12 Annual average percentage change in population



5.2 Economic activity

Kaipara has seen economic growth increase from $950m pre-Covid pandemic to over $1b, with consumer spending and employment numbers both on the rise. Unemployment is low and beneficiary numbers are decreasing from a spike following Covid-19. House sales numbers are at record low levels following inflation and interest rate increases, together with lower property prices (Kaipara District Council, 2023).

Economic activity is a determinative factor for changes in both waste volume and composition. Seasonal effects are expected, primarily due to holiday periods. Economic growth centred around the urban towns will increase the resources consumed in these towns, resulting in more waste generated. Kaipara's economic activity is based firmly in the primary sector; mainly in agriculture, forestry and fishing. However, it is not the primary sector responsible for recent economic growth. These industries include construction, manufacturing, professional services and retail-wholesale trades (Infometrics, 2023).

Non-economic factors such as Covid-19 and seasonal variations can have significant impacts on both waste generation and services.

5.3 Waste from other areas

Waste flows from other areas are not a significant factor for Kaipara. More likely, some waste generated in Kaipara will be received at out-of-district waste and resource recovery facilities, such as those in Auckland and Whangarei.

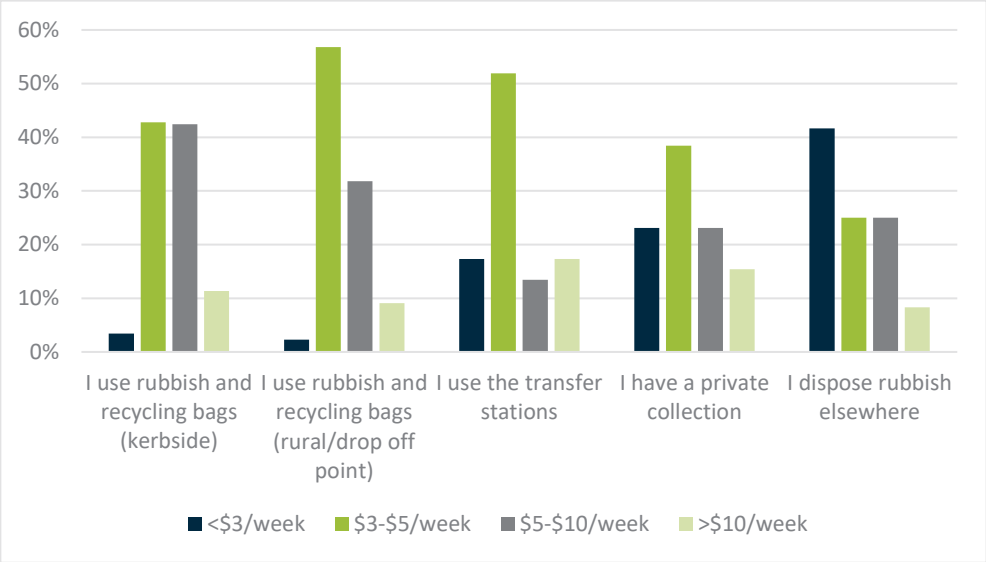
5.4 Community expectations and consumer behaviour

Kaipara District Council performed a community panel survey in 2020. The data gathered is summarised in Table 6 and Figure 13, with additional comments and graphs provided in Appendix F.

Table 6 Summary of the People Panel Survey from 2020

Question	Summary of Responses
Gender, ethnicity, township, residents status, age	523 responses received from the survey. Township responses linked to StatsNZ Statistical Area 2 categories.
Question 1: How do you currently interact with councils waste and recycling (tick all that apply)?	593 responses as multiple selections available: • 34% use rubbish and recycling bags (kerbside): 199 selections • 30% use the transfer stations: 177 selections • 14% use rubbish and recycling bags (rural/drop off point): 82 selections • 8% have a private collection: 49 selections • 7% dispose of rubbish elsewhere: 44 selections • 7% have other options: 42 selections
Question 2: Thinking about recycling of household waste, which of these statements best describes how important recycling is to you personally?	Rating: • 1: <1% • 2: 5% • 3: 9% • 4: 15% • 5: 71%
Question3: Council is going to undertake a review of the waste and recycling services that it provides across the district, currently we operate a user pays approach (you purchase bags, pay at the transfer station etc). Which of the below statements best reflects:	• 36% would pay a specific rate for refuse and recycling bins instead of bags. • 18% would like to keep the status quo, user pays service. 17% would like user pays refuse and rates funded recycling. • 15% would like rate-funded options (e.g. stickers, wheelie bin, low RTS charges. • 14% provided other options. • 1% don't know.
Question 4: Please finish this statement "The one thing Council could do now to make waste and recycling better is":	453 individual responses, not summarised.
Question 5: How much do you currently spend per week on recycling & refuse disposal (blue bags, yellow bags or trips to transfer station)	• 6% spend less than $3/week. • 42% spend $3-$5/week. • 34% spend $5-$10/week. • 9% spend more than $10/week. • 8% spend $0/week. • 2% have other values.
Question 6: Is there anything else you would like to add?	257 individual responses, not summarised.

Figure 13 People Panel Survey 2020 results for services used and weekly household rubbish costs



In summary, the 2020 People Panel survey results show that:

- The 523 submissions received represent views from across the district, including small urban and rural settlements.
- The majority of people surveyed use Council provided services or facilities, 77% of responses use kerbside bag collections, rural drop-off points for collection or take waste directly to an RTS. Only 8% responded that they use private collections, or they dispose of their waste by other means (14%).
- There is significant importance for recycling across all areas.
- There is general support for rates funded kerbside collection services using bins instead of bags, particularly in the small urban areas, Dargaville and Mangawhai. The rural areas generally support the status quo user pays scenario.
- Most households (42%) usually spend, or feel they spend, $3-$5 per week on refuse and recycling through the blue and yellow bags, or drop-offs directly at the transfer stations. 34% of households spend $5-$10 per week, while 9% spend more than $10 per week and fewer than 6% spend less than $3 per week. 8% claim they spend no money on waste per week.
- There is a difference in responses from Dargaville where the majority claim to spend $5-$10 per week, compared to Mangawhai and Mangawhai Heads where the majority claim to spend $3-$5 per week.
- Most households claim to spend between $3 and $10 per week on rubbish services. A majority of households that use Council kerbside (85%) or rural drop off (88%) spend in this range. Around two thirds of households that use transfer station drop-off or privately provided services spend in this range.

5.5 Natural and man-made disasters

Natural and man-made disasters apply a different pressure upon waste services and other inter-related services by potentially creating a significant volume of waste, which may be contaminated, in a very short timeframe. The earthquakes in Christchurch and Kaikoura, the Covid-19 pandemic, Cyclone Gabrielle and the Auckland floods re-emphasise the need for planning. Lessons can be learnt from these events to assist in preparing for future natural disaster events in Kaipara such as the need to provide additional capacity at transfer stations and disposal facilities at short notice.

5.6 Future demand for waste facilities and services

Taking the waste demand drivers and changing community expectations described above into consideration, there will be both increased demand and public expectations from waste facilities and services in Kaipara. Projected future waste volumes are presented in Section 7.2.

Council should consider that the Hakaru RTS is a strategic asset situated in proximity to high growth areas (Mangawhai rural, Mangawhai Heads and Kaiwaka) and central transportation routes both into and through the district. To ensure future Council services can be provided, KDC plan to commence negotiations for the Hakaru land ownership and facilities during 2024-2025.

Dargaville RTS will continue to provide the services required by the community for the foreseeable future. However, future development is needed to maintain the current level of service as the population increases. KDC have plans underway for improvements to the Dargaville RRP including a new weighbridge.

Currently, the southern part of the district has no RTS or resource recovery facility. There is the opportunity in the future to provide a resource recovery facility in this growing part of the district.

6 Future Planning Framework

This section considers the Councils' direction with regards to vision, goals, objectives, and targets for achieving waste reduction and for meeting the forecast demand for services in Kaipara District Council. The vision and targets discussed in this Waste Assessment have been derived from performance against the 2017-2022 WMMP, and incorporating the NZWS vision, goals, objectives and targets.

6.1 Vision

Council's vision for waste management and minimisation is aligned with the NZWS:

> *"By 2050, Kaipara District is a low-emissions, low-waste society built upon a circular economy".*

6.2 Goals and objectives

KDC has adopted developed objectives that support the achievement of these NZWS goals. The NZWS states that "By 2030, our enabling systems are working well and behaviour is changing". The NZWS goals and KDC objectives are shown in Table 7.

Table 7 New Zealand Waste Strategy goals and KDC objectives

#	NZWS Goals	KDC Objective
1	**Systems** The strategic planning, regulatory, investment and engagement systems are in place and operating to drive and support change	A. LTP and WMMP provide a long-term guidance. B. Focus on services that enable staged goals for 2030, 2040 and 2050. C. Regional collaboration where fit-for-purpose.
2	**Infrastructure** We have a comprehensive national network of facilities supporting the collection and circular management of products and materials	D. Council and private facilities support collection and circular management of products and materials. E. Local planning provisions support the circular economy.
3	**Responsibility and accountability** We all take responsibility for how we produce, manage and dispose of things, and are accountable for our actions and their consequences	F. Deliver behaviour change programmes to increase awareness and accountability to better support waste minimisation.
4	**Using less** We use fewer products and materials, and use them for longer, by making them more durable, and repairing, reusing, sharing and repurposing them	G. Support local redesign, repair, reuse, sharing and repurposing initiatives. H. Education programs to raise awareness in the community.
5	**Resource recovery systems** Resource recovery systems are operating effectively for core materials and across all regions	I. Kerbside services are supported by resource recovery for use in region (organics, C&D) or consolidation (plastics) of out of region circular processing.
6	**Recovering value** We look for ways to recover any remaining value from residual waste, sustainably and without increasing emissions, before final disposal	J. Look to recover any remaining value from residual waste prior to disposal to landfill. K. Further opportunities in the residual waste sent to Puwera Landfill and possibly Redvale Landfill.
7	**Emissions** Emissions from waste are reducing in line with our domestic and international commitments	L. Organics collections in Dargaville and Mangawhai by 2030 will support emission reduction. M. Reduce organic waste production and disposal from both residents and businesses.

#	NZWS Goals	KDC Objective
8	**Contaminated land** Contaminated land is sustainably managed and remediated, to reduce waste and emissions and enhance the environment	N. Identify and sustainably manage contaminated land in KDC, including vulnerable landfills. O. Encourage a reduction in soil disposal volumes to landfill.

6.3 Targets

Councils' waste minimisation targets are aligned to the targets set out in the NZWS and outlined in Table 8 below.

Table 8 Targets based on KDC objectives and alignment with NZWS

NZWS target	Local annual target	Kaipara District Council	
		2022	2030 Target
10% reduction in waste generation per person by 2030	10% reduction in waste per capita received at Kaipara's two RTS	261kg / person/ year [2]	235kg / person/ year
30% reduction in waste disposal per person by 2030	30% reduction in waste received at Kaipara's two RTS	166kg / person/ year	116kg / person/ year
% diversion kerbside collection	Staged diversion in kerbside collections of 30% by 2026, 40% by 2028 and 50% by 2030	36%	>50%
30% reduction in biogenic methane emissions by 2030	Putrescible content in kerbside refuse measured in annual SWAP	>40%	<20%

[2] Based on data available to Council at the time of reporting. Calculated on 7,091 tonnes refuse and recycling weighed at both RTS facilities during 2022, and a population of 27,200. Council understands that assessment of this national target will be developed by MfE using 2025/26 as the baseline year, and 2026/27 for the result.

7 Options Assessment (Statement of Proposals)

This section identifies the waste minimisation issues and opportunities for Kaipara District. It then presents the guiding principles that will be applied when considering intervention options. Finally, it presents an options assessment that considers practicable options to address future demand for waste management and minimisation services and programmes to address the opportunities that have been identified.

7.1 Waste issues and opportunities

7.1.1 Waste issues

Waste issues for Kaipara District have been identified based on:

- The district's review of its waste strategy in early 2023
- Composition and quantities of waste in council collection services and at Council facilities
- Progress against the previous WMMP Action Plan.

Eight specific waste issues have been identified through this assessment (Table 9) that will need to be addressed in the Councils' next WMMP.

Table 9 Summary of waste issues

#	Issue	Description
1	Refuse still contains high levels of recycling	Potential for greater recycling based on limited data availability. High volume of potentially recyclable material (40%) in rubbish bags.
2	High volumes of organic waste to landfill	Organic waste, which can be diverted, represented 40.2% in rubbish bags.
3	Limited local circular initiatives and limited access to recycling and value recovery facilities	Limited reduce and reuse initiatives for circular management of materials. Limited or no recycling or regional organics processing facilities for value recovery.
4	Collection of data	Reliable data assists in setting realistic strategic objectives and policies. It is also required for reporting and tracking progress against targets. Currently Council contract data is available, but limited or no waste data is available from private operators for Council to plan services.
5	Community engagement	Community is not as engaged in waste diversion as may be possible.
6	Urban-rural spread and seasonal variation	Geographically spread region including rural communities, isolated marae and coastal holiday homes.
7	Cost of service concerns	Significant national change impacting council budgets.
8	Closed landfill management	Limited knowledge of historical landfills, with financial and environmental risk associated with closed landfills.

7.1.2 Waste opportunities

Opportunities are discussed based on the issues identified through this Waste Assessment. Suggested solutions and actions to these opportunities are developed in Section 7.4.

1. ***Promote local circular economy initiatives***

   Currently, there are limited local circular initiatives promoted by businesses or Northland Councils.

There is an opportunity to provide support to local and national initiatives to enable local circular developments, such as a local composting facility or supporting a regional organics facility. Funding for these initiatives could be supported by government grants.

2. ***Promote better waste minimisation and recycling behaviour***

   There is an opportunity to promote waste minimisation and improve the recycling behaviour of residents, visitors and businesses across the district.

   By including the community voice in what services are offered, and how those services are implemented in our region, is important for effective use of grants, funds and/or rates. There is an opportunity to take the community's voice into consideration from the 2020 People Panel's survey and future consultations on the WMMP. The waste sector expects significant change in the coming decade, and with that there is an opportunity for improved customer satisfaction. There are change management opportunities through clear communication of the process and reasons for the change. Community involvement and collaboration with neighbouring councils present opportunities to enable circular economic activity.

3. ***Better service for rural communities and holiday makers***

   The urban-rural spread across the District presents an issue with household access to services. There is an opportunity to explore alternative Council services to meet community expectations and national targets. The geographic spread of the region including rural communities, isolated marae and coastal holiday homes. Council can explore opportunities to better service rural and business customers.

   Urban residents have the opportunity to access three or four-stream collections services in the coming WMMP cycle. Rural residents and businesses do not have the same access to the same services, therefore there is an opportunity to divert more by looking at alternative collection systems that meet their needs.

   There is an opportunity to design services to cope with seasonal change in waste volumes and type. Seasonal peaks of materials received at kerbside and facilities requires systems and infrastructure capability and resilience. Urban development is expected to be focused around the Mangawhai and Kaiwaka areas, with uncertainty around the Hakaru RTS land ownership, there may be an opportunity for a southern region RRP.

4. ***Modernise waste services***

   There is an opportunity to improve diversion by aligning the Council's services with the NZWS to recover more recycling and organics from kerbside collections. This addresses the first two issues described above. These materials have more value outside of their current waste streams. The volume of recycling measured in kerbside refuse presents an opportunity to recover more value from waste at the kerbside. Secondly, the high volume of organic waste going to landfill presents opportunity to recover energy or chemical value from this material. Currently the Council does not offer a service for household diversion of organics. The organics in kerbside refuse from Council collections is between 28% and 43% across the district.

5. ***Manage environmental risks associated with closed landfills***

   The issue facing Council with closed or illegal landfills is the limited knowledge of these sites. Some of these closed landfills are located in coastal areas, at risk of contaminating the environment as a result of changes to climate conditions. The on-going management of these risks and remediation efforts remain a priority for Council.

7.2 Projected waste volumes

Waste volumes are projected to increase as population and economic activity increases within the district. Without intervention, population and economic growth are predicted to increase waste generation by 3.9% per annum (1.4% population growth plus 2.5% GDP growth). By 2033, waste generation is expected to increase by 52% to 10,800 tpa.

7.3 Guiding principles

In developing options, KDC will be guided by the principles in Table 10. These guiding principles align with the three NZWS targets.

Table 10 Mapping KDC guiding principles to NZWS objectives

KCD Guiding Principles	New Zealand Waste Strategy 2023
• Implementing a circular economy (by reducing waste).	(1) Waste Generation
• Managing impacts and adapting to climate change (by reducing greenhouse gas emissions and protecting infrastructure from the effects of climate change).	(3) Waste Emissions
• Encouraging the community to take responsibility for minimising their own waste.	(1) Waste Generation (2) Waste Disposal
• Providing services that are safe (for collectors and public) (and protect the environment from harm).	

7.4 Options Assessment

Options assessment for kerbside collection services is detailed in Section 7.4.1 which includes options for rural households and holiday homes. Options for transfer stations follows in Section 7.4.2.

7.4.1 Kerbside collection options

The outcome from the options assessment was that the following services scored highest for the refuse, recycling and organics collection service. Table 11 compares kerbside collection options assessed.

Refuse

Refuse collection options include maintaining the status quo with pre-paid refuse bags collected weekly, or alternative options which include replacing refuse bags with rubbish bins and rates-funding collections in urban areas. Experience from other councils in New Zealand is that offering only 140L bins suits most residents. Offering a choice of bin sizes meets the needs of more residents, but customer choice adds complexity to service delivery.

Compared with pre-paid bags, bins with pre-paid tags or private only services, the universal service is more cost-effective for residents and the volume restriction encourages them to use the diversion services available (kerbside recycling and organics). Refuse bag collection services continue for rural areas.

Recycling

Options assessed for recycling include the status quo pre-paid yellow bags. Alternative options assessed include a comingled recycling bin in urban areas, or a comprehensive recycling collection with glass separated from other recycling using a crate.

The most common service in New Zealand is the 240L mixed recycling bin plus 45L glass crate. Residents prefer the convenience of bins, but commingling all recyclables reduces the quality of material collected. A separate glass crate improves the quality of glass recycling, whilst also reducing contamination of mixed recyclables with glass shards, in turn improving the quality of other recyclables collected. There is improved health and safety for recyclables processing operators with no glass on processing lines.

Using 3x45L crates sorted at source maximises the value of the material collected, however there are higher health and safety risks than a service that replaces some crates with bins.

Compared with pre-paid bags or no collection service, there is greater use of recycling services with a universal Council service.

Organics

Options assess for organic collections in urban areas include a 23L food scraps bin either as an opt-in private service, or a rates funded service.

The NZWS requires KDC to implement organics collections in urban areas by 2030. Collecting food waste serves two primary purposes, increased diversion and reduced greenhouse gas emissions. Food scrap diversion provides opportunities for a wider range of processing options (e.g. digestors) to be considered. However, it is expensive to provide a collection service for this low volume of waste. Collecting food and green waste together is more cost-effective and ensures a service is available for diverting green waste as well. Combined food and greed waste requires a composting facility for processing, however these are the most common processing option. Combining food and green waste can result in less food waste collection with residents primarily using the bins for green waste diversion as opposed to food waste.

Selecting a preferred option

It is recommended that these options are presented to the community to obtain their feedback on them and help inform which is the preferred option. The status quo would also be presented, however noting that Council is not recommending the status quo continue.

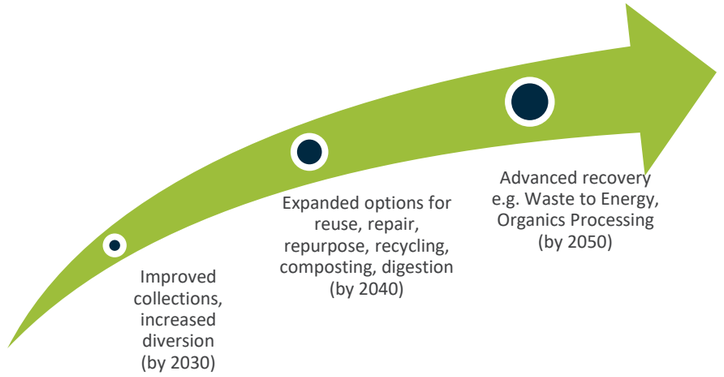
Table 11 Kerbside options to address future opportunities

Option	1. Status quo		2.1. Introduce recycling bin		2.2. Introduce recycling and rubbish bins		3. Opt-in organics collection			4. All services			
Services	Pre-paid rubbish bags 	Pre-paid recycling bags 	Pre-paid rubbish bags 	Recycling bin, 240L (incl. glass) 	Rubbish bin, 140L (rates-funded) 	Recycling bin, 240L (incl. glass) 	Rubbish bin, 140L (rates-funded) 	Recycling bin, 240L (incl. glass) 	Food scraps bin, 23L (opt-in to private service) 	Rubbish bin, 140L (rates-funded) 	Recycling bin, 240L (no glass) 	Glass crate, 45L 	Food scraps bins, 23L (all urban areas) 
Waste strategy alignment	• Does not align. • Does not meet mandatory service requirements for recycling or organics. • Unable to meet 50% diversion target for kerbside services.		• Does not align. • Does not meet mandatory service requirement for organics. • Unable to meet 50% diversion target for kerbside services.		• Does not align. • Does not meet mandatory service requirement for organics. • Unable to meet 50% diversion target for kerbside services.		• Does not align. • Unable to meet 50% diversion target for kerbside services.			• Aligns with all waste strategy requirements. • Enables long-term circular economic activities.			
Advantages	✓ No change for community. ✓ Private collectors not impacted.		✓ Limited change for community. ✓ High recycling volumes. ✓ Meets 2021 LTP commitment to community to introduce recycling. ✓ Equitable access to recycling collection service. ✓ Private collectors not impacted. ✓ Access government grants for recycling service.		✓ High recycling volumes. ✓ Meets 2021 LTP commitment to community to introduce recycling. ✓ Equitable access to collection services. ✓ Access government grants for recycling service.		✓ High recycling volumes. ✓ Meets 2021 LTP commitment to community to introduce recycling. ✓ Equitable access to rubbish and recycling collection services. ✓ Access government grants for recycling service (and potentially food too).			✓ High recycling volumes. ✓ Meets 2021 LTP commitment to community to introduce recycling. ✓ Meet diversion targets. ✓ More recyclables reach end markets and market access more certain. ✓ Volume restrictions on rubbish encourages diversion. ✓ Equitable access to collection services. ✓ Access government grants for recycling and food collection services.		
Disadvantages	× Low recycling volumes. × No food waste diversion. × Unable to meet diversion targets. × Unable to collect all mandatory recycling materials. × Lose opportunity for government funding grant for organics and recycling. × Not compliant government requirements, enforcement action e.g. loss of levy funds or return of grants are lost opportunity costs. × No volume restrictions on rubbish to encourage diversion. × Inconsistent collection service access. × H&S issues collecting bags.		× No food waste diversion. × Unable to meet diversion targets. × Lose opportunity for government funding grant for organics. × Not compliant government requirements, enforcement action e.g. loss of levy funds or return of grants are lost opportunity costs. × No volume restrictions on rubbish to encourage diversion. × Inconsistent rubbish collection service access. × Lower quality recyclables, less markets (may have to sort out of district). × H&S issues collecting bags. × Bin to store at home plus bags.		× No food waste diversion. × Unable to meet diversion targets. × Lose opportunity for government funding grant for organics. × Not compliant government requirements, enforcement action e.g. loss of levy funds or return of grants. × Large change for the community. × Private collectors lose residential customers. × Volume restrictions on rubbish not sufficient to encourage diversion. × Contamination hidden in recycling bins. × Lower quality recyclables, less markets (may have to sort out of district) × Two bins on kerb in recycling weeks. × Two bins to storage at home.		× Cost of opt-in service for food scraps limits uptake. × Unable to meet diversion targets. × Not compliant government requirements, enforcement action e.g. loss of levy funds or return of grants are lost opportunity costs. × Large change for the community. × Private collectors lose residential customers. × Volume restrictions on rubbish not sufficient to encourage diversion. × Contamination hidden in recycling bins. × Lower quality recyclables, less markets (may have to sort out of district). × Two bins on kerb every week if opt-in to food scraps. × Two or three bins to store at home.			× Large change for the community. × Private collectors lose residential customers. × Contamination management in recycling and organics bins. × Three bins on kerb in rubbish collection weeks. × Four bins to store at home.		
Costs	**$260-$580/hh/yr (incl. GST)** **$5-$11.15/hh/wk (incl. GST)** • Rubbish bag or private bin, $180-$420. • Recycling bag $80-$160.		**$300-$540/hh/yr (incl. GST)** **$5.77-$10.38/hh/wk (incl. GST)** • Rubbish bag or private bin, $180-$420. • Recycling bin $120.		**$340/hh/yr (incl. GST)** **$6.54/hh/wk (incl. GST)** • Rubbish bin, $220. • Recycling bin $120.		**$340 or $590/hh/yr (incl. GST)** **$6.54 or $11.35/hh/wk (incl. GST)** • Rubbish bin, $220. • Recycling bin $120. • Food bin, extra $250 if opt-in.			**$340/hh/yr (incl. GST)** **$6.54/hh/wk (incl. GST)** • Rubbish bin $150 (collected fortnightly). • Recycling bin + crate $120. • Food bin $70.		

Notes:

- Private sector bins also available for rubbish and green waste, or if extra capacity needed.
- Council bins for food, recycling or rubbish are rates funded.
- Recycling bin (or bin plus crate) collected fortnightly.
- Food bin collected weekly.
- Rubbish bin collected fortnightly following introduction of food waste collection.
- Option to replace food bin with combined food and garden organics bin (80L).
- Costs:
  - Blue rubbish bags: $3.60 for 60L, pricing for 1-2 bags per week, $180-$360/hh/yr (incl. GST).
  - Households can also use private rubbish bins, $260-$420/yr.
  - Rubbish bin $220/yr for weekly collection, $150/yr for fortnightly collection.
  - Yellow recycling bags: $1.50 for 30L, pricing for 1-2 bags per week, $80-$160/hh/yr (incl. GST).
  - Recycling bin, or bin+crate, $120/yr.
  - Food bin $70/yr.
  - Private opt-in service for food waste estimated at $250/yr (based on pricing provided to Council).

Future vision:



7.4.1.1 Rural households

The standard kerbside collection service described above does not suit the needs of rural households in the district. Proving a kerbside service to every property would be difficult and costly due to the remoteness of some areas, the low housing density and the narrow, unsealed roads making it difficult for collection vehicles to access. Rural properties typically have on-site solutions for food scraps and green waste and therefore do not need organics collection services. Rural properties also no not have the same level of service expectation that urban households do.

For rural households the following services are proposed, that complement the urban services:

- Continue refuse and recycling user pays bags
- Continuing to service rural households on select routes, that are between urban collection areas
- Explore the effectiveness of rural drop-off points for rural collections
- Exclude organic collection from rural collection services.

7.4.1.2 Holiday homes

In holiday areas, households generally prefer to have a similar level of waste service to that which they have in their normal residence (unless they are in a remote rural part of the district). However, often these homes are empty and require collection following long weekends. Wheelie bins that have to be returned to a property can prove problematic.

For holiday areas, the following enhancements to the urban services are proposed:

- Collection days at the start of a week
- Continue to offer bags as options in both urban and rural collections
- Provision of additional collections during peak holiday season
- Advertising the availability of drop-off facilities on non-collection days
- A put-back service for additional fee.

7.4.2 Transfer stations

KDC's preference is for the operation of the transfer station sites to be outsourced to private contractors. However, the decision for Kaipara's involvement in transfer station sites ranges from being 'All In' where Council would set the fees for the sites, retain all revenues and fund required upgrades, or conversely an 'All Out' approach where the transfer station sites are to be provided by private waste contractors who can set gate fees and retain all revenue. Council has waste minimisation goals to achieve, illegal dumping to strongly avoid and public behavioural change to manage for maximisation of waste diversion into recycling. Therefore there are benefits for Council to retain some degree of control of the transfer stations.

The decision over the long-term ownership of the Hakaru transfer station property is still to be made. An alternative site will be needed to replace Hakaru if it is not purchased by Council and instead is returned to the landowner when the lease expires in 2027. This decision may divert the consideration of an option for Council to maintain control of the western Dargaville facility only, and fully out-source the eastern facility.

The options assessed for the transfer stations are listed in Table 12. The status quo is the least cost option for Council, but upgrades are required to increase diversion supported by differential fees for diversion services. The uncertainty regarding future ownership of the Hakaru site, make ongoing use more challenging. For this reason, the option that involves focusing on Dargaville is preferred over other options.

Table 12 Transfer station options considered

Option	Description
Status Quo	• Out-sourced contracts for both RTS • Contractor sets gate fees and retains revenue
Enhanced status quo, upgrade RTS	• Out-sourced contracts for both RTS • Contractor sets gate fees and retains revenue • Council funds RTS upgrades for more diversion • Negotiation with Hakaru site owner for purchase or lease
Council takes more site control, sets RTS fees	• Out-sourced contracts for both RTS • Council sets gate fees and retains revenue • Council funds RTS upgrades for more diversion • Negotiation with Hakaru site owner for purchase or lease
Council retains Dargaville, but opts out of Hakaru	• Out-sourced contract for Dargaville • Eastern RTS provided by private waste company • Council sets Dargaville gate fees and retains revenue • Council funds Dargaville upgrades for more diversion
Council opts out of both Dargaville and Hakaru	• RTS provided by private waste companies • Dargaville site leased to operator • Ownership Hakaru site returns to owner
Council develops a new Southern RTS/RRP	• Fund the development of a third RTS facility to service the southern region • May only be required if the Hakaru RTS can remain operational pending land ownership outcomes.

Notes:
(1) Out-sourced contract includes specification of: O&M requirements, availability of diversion services
(2) Out-sourcing enables Council to define type of contractor operating site e.g. involvement community groups
(3) Setting fees includes a decision on whether to charge for diversion or hazardous waste services

7.4.3 Refuse disposal, and recyclables and organics processing

Material collected through kerbside services will need to be consolidated and transported to waste handling and disposal facilities. Residual waste is transferred to landfill for disposal, Material Recovery Facilities (MRF) are usually where recyclables are transferred and composting or other organics processing facilities is where organic and greenwaste is transferred for further processing.

Arrangements for access to consolidation, disposal and processing facilities needs to be coordinated with the procurement of new collection services. Through the procurement process, and the development of a procurement strategy, consideration would be given to negotiating direct supply agreements (e.g. recyclables processing), competitive tender (e.g. landfill disposal), or regional development (e.g. composting).

Waste-to-Energy

As an alternative to landfill disposal, a Waste-to-Energy facility could be developed in the Kaipara for in-district waste or in a neighbouring district as a regional facility. The development of a Waste-to-Energy

facility is not recommended at this stage for the following reasons:

- Not promoted by central government as the value of the resource is lost through the combustion process and therefore, does not align with a circular economy approach that keeps resources in use as long as possible. Note, central government accept that for a small number of specific waste streams, for which there are no other recovery options available, Waste-to-Energy is preferred over landfill disposal.
- Waste-to-Energy facilities are complex and expensive to operate, requiring high-tech operational management, when compared with existing waste processing options.
- Waste-to-Energy facilities are not flexible waste processing option as they require a sustained, steady volume of suitable waste (high calorific value) over their operating life (20-years plus).
- Waste-to-Energy facilities are difficult to consent, with public opposition generally high.

7.4.4 Other services

7.4.4.1 Litter services

KDC understands that litter bins should be phased out across the district to avoid the incidence of illegal dumping and the costs associated with increased maintenance and service. The following direction is to be taken by KDC on litter services:

- The complete removal of litter bins is to be considered across the entire Kaipara district including playgrounds, campgrounds, sports facilities, reserves, parks.
- If litter bins are retained, then option to explore the application of technology for litter bins to provide information on when servicing is required.

7.4.4.2 Waste education and behaviour change programmes

Council will enhance and expand its existing waste education and behaviour change programmes to support and enable the community to take responsibility for diverting more of their own waste and ensure they are aware of and can use the services provided by Council. Additional budget will be allocated to enable this enhanced programme.

7.4.4.3 Management of closed landfills

There are no changes proposed to the Council's current approach to managing its closed landfills. Council will continue to assess the risk these legacy sites present to the environment, including the potential impacts of more severe climatic events, and undertaking appropriate remedial works.

7.4.4.4 In-house resources

Additional resources are proposed to support the delivery of wider kerbside collection services and coordinate the enhanced behaviour change programmes, however this does not include resource requirements for continued delivery of the other waste service requirements such as contractor and contract management, monitoring and consent requirements for the closed landfills and other related activities.

8 References

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Appendix A Letter from Medical Officer of Health

Te Whatu Ora
Health New Zealand
Te Tai Tokerau

Kaipara District Council
Private Bag 1001
Dargaville 0340

15 September 2023

Dear Donna Powell

Subject: Draft Waste Assessment Kaipara District Council

Thank you for providing a copy of the above Assessment, as per the requirements of section 51(5)(b) of the *Waste Minimisation Act 2008*

I have reviewed this document alongside a Health Protection Officer in our Public Health Service (Ngā Tai Ora, Northland Public Health) primarily in relation to any immediate concerns around protecting human health, but also looking at the assessment more broadly, and would like to provide the following comments.

Health Protection
We respond regularly to notifiable illnesses and diseases as listed under Schedules 1 and 2 of the Health Act 1956. This list includes diseases that have the potential to arise from direct exposure to waste (particularly organic waste), or from exposure to vermin carriers of such diseases which may breed in environments harbouring waste. We acknowledge that not all diseases are always diagnosed and notified, however we draw on a considerable amount of experience investigating particularly infectious diseases across Northland.

In conclusion, we are not aware of any recent disease outbreaks or health related incidents in our region linked to household or commercial waste. We also do not believe that exposure to waste currently plays a significant role in the rate and trends observed in notified diseases at a population level, where we believe from case interview reports that other factors are more significant predictors of risk (e.g. water quality, food safety, animal exposures and wider environmental exposures). We therefore conclude that current and future proposals for waste minimisation are unlikely to pose a significant risk to public health from a health protection perspective.

Health protection risks are likely to be greater for those who handle waste regularly as part of their occupation, where we would be happy to engage further to understand what safeguards are already in place or could be promoted more widely in the region.

Waste Assessment
The key limitation to the quantitative assessment remains, as for the previous assessment, a significant lack of available data. While it appears for example that RTS facilities are moving to greater diversion of waste (Graphs in Section 4.2) as an alternative to landfill, and while this may be true, it is also possible that waste to landfill may still be increasing if it is bypassing the RTS through a more direct private route (see Figure 3). Without understanding also, the source and composition of waste at RTS facilities in further detail, it is difficult to say any change in diverted waste is due to improvements in RTS process or a change in the composition of the waste being received. These and other data limitations will make it difficult to audit the waste minimisation system as a whole going forward.

Proposals

Proposals are well laid out and there is good referencing of national policy and best practice guidance throughout the document.

The options appraisal diagram for kerbside bin services was particularly helpful and looks like a useful tool for public consultation.

Some further proposals on local waste reduction initiatives with businesses would be welcome.

Other Comments

I noted the low satisfaction rate reported with recycling and also that there is a charge for recycling services at RTS facilities (suggestive from Table 1). This and other barriers would be useful to consider as part of the public consultation around recycling. A higher target should be set for public satisfaction with recycling services.

There is a brief mention that litter bins will be phased out – it is unclear what evidence base was used to make this decision, and this should be a feature of the public/stakeholder consultation.

Page 28 contains a survey response summary – Question 2 response summary needs expanding to include descriptions for rating scale responses.

Yours sincerely,

Dr. Ankush Mittal
Medical Officer of Health
Ngā Tai Ora / Northland Public Health Service
Te Whatu Ora / Northern Region / Te Tai Tokerau

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Te Kāwanatanga o Aotearoa
New Zealand Government

Appendix B Legislation

Waste Minimisation Act (WMA) 2008

https://www.legislation.govt.nz/act/public/2008/0089/latest/DLM999802.html

Climate Change Response Act 2002 and amendments

https://www.legislation.govt.nz/act/public/2002/0040/latest/versions.aspx

Local Government Act 2002 (LGA 2002)

https://www.legislation.govt.nz/act/public/2002/0084/latest/DLM170873.html

Resource Management Act 1991 (RMA)

https://www.legislation.govt.nz/act/public/1991/0069/latest/DLM230265.html

Other legislation

The following is a summary of other legislation that is to be considered with respect to waste management and minimisation planning.

Hazardous Substances and New Organisms Act 1996 (HSNO Act)

https://www.legislation.govt.nz/act/public/1996/0030/latest/DLM381222.html

Health Act 1956

https://www.legislation.govt.nz/act/public/1956/0065/latest/whole.html

Litter Act 1979

https://www.legislation.govt.nz/act/public/1979/0041/latest/DLM33082.html

Health and Safety at Work Act 2015 (HSWA)

https://www.legislation.govt.nz/act/public/1979/0041/latest/DLM33082.html

Urban Development and Building

Various pieces of policy and legislation in the development and construction sector will have an indirect impact on the management and impact of construction and demolition waste. The National Policy Statement on Urban Development 2020 has objectives and policy statements on sustainability, including reduction in greenhouse gases. Amendments to the Building Act (2019) and (2021) are designed to drive product stewardship, the recording of product information and support the use of new, innovative and efficient building methods.

Other legislation

Other legislation that relates to waste management and/or reduction of harm, or improved resource efficiency from waste products includes:

- Biosecurity Act 1993
- Radiation Protection Act 1965
- Ozone Layer Protection Act 1996
- Agricultural Chemicals and Veterinary Medicines Act 1997

Appendix C Progress towards 2017-2022 WMMP action plan

Table 13 Assessment of Kaipara District Council's Action Plan in the previous WMMP 2017-2022

Category		Action	Assessment
Infrastructure actions	A.	Determine community interest in additional/new rural drop-off locations.	PARTIALLY COMPLETED (general interest expressed, but specific locations TBC)
	B.	Determine community interest in new holiday home drop-off locations.	PARTIALLY COMPLETED (general interest expressed, but specific locations TBC)
	C.	Investigate provision of a universal recycling collection.	PARTIALLY COMPLETED (investigations complete, but service not yet implemented)
	D.	Develop a proposal to promote composting.	COMPLETED (Sustainable Kaipara composting workshops)
	E.	Investigate the 'dry' waste sorting at Hakaru and Dargaville Transfer Stations.	ONGOING (both RTS operators continue to look for opportunities for additional recycling)
Concept developed with contractors including pilot trial.	F.	Consult with the community on the best solution for litterbins.	NOT COMPLETED (proposed actions to be included in 2023 WMMP)
	G.	Assist the Refuse contractor in researching and establishing alternative economic recycling markets.	ONGOING (contractor continually researches alternative markets for recyclables).
Education actions	H.	Update and maintain information on KDC website.	ONGOING
	I.	Disseminate information on waste services to all residents.	ONGOING
	J.	Support NRC environmental education activities.	ONGOING
	K.	Participate in national education/advocacy activities.	ONGOING
Policy Actions	L.	Investigate options and alternatives for funding of recycling collection (linked to Action "C.").	PARTIALLY COMPLETED (investigations complete, funding allowed for in 2021 LTP but service not yet implemented)
	M.	Develop criteria for making grants available from Waste Levy funds.	COMPLETED (further grants on-hold while effectiveness of grant programme reviewed)
	N.	Develop an implementation plan for the existing Solid Waste Bylaw.	NOT COMPLETED (licensing superseded by national reporting requirements. New bylaw to be considered following completion of 2023 WMMP)
	O.	Reporting on progress against the targets in the WMMP in Annual Reports.	ONGOING

Appendix D Current Product Stewardship Schemes in New Zealand

Table 14 Existing product stewardship schemes in New Zealand – regulated and accredited

Scheme or Programme	Regulated / accredited	Details
Agrecovery Foundation	Accredited scheme, working towards regulated status	Provides NZ farmers and growers with programmes for container recycling, drum recovery and collection of unwanted and/or expired chemicals. Also provides systems for return of shrink wrap and other farm plastics.
Envirocon	Accredited scheme, non-regulated	Waste concrete (including potentially harmful liquids) is diverted from landfill and upcycled into value-added precast concrete products for the Interbloc Modular Wall System.
Filter disposal services	Accredited scheme, non-regulated	Take back scheme for used oil filters from vehicles.
Glass Packaging Forum	Accredited scheme, non-regulated	The forum connects businesses that sell glass-packaged consumer goods with those that collect and recycle glass. This helps to improve the quality and quantity of glass recycled. The aim is zero container glass to landfill.
Interface ReEntry Programme	Accredited scheme, non-regulated	The scheme recycles used Interface carpet tiles into new carpet tiles and other products. PVC backed carpet tiles beyond their usable life are sent back to the original manufacturer in the US where they are stripped and remanufactured.
Large batteries	Currently in design phase for regulated scheme	Managed by the Battery Industry Group, covering batteries greater than 5kg, excluding lead-acid batteries.
Plastic packaging	Currently in design phase for regulated scheme	The Packaging Forum and New Zealand Food and Grocery Council are leading the two-year co-design process on plastic packaging.
Refrigerant recovery scheme	Accredited scheme, currently in design phase for regulated scheme	The Trust for the Destruction of Synthetic Refrigerants, also known as RECOVERY collects and responsibly disposes of refrigerants used in the refrigeration and air conditioning industries.
Resene Paintwise	Accredited scheme, non-regulated	Take-back of paint and paint receptacles. User pays for non-Resene branded paint and paint receptacles.
Recovery Oil Saves the Environment (ROSE)	Accredited scheme, non-regulated	The used-oil recovery programme enables users, oil producers and regulators to responsibly collect, transport, use and dispose of used oil.
Soft Plastic Recycling Scheme	Accredited scheme, non-regulated	Soft plastic packaging is collected from participating stores and delivered to two NZ processors – Future Post in Waiuku and Second Life Plastics in Levin. The soft plastics are made into new products such as plastic fence posts, cable covers & garden edging.
Sharp Comprehensive Recycling and Waste Reduction Scheme	Accredited scheme, non-regulated	Sharp New Zealand aims to reuse and recycle 100% of its packaging materials, electronic products, equipment and obsolete and used parts.
Synthetic refrigerant scheme	Design phase for regulated scheme	End of life refrigerant management scheme.
TechCollect	Design phase for regulated scheme	End of life e-waste scheme.
Tyrewise	Regulated scheme	New Zealand's first regulated product stewardship scheme covering the management of tyres.

Appendix E Closed Landfill Site List

Kaipara District Council's Waste Minimisation Strategic Activity Management Plan 2021-2031 lists known closed and illegal landfills.

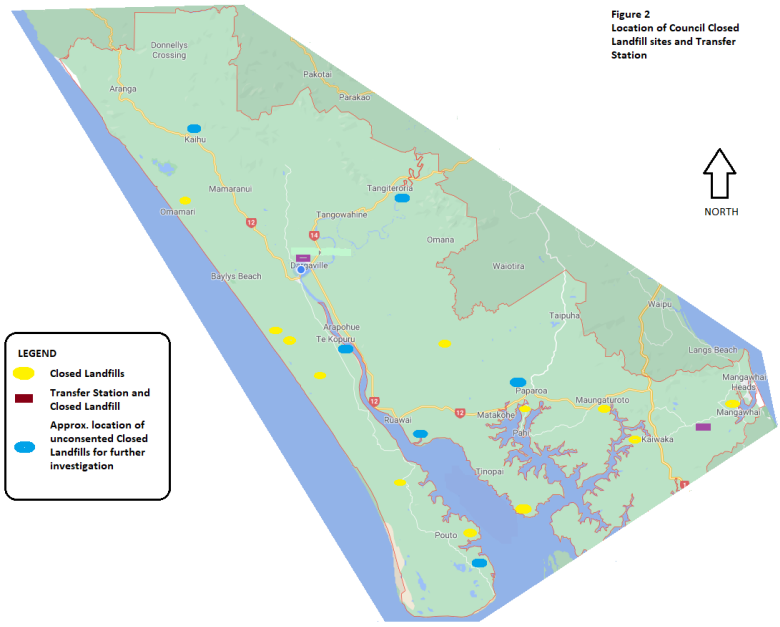
Closed landfills previously consented –

1. Dargaville Closed Landfill
2. Hakaru Closed Landfill
3. Pahi Road Closed Landfill
4. Kaiwaka Closed Landfill
5. Mangawhai Closed Landfill
6. Tinopai Closed Landfill
7. Ruawai Closed Landfill
8. Omamari Closed Landfill
9. Glinks Gully Closed Landfill
10. Parawanui Closed Landfill
11. Cole Road (Te Maire) Closed Landfill
12. Mosquito Gully Closed Landfill
13. Kellys Bay Closed Landfill
14. Bickerstaffe Road Closed Landfill

Closed landfills previously unconsented -

1. Pouto Point
2. Tangiteroria
3. Kaihu
4. Te Kowhai Road
5. Te Kopuru, Clean Street
6. Franklin Road, this site has previously had some consented activity

Figure 14 Locations of closed landfills across Kaipara District Council (KDC, 2021).



Appendix F People Panel Waste Survey Results 2020

Kaipara District Council conducted a people panel survey on waste services in 2020. There were 523 responses from across the region. Figure 15 shows the responses by area using the Statistical Area 2 categories by StatsNZ.

Question 1 asked residents which refuse and recycling services they currently use, multiple options could be selected. Figure 16 shows a summary of responses by area.

Question 2 asked residents to rank the relative importance of recycling to them personally out of 5, with 5 being highly important. Figure 17 shows a summary of responses by area.

Question 3 asked residents their preference for potential future waste services. The current user pays model was one options, with options for a rates funded refuse and recycling services, a rates funded recycling service only, or other rates-funded options. Figure 18 shows a summary of responses by area.

Question 4 asked residents to complete the sentence "The one thing Council could do now to make waste and recycling better is …" for which 453 individual answers were received. A summary of these is not illustrated.

Question 5 asked residents how much their household spends on refuse and recycling service per week. Figure 19 shows a summary of responses by area.

Figure 15 Responses by Statistical Area 2

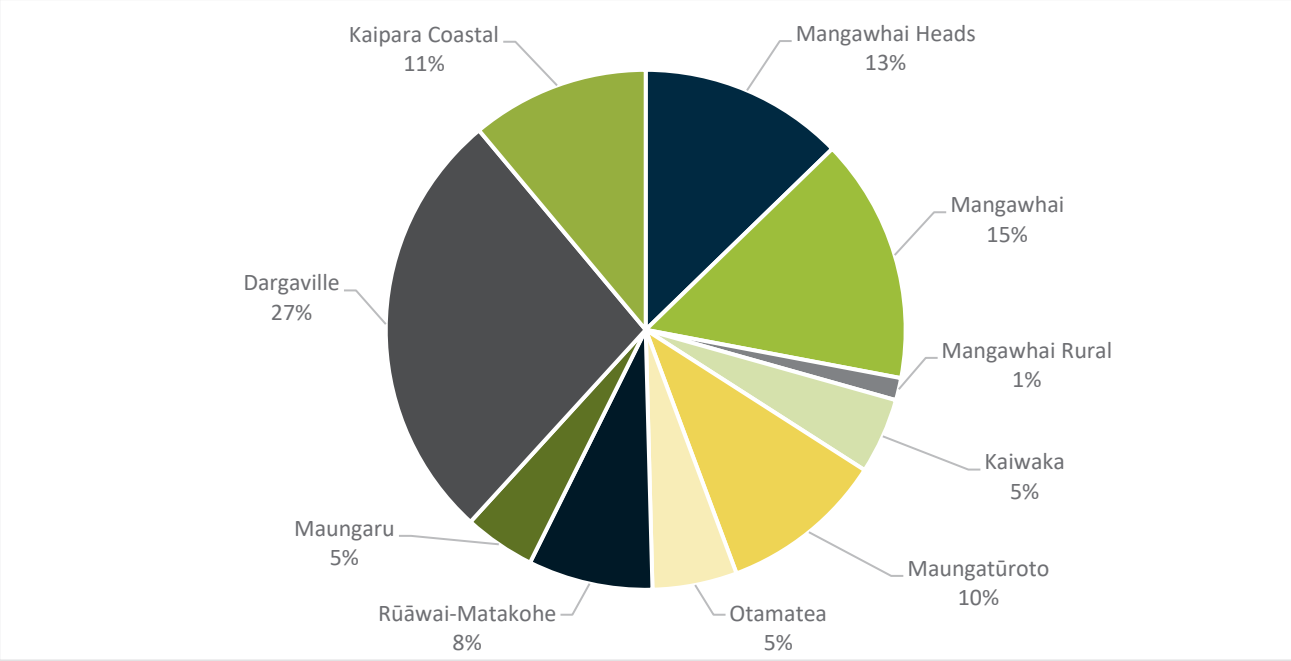


Figure 16 Current type of refuse and recycling services used

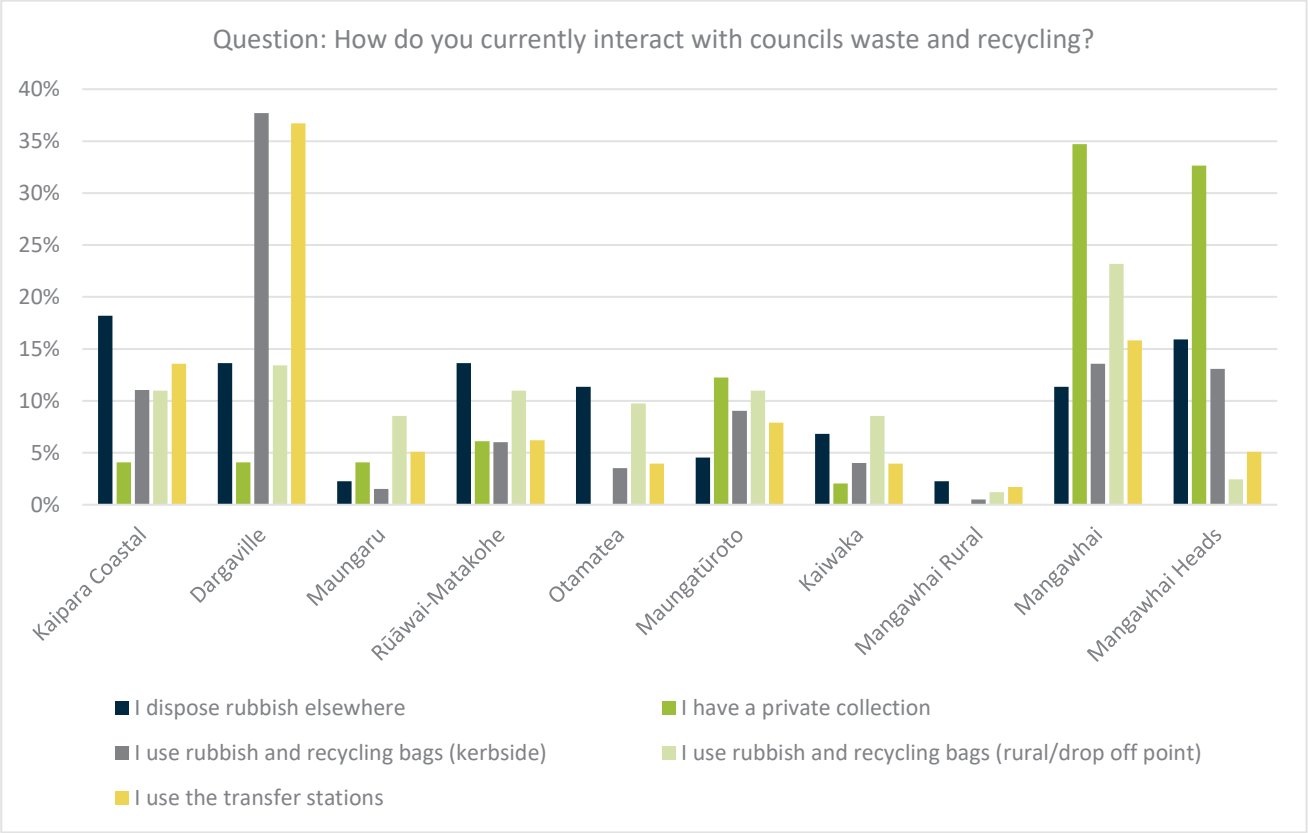


Figure 17 Importance of recycling to households

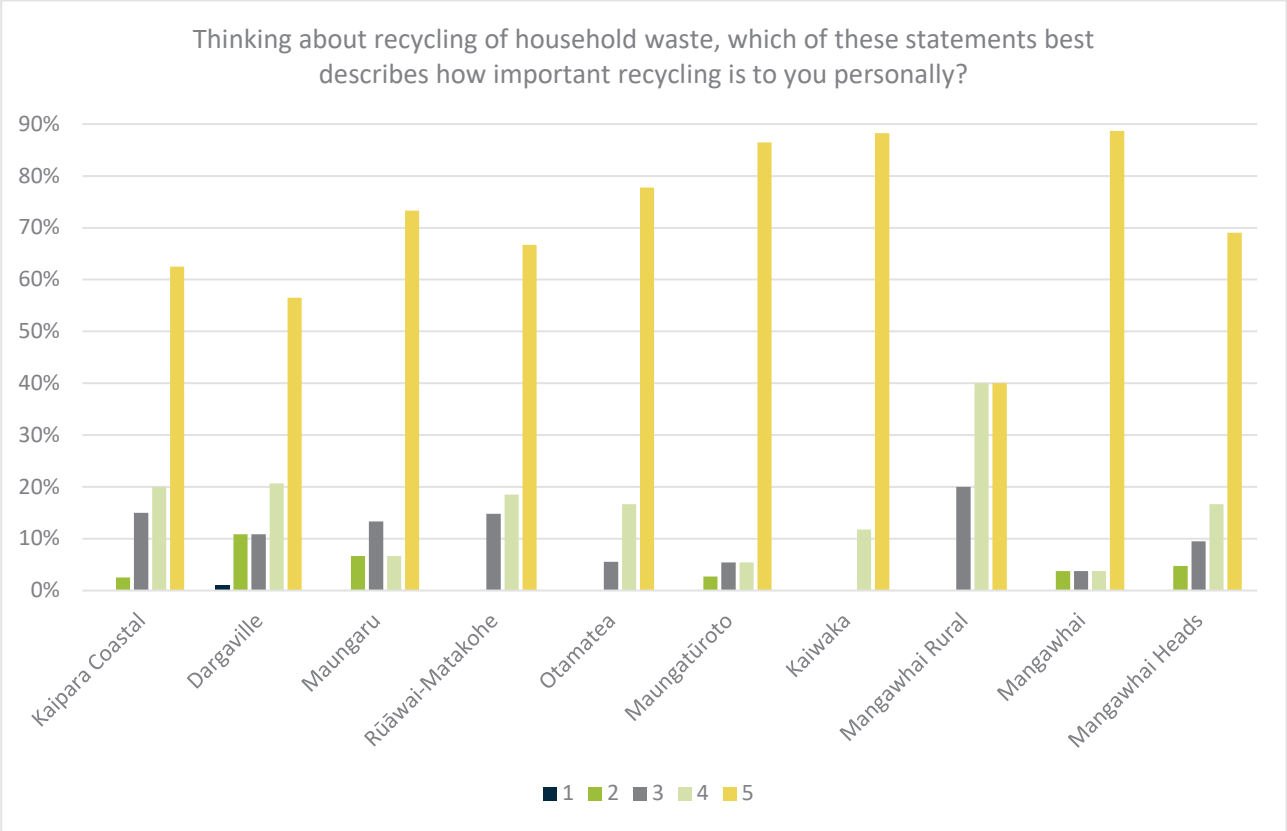


Figure 18 Preference for future waste services

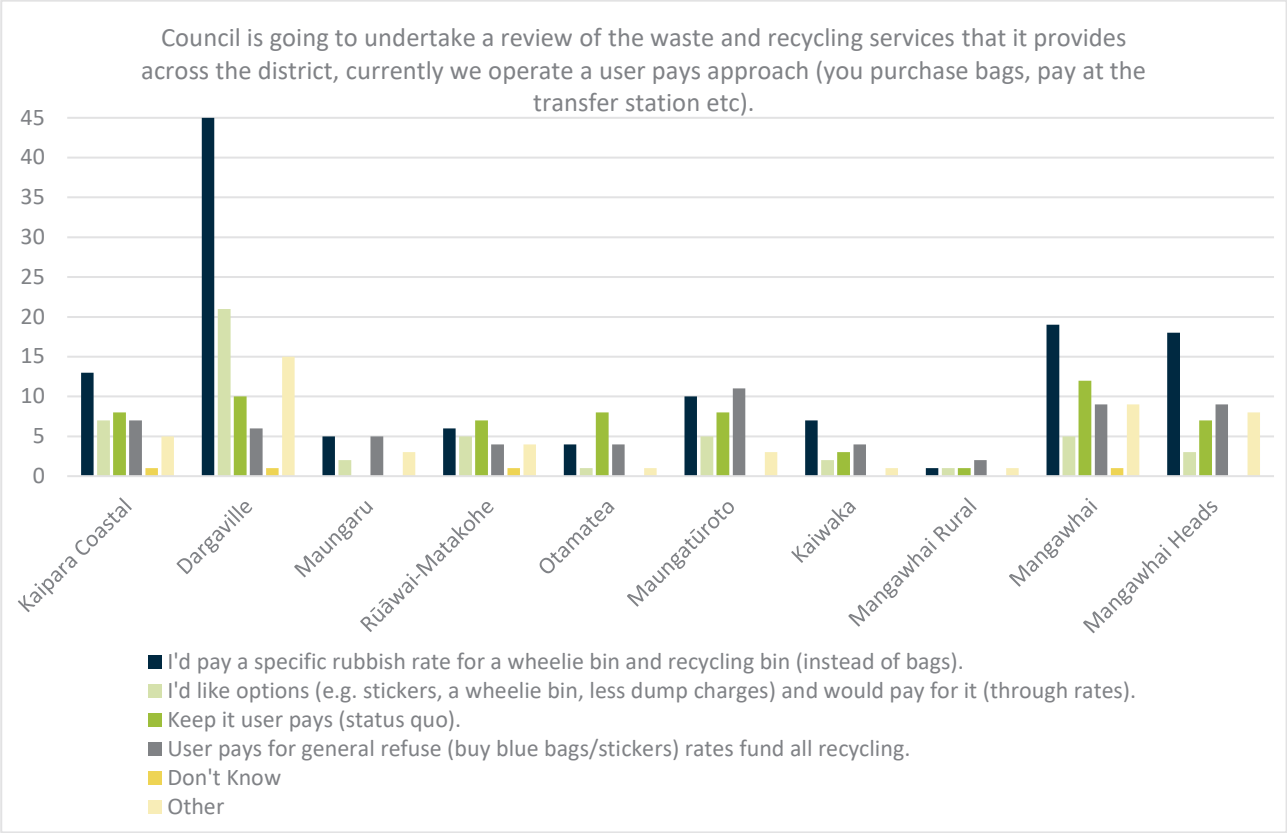


Figure 19 Household weekly spend on refuse and recycling