Hamilton City Council
Waste assessment

August 2023

MorrisonLow

Hamilton City Council
Te kaunihera o Kirikiriroa

The key purpose of the Waste Assessment is to provide a snapshot of the current waste situation at a local, regional and national level.

It will provide the foundation for Hamilton City Council to update its Waste Management and Minimisation Plan 2018 – 2024 in an informed and effective manner. It is a technical document presenting as clear a picture as possible of what happens with waste in Hamilton. It examines what forces are driving current trends and challenges, and from that, identifies the focus areas and actions for addressing these issues.

This is a collaborative document, with the technical elements being contributed by Morrison Low and the Hamilton City Council Future Planning Framework established by Hamilton City Council Elected Members and staff.

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. The Waste Management Act 2008 also requires a waste assessment be notified with the draft waste management and minimisation plans for public feedback. This process is required at intervals of no less than every six years.

Council's current Waste Minimisation and Management Plan 2018 – 2024 was prepared in 2018. The 2023 Waste Assessment will inform our Council's 2024 review of its WMMP and will support decision making for Council's Long-Term Plan 2024-34. Council has prepared this waste assessment as prescribed in s51 of the Waste Minimisation Act and provides details of:

- known existing waste services and facilities provided in Hamilton
- waste quantities, composition, and flows
- identified waste issues
- forecast future demand
- Council's vision, outcomes, guiding principals and targets for waste management and minimisation
- an assessment of options to address Hamilton's identified issues (a statement of proposal).

1.1 Document and accuracy

A waste assessment is only a snapshot in time of the data collected for the purposes of future waste planning and preparation of the waste management and minimisation plan.

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 private kerbside collected rubbish. Details have been provided regarding any limiting factors in preparing the waste assessment, deemed to have materially impacted on the completeness or accuracy of the data. This includes forecasts, estimates or options assessments.

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 Council's resources
- the possibility Council may be directed under the Health Act 1956.

1.2 Key terms and acronyms

Key Term	Definition
2030 Agenda for Sustainable Development	Adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. https://sdgs.un.org/2030agenda
Cleanfill	A cleanfill (class 4 landfill) is any facility that accepts only cleanfill material.
Cleanfill material	Inert materials disposed of, into or onto land, at a consented cleanfill, that when buried will have no adverse effect on people or the environment. Materials typically include construction and demolition waste such as concrete, uncontaminated soil and rock.
Construction and Demolition.	
Diverted material	Anything no longer required for its original purpose and, discarded materials collected for recycling, composting or other recovered or treated materials that are diverted from landfill.
Emissions Reduction Plan	Aotearoa New Zealand's First Emissions Reduction Plan 2022. Ministry for the Environment. Te hau mārohi ki anamata – towards a productive, sustainable and inclusive economy.
Landfill	A disposal facility as defined in Section 7 of the Waste Minimisation Act 2008, excluding incineration. Includes by definition in the WMA, only those facilities that accept 'household waste (class 1 landfill).
Aotearoa New Zealand Waste Strategy	Aotearoa Wellington: Ministry for the Environment. The waste strategy is New Zealand's roadmap for the next three decades for a low-emissions, low-waste society built upon a circular economy.
Organics	Discarded compostable materials that are organic in origin and appropriate to be used as feedstock for composting. Includes garden waste and food waste.
Solid Waste Analysis Protocol	Ministry for the Environment-led baseline programme to provide solid waste composition information.
Territorial Authorities	Defined under the Local Government Act 2002 as a city or district council.
Waste	Waste disposed of to landfill and includes a type of waste defined by its composition or source e.g. organic waste, electronic waste, or construction and demolition waste. Includes any component or element of diverted material, if the component or element is disposed of to landfill.
Waste Assessment	As defined by Section 51 of the Waste Minimisation Act 2008.
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 Council will develop their Waste Assessment and Waste Management and Minimisation Plan.

2.1 New Zealand waste strategy

Waste management and minimisation in New Zealand is supported by the Government's Aotearoa New Zealand Waste Strategy 2023. The Aotearoa New Zealand Waste Strategy sets out the long-term policy priorities for waste management and minimisation.

The vision is:
"By 2050, Aotearoa New Zealand is a low-emissions, low-waste society, built upon a circular economy. We cherish our inseparable connection with the natural environment and look after the planet's finite resources with care and responsibility". The strategy has three phases as seen below.

Three phases of getting rid of waste for a circular Aotearoa New Zealand:

By 2030, our enabling systems are working well and behaviour is changing.

The building blocks are in place to enable change.

More activity is circular and we are producing less waste.

Emissions and other environmental indicators are improving.

By 2040, circular management of materials is normal, expected and well supported.

Circular activity is widespread residual waste is minimal.

Emissions and other environmental indicators are improving.

By 2050, New Zealand has a low-emissions, low-waste circular economy and is helping other countries make the change.

Domestic systems are circular as possible.

We are contributing to Pacific and international circular networks.

Our management of materials does not harm the environment.

Reference: Ministry for the Environment. 2023. Te rautaki para | Waste strategy. Wellington: Ministry for the Environment

2.2 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 Aotearoa New Zealand Waste Strategy. Careful attention is given to these in developing the waste assessment. The Acts which 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 Emissions Trading Scheme
- The Climate Change Response (Zero Carbon) Amendment Act 2019
- Local Government Act 2002
- Resource Management Act 1991 (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.

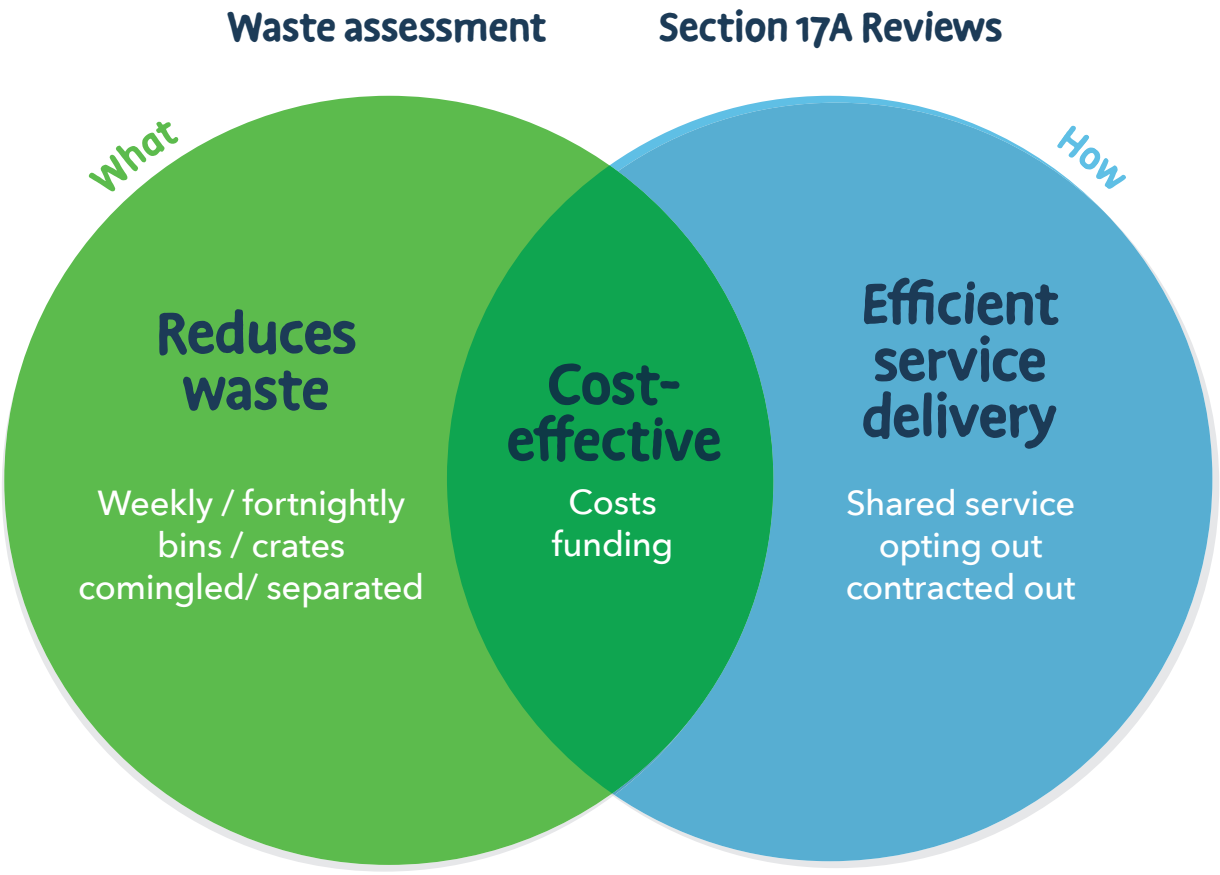
Appendix B provides further information on this primary legislation.

2.3 Section 17A – delivery of services

Section 17A of the Local Government Act 2002 sets out the requirement for local authorities to "review the cost-effectiveness of current arrangements for meeting the needs of communities within its district or region for good-quality local infrastructure, local public services, and performance of regulatory functions".

The two prongs of a Section 17A assessment as shown in Figure 1, puts the customer at the forefront of the assessment in tandem with cost-effectiveness. For the customer, cost-effectiveness does not mean least-cost, and therefore understanding what the community needs is critical to delivering a service in alignment with community expectations.

Figure 1: Interlinked Section 17A components of cost-effectiveness and community needs for a kerbside collection.



Section 17A reviews provide Council with the opportunity to undertake a full review of the way in which a service is delivered. As part of this process, discussions with surrounding territorial authorities are critical as there may be options for regional collaboration. This could benefit more communities and result in greater efficiencies and encourage a regional approach through the joint use of facilities to achieve waste minimisation outcomes.

2.4 International commitments

New Zealand is party to the following key international agreements influencing the requirements of our domestic legislation for waste minimisation and disposal. Some of the key agreements are the:

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

2.5 National direction

Many waste minimisation initiatives are more suitably implemented at a national level, e.g. product stewardship schemes for problematic waste streams (e.g. e-waste, tyres) and container deposit legislation. Work is needed by governing bodies, such as WasteMINZ and The Ministry for the Environment, to encourage ongoing support for the implementation of national waste minimisation activities through a coordinated advocacy approach.

National direction has evolved rapidly over the last two years. There are several signalled changes in legislation and the wider waste industry, impacting the way waste services are delivered by Council. These include:

- A revised Aotearoa New Zealand National Waste Strategy, released in March 2023, setting targets for waste reduction that councils will need to align with when preparing their waste minimisation and management plans. The strategy sets these three national targets to be achieved by 2030:
  - waste generation - reducing the amount of material entering the waste management system, by 10% per person
  - waste disposal - reducing the amount of material needing final disposal, by 30% per person
  - waste emissions - reducing the biogenic methane emissions from waste by at least 30%.
- The emissions reduction plan sets out how New Zealand will reduce our impact on the climate.

  Emissions reduction targets by 2050:
  - long-lived greenhouse gas emissions are net zero
  - biogenic methane emissions are 24–47% below 2017 levels.
- Supporting the Local Government Waste Management Manifesto including:
  - changes to the Waste Disposal Levy
  - better waste data
  - container deposit scheme
  - mandatory product stewardship e.g. tyres, e-waste.
- Proposed standardisation of the kerbside collection system.
- Banning of specific grades of plastics for packaging and some single-use plastics.
- Government investment in diversion infrastructure via the Waste Minimisation Fund and Climate Emergency Response Fund. Current funding round focused on organic waste diversion and specific funding for council kerbside collection of food waste.
- Ongoing implementation of increases to the Waste Disposal Levy and Emissions Trading Scheme costs, as well as expansion of the Levy application to Class 2-4 landfills (e.g. construction and demolition waste landfills, and managed fill and clean fill sites).
- Introduction of the transfer station reporting using an agreed National Waste Data Framework.
- Implementation of the Government's Climate Action Plan, which includes diversion of organic waste (food, green, timber wastes) from landfill.
- A move towards a circular economy which is strongly aligned with global initiatives to achieve the Sustainable Development Goals*. In particular the goals on sustainable consumption and production, climate change, economic growth, energy and ecosystem health.

- Subsequent revisions to the Waste Minimisation Act 2008 and the Litter Act 1979 to support the changes above. Funding models for waste services may be impacted by any changes to sharing the Waste Disposal Levy.
- Wider government reform impacting Councils will also impact waste service delivery. This includes (but is not limited to) Resource Management Act reform, Affordable Water Reforms and the future for local government review.
- **MfE considers compostable products could have a role in a circular economy in New Zealand:
  - in closed-loop settings where they help divert food to compost
  - where plastic polymers would usually contaminate the compost or soil (e.g. produce labels).
- ***Waste to energy: Some technologies extract the remaining value from materials before, or while, they are disposed of. Waste-to-energy facilities are a common example. However, recovering value must be done without increasing emissions or instead of a preferred method higher in the waste hierarchy. Ideally these facilities process renewable material.

2.5.1 Alignment with the national strategy

Central government policy is being reviewed which could have significant effects on Council's waste management and minimisation practices.

Council will be developing its new Waste Management and Minimisation Strategy 2024 – 2030 against the backdrop of future changes – which will likely place new responsibilities on council services and resources. Council therefore is seeking to align its waste plan with likely changes and key strategy priorities including:

- diversion of organics away from landfill
- reducing landfill emissions
- lifting recycling rates
- standardisation of kerbside collections
- promoting a circular economy.

2.5.2 Te Tiriti o Waitangi – Treaty of Waitangi

Council is committed to honouring the principles of Te Tiriti o Waitangi / Treaty of Waitangi through its relationship with Kiingitanga, Waikato-Tainui, mana whenua and maataa waka within Hamilton. The principles of partnership, participation, and protection underpin the relationship between the government and Maaori under Te Tiriti o Waitangi.

* Ministry for the Environment. 2021. Te kawe i te haepapa para | Taking responsibility for our waste: Proposals for a new waste strategy; Issues and options for new waste legislation. Wellington: Ministry for the Environment.

** Ministry for the Environment. 2022. Compostable products: Ministry for the Environment position statement. Wellington: Ministry for the Environment.

*** MfE A waste to energy guide for New Zealand Aug 2020 Publication number: INFO 964.

2.6 Regional strategies

2.6.1 Te Ture Whaimana

Tooku awa koiora me oona pikonga he kura tangihia o te maataamuri.

Te Ture Whaimana encompasses the vision for a future where a healthy Waikato River sustains abundant life and prosperous communities who, in turn, are all responsible for restoring and protecting the health and wellbeing of the Waikato River, and all it embraces, for generations to come.

2.6.2 Waikato Regional Council's waste strategic action plan 2020-2025

With a vision of "working together towards a zero-waste region", the focus is on wellbeing for our environment and people through:

- preventing waste and its impact on the environment
- maximising quality resource recovery and putting recovered resources to their highest and best use
- accelerating the transition to a circular economy in the Waikato region
- working in partnership to achieve our goals.

The Waikato Waste Prevention Plan aligns with Waikato Regional Council's 10-year strategy, Waikato Regional Policy Statement and Waikato Wellbeing Project. Under the Waikato Wellbeing Project, goals for achieving a more environmentally sustainable, prosperous and inclusive Waikato region by 2030, are being set using the Sustainable Development Goals framework. The goal of reducing waste to landfill in the Waikato region by 50% has been set under SDG (goal 12) responsible consumption and production.

2.6.3 Iwi/hapuu environmental plans

- **Waikato-Tainui:** The Waikato-Tainui Enviornmental Plan, Tai Tumu, Tai Pari, Tai Ao is developed out of the Whakatupuranga 2050 long-term development approach and seeks to build the capacity of marae, hapuu and iwi in the sustainability space. The overarching purpose of the Plan is to provide a map or pathway that will return the Waikato-Tainui rohe to the modern-day equivalent of the environmental state it was in when Kiingi Taawhiao composed his maimai aroha.
- **Ngāti Hauā Iwi Trust:** The Te Rautaki Tāmata Ao Turoa o Hauā - Ngāti Hauā Environmental Management Plan has been developed by Ngāti Hauā Iwi Trust in partnership with Ngāti Hauā Marae. The plan has been developed 'to express and articulate the values, frustrations, aspirations and position statements in relation to our taiao (environment)'.
- **Ngaati Tamainupoo:** The purpose of the Ngaati Tamainupoo Matauranga and Taonga Management Plan 2021 is to serve as the first generation plan for Ngaati Tamainupoo to direct external agencies and organisations, and developers and their agents, on the management and use of Ngaati Tamainupoo maatauranga and taonga.

2.7 Council strategic plans, policies and regulations

Council strategic plans, policies and regulations will be considered in the development of the new Waste Management and Minimisation.

2.7.1 Long-Term Plan

Council's vision within its Long-Term Plan 2021-2031 is to improve the wellbeing of Hamiltonians. Central to this, Council have developed five priorities for the city based on feedback received from the community:

- shaping a city that's easy to live in
- shaping a city where our people thrive
- shaping a central city where people love to be
- shaping a fun city with lots to do
- shaping a green city.

In relation to shaping a green city, Council sets out the following focus areas:

- making the city healthier and stronger
- reduce the carbon footprint
- mitigate the impact of the city on river and lake
- enable alternative ways to move safely and quickly
- plan our future as a sustainable city.

2.7.2 He Pou Manawa Ora

The Pillars of Wellbeing Strategy outlines the vision for a city that celebrates its whole history, including its unique Maaori heritage. The strategy recognises Maaori as key partners in determining Hamilton's future and aims to achieve better outcomes for Maaori and all Hamiltonians. The four pillars or 'pou' are history, unity, prosperity and restoration.

2.7.3 Climate Change Strategy – our climate future

Climate change is one of the greatest challenges for Hamilton. Hamiltonians have made it clear they want Council to lead the way in responding to climate crisis. Council has developed a climate change strategy outlining the priorities for its response.

The strategy's vision is 'Hamilton Kirikiriroa is a thriving, low-carbon city that responds and adapts to climate change' and have the following outcomes and focus areas:

Outcomes	Focus areas
Outcome one: **By acting together, our emissions are reducing**	• Establish and implement emissions reduction pathways for our city and our organisation's emissions. • Develop a low-emissions transport network and system. • Make Hamilton a centre of excellence for climate response innovation. • Support our businesses and community through the low-carbon transition and to reduce their emissions. • Embed circular economy principles in all activities.
Outcome two: **Our neighbourhoods enable low-carbon living**	• Create a 20-minute city of compact, connected and healthy neighbourhoods, with a focus on sustainable urban intensification. • Enable low-carbon infrastructure and buildings, and opportunities for renewable energy solutions. • Support community sharing networks to reduce emissions and enable other co-benefits.
Outcome three: **Our city is ready for Hamilton's climate**	• Improve our community's resilience and reduce the impact of climate change on their wellbeing. • Build the right things in the right place to reduce our climate risk exposure. • Future-proof existing and new infrastructure to be climate resilient. • Regenerate our natural environment, to improve the resilience of our gullies and other natural areas. • Encourage sustainable water use and conservation measures to protect the Waikato River.

2.7.4 Waste Management and Minimisation Bylaw 2019

The Waste Minimisation Act 2008 requires councils to review their waste bylaws at least every 10 years. Council's current waste bylaw was approved in 2019.

Waste-related bylaws must not be inconsistent with a council's waste management and minimisation plan which is reviewed every six years. With a review of the Waste Management and Minimisation Plan in 2024, Council must ensure the waste bylaw remains fit for purpose. Following the new Waste Management and Minimisation Plan development, the waste bylaw would be checked for consistency.

2.7.5 Regulatory functions

In addition to waste facility assets and the provision of services, Council also has responsibilities and powers as a regulator and statutory obligations placed upon them by the Waste Minimisation Act 2008.

Council operates in the role of regulator with respect to:

- management of litter and illegal dumping under the Litter Act 1979
- trade waste requirements
- nuisance-related bylaws
- Local Government Act 2002.

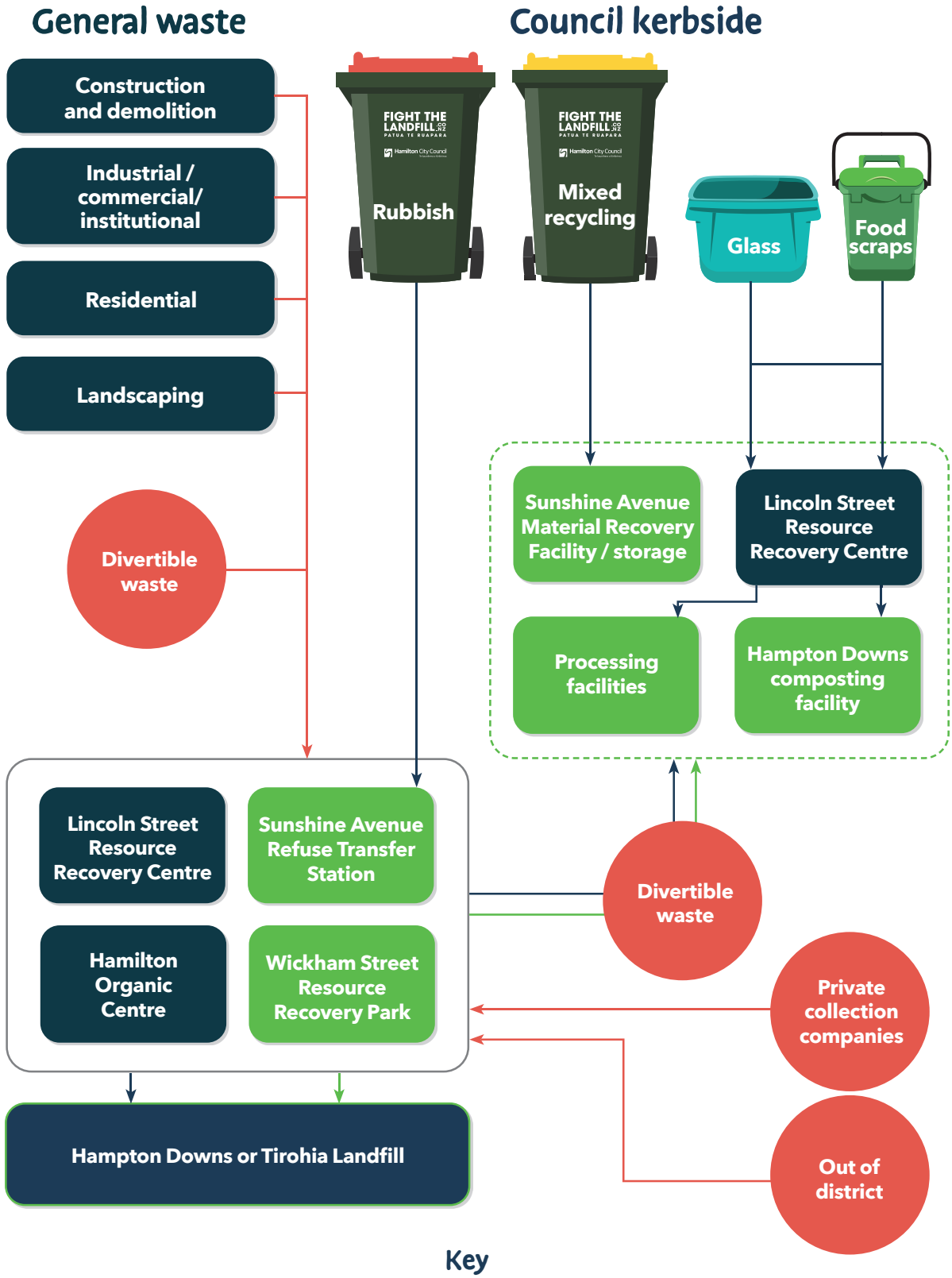
3 Existing recycling and waste facilities and services

This section includes a summary of information regarding waste management and minimisation services and facilities provided within Hamilton for reduction, re-use, recycling, recovery, treatment, and disposal. This includes Council services as well as private and commercial services, where known and applicable.

There are no operating landfills in Hamilton. Residual waste from Hamilton is consolidated at the Council-owned Lincoln Street Resource Recovery Centre and Hamilton Organic Centre at Wickham Street, the Enviro NZ owned Refuse Transfer Station on Sunshine Avenue, or the Waste Management owned Resource Recovery Park on Wickham Street, Frankton.

Waste from the Lincoln Street Resource Recovery Centre and waste from the Refuse Transfer Station is bulk-hauled to North Waikato Regional Landfill (Hampton Downs landfill). A small amount of waste is transported directly from Hamilton to Hampton Downs landfill. Without access to available data, waste from the Waste Management Resource Recovery Park is assumed to be transported to the Tirohia landfill.

Figure 2: illustrates the source and destination of waste and diverted material in Hamilton.



3.1 Council provided facilities, services and funds

From 31 August 2020, Council implemented a new rubbish and recycling service. The new service includes separate wheelie bins for rubbish and mixed recyclables as well as a new food scraps bin to collect household food waste. Glass is now collected separately using the existing crates that were available to the customers.

As of September 2020, Council provides the following facilities and services, excluding the inner-city rubbish and recycling exclusion zone:

- Residential fortnightly kerbside collection of rubbish (120 litre wheelie bin), is disposed of at the Sunshine Avenue Refuse Transfer Station. Occasionally, loads of Council kerbside rubbish is disposed of at the Lincoln Street Resource Recovery Centre. The Refuse Transfer Station is closed to the public.
- Residential weekly kerbside collection of food scraps (23 litre bin), is consolidated at the Lincoln Street Resource Recovery Centre and transported to Hampton Downs composting facility.
- Residential fortnightly kerbside collection of mixed recycling (240 litre wheelie bin), taken to Sunshine Avenue Materials Recovery Facility for sorting and subsequent processing.
- Residential fortnightly kerbside collection of glass (45 litre crate), consolidated at Lincoln Street Resource Recovery Centre and sent for processing.
- Hamilton Organics Centre on Wickham Street accepts green waste drop offs. Green waste can also be dropped off at Lincoln Street Resource Recovery Centre. Greenwaste from the facilities is consolidated at the Hamilton Organic Centre and transported to Hampton Downs for composting.
- Lincoln Street Resource Recovery Centre, owned by Council and operated by Enviro NZ, accepts rubbish, green waste and a range of recyclable/recoverable materials including wood gib, concrete cleanfill, batteries, metals, e-waste, hazardous goods, and standard kerbside recyclable items. Habitat for Humanity operate an onsite retail store for items recovered.
- An education room (owned by Enviro NZ) offering community tours of the at Sunshine Avenue Materials Recovery Facility.
- Litter bin servicing and removal of illegal dumping (funded through general rates).
- Special wastes generated in Hamilton include sewage milliscreenings and biosolids from Council's wastewater treatment plant and road sweepings. Milliscreenings are disposed of at the Hampton Downs landfill. Biosolids are vermicomposted at the MyNoke plant in Tokoroa. Road sweepings are disposed of at Lincoln Street Resource Recovery Centre.
- Collection from Council facilities includes, rubbish, recycling, glass, food waste and greenwaste.
- An annual community contestable Waste Minimisation Fund.
- Compliance and closed landfill management.

3.2 Non-council facilities and services

In addition to the kerbside services provided by Council, private operators such as Enviro NZ or Waste Management also offer user-pays kerbside rubbish collections to urban households, using several sizes of wheelie bins as the waste container. The extent of households using private rubbish collections is estimated at only 4.2%* given Council provides a Council-led, rates funded kerbside service.

Several commercial operators offer gantry skip bin services to householders for the occasional disposal of larger quantities of waste. Different sizes of bins are available, with specific bins being available for dense materials such as hard fill and soil.

Several greenwaste operators also offer user-pays greenwaste collection services to residential customers.

Commercial waste operators provide waste and recycling services for most businesses in Hamilton. Depending on the volume of waste generated, wheelie bins, gantry bins, and front-loader bins are available. Some businesses transport their own waste and recycling to one of the transfer stations.

3.2.1 Private processing facilities

There are limited diverted material processing facilities in Hamilton, but the district is serviced by other North Island facilities.

Council uses the Materials Recovery Facility in Hamilton and facilities in other districts for the processing of the material it collects. A summary list of known recycling/recovery facilities in other North Island districts used by Council, the private sector and other councils are outlined in Table 1.

* Composition of Kerbside Rubbish and Composition of Waste to Lincoln St Resource Recovery Centre, Waste Not Consulting, November 2022 (SWAP report)

Table 1 Diverted material processing facilities

Name / Operator / Owner	Type	Key service / waste stream	Location
Enviro NZ	Materials Recovery Facility	sorting and bulking of mixed recyclables	Hamilton
Waste Management New Zealand	Materials Recovery Facility	sorting and bulking of mixed recyclables	Other North Island locations
Visy	glass furnace	glass bottles and jars	Onehunga, Auckland
Envirofert	composting	• green waste and food waste • clean plasterboard (used as additive for compost) • wood (shredded and sent as biofuel)	Tuakau
MyNoke	vermicomposting	biosolids	Tokoroa
South Waikato Achievement Trust	dismantling site	electronic waste	Tokoroa
SIMS Pacific	scrap yard	metals	Auckland
Oji Fibre Solutions	fibre reprocessing	paper and card	Auckland
PACT Group	plastic reprocessing	plastics recycling	Auckland
Polymer Processing	plastic reprocessing	plastics recycling	Papakura, Auckland
ENZ	composting	green waste and food waste	Hampton Downs
Astron Plastics	plastic #1 and #2	plastics recycling	Auckland
Flight Plastic	plastic #1	plastics recycling	Wellington
Budget Plastics	plastic #5	plastics recycling	Palmerston North
Bay Tyres	end of life tyres	shredding of tyres for fuel	Tauranga
Global Metal Services	tin, steel, aluminum, gas bottles	metal recycling	Hamilton
Computer Recycling Auckland	batteries, car batteries, e-waste	electronic waste recycling	Auckland
D&T MacDonald	concrete and cleanfill	concrete and cleanfill processing	Hamilton
Revital	plasterboard	fertiliser manufacturer	Cambridge
PurposeFill	plasterboard and other construction waste	sorting and bulking of recyclables	Hamilton
Chemwaste	hazardous chemicals and oil	hazardous waste	Auckland

Data provided from Council's Rubbish and Recycling report, April 29 2021.

3.2.2 Product stewardship/take back schemes

A summary list of known product stewardship schemes operating in New Zealand is outlined in Table 2.

Table 2 Product stewardship schemes and take-back schemes in the Waikato and Bay of Plenty Regions (2021)[1]

Name / Operator /Owner	Key service / waste stream	Location
Waste paint	3R and Resene Paints	Drop-off at locations that sell paint or transfer stations
Agricultural waste chemicals and plastics	3R and Agrecovery	Drop off or pick up
Farm plastics (bailage wrap)	Plasback	Collects from farms, call to schedule pick up
Child restraints	Seatsmart through agents	Tauranga, Rotorua, Hamilton, Frankton
Hard to recycle consumer products	Terracycle	At local collection points (schools, libraries, or send by mail)
Electrical and electronic products	TechCollectNZ	Noel Leeming stores in Hamilton, Tauranga, and Rotorua
Electrical and electronic products	South Waikato Achievement Trust	Drop-off in Tokoroa
Mobile phones	REMobile	Selected Spark, 2 Degrees, and Resene stores
Swappa crate (beer bottles and crates)	The Associated Bottlers Co Ltd	In most liquor stores
Household polystyrene recycling programme	EXPOL	Mitre10 stores in: Cambridge, Rotorua, Tauranga, Ruakura, Te Rapa
Household soft plastics	The Packaging Forum	Selected Countdown, The Warehouse, New World, Pak'nSave stores and other locations
Liquid paper Board	SaveBOARD	A small number of Hamilton cafes and SaveBOARD Te Rapa
Roading materials	Various	Various

[1] Waikato and Bay of Plenty region waste and recycling stocktake 2021

4 Waste data

It is important for Council to understand the quantity and composition of waste coming through its facilities and services so it can 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, and disposed of via Council's collection services and facilities. This includes kerbside and facilities data for the period July 2017 to June 2022, and sampling data collected by Waste Not Consulting in May, June, October, and November 2022. The sampling includes two four-day visual surveys of the composition and activity sources of waste disposed of at the Lincoln Street Resource Recovery Centre and two, three day sort-and-weigh audits of the composition of Council's kerbside rubbish collection. Only the Lincoln Street Resource Recovery Centre was surveyed for the 2022 research.

Without the inclusion of the Enviro NZ and Waste Management Resource Recovery Park, the visual survey does not provide a complete picture of waste disposed of to landfill from Hamilton.

Council had a new waste service contract which commenced in August 2020, at which point the format of waste data being recorded by the contractor were slightly different than what has been recorded historically.

4.1 Data assumptions and accuracy

To obtain a better understanding of waste data within Hamilton and how it compares to other territorial authorities, a per capita figure has been used as the first guide. This is the total amount of known waste collected, divided by the total number of people in a defined area. It is an indicator of average 'waste' production or recyclables diverted on a per person basis. It is not directly equivalent to the amount of waste an individual throws away each year. Much of the waste is produced from commercial sources or is coming from out of the area.

This document was prepared using information gathered in December 2022 from a variety of sources including data managed by Council, the most recent and historical data from the Solid Waste Analysis Protocol, and the Waste Management and Minimisation Plan 2018 – 2024. . Council temporarily ceased the collection of food scrap bins during COVID-19 Level 4 lockdown in August 2021 and in March 2022. This was due to COVID-19 related staff shortages.

The data presented in this document does not represent all the waste and diverted materials generated in Hamilton. The amount of waste and diverted material is gathered extrapolated from waste data controlled by Council.

[2] Composition of Kerbside Rubbish and Composition of Waste to Lincoln St Resource Recovery Centre, Waste Not Consulting, November 2022

No data was available from the private and commercial sector. Following the implementation of the new kerbside rubbish and recycling service, a survey conducted by Versus for Council, estimated 4.2% of households used a private kerbside service. The 2018 census population (161,000) is used for the basis of the calculations. Taking Hamilton's estimated population for 2022 (181,000), from assumptions made in the 2021-31 Long-Term Plan, does not change the overall trends the data reveals.

A number of data gaps were evident in the waste assessment:

- private recovered waste is not measured
- tonnage from private collectors, commercial and industrial operations, construction and demolition sources not able to be separated from total tonnes
- unregulated disposal (e.g. farm pits and burning) not able to be measured
- volume of organic waste being processed privately through home composting or pig farms, or through private collection services are not able to be measured.

4.2 Progress against the 2018-2024 WMMP targets

Council's Waste Management and Minimisation Plan 2018 – 2024 consists of 33 actions of which significant progress has been made, including the introduction of the new residential kerbside rubbish and recycling service, along with the (then) Solid Waste Bylaw Review. For a full summary of action progress, please refer to Appendix A.

There are four waste minimisation targets set in the Waste Management and Minimisation Plan 2018 – 2024 for Hamilton. The progress against these targets is discussed in the following sections. As noted in section 4.1 above there are multiple data gaps which make it difficult to accurately report on the targets set in the Waste Management and Minimisation Plan 2018 – 2024.

Lack of high quality data is a persistent issue for the waste sector. There are currently large gaps in our knowledge of what makes up our waste, where it goes and how we dispose of it.

To assess progress in any meaningful way, we need more robust data. In all our systems for managing and using materials, and managing waste, we need to start collecting data systematically and using it to measure, monitor and report our progress.

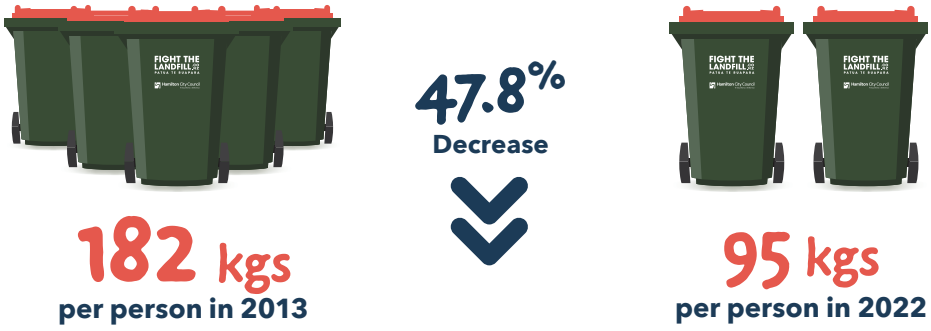
Traditionally, individual councils have collected data on waste, through their waste assessment and waste planning work. However the information gathered and how it is measured often vary. Bringing the information together and building on it, will support the National Waste Strategy Priority 1.3, Data Collection systems, to create a full national picture.

4.2.1 Reduction (by 10%) per capita amount of rubbish to landfill

No local data is available for the total per capita amount of waste going to landfill (reasons covered in section 4.1). At the national level, total waste to landfill has increased from 580kg to 740kg per person per annum between 2009/10 and 2018/19.[3]

A similar trend was seen regionally as data from the Waikato and Bay of Plenty waste and recycling stock-take 2021 shows waste to Class-1 increased by 28.5% per person between 2017 and 2020. It could be assumed the waste to landfill in Hamilton would show a similar trend to the national and regional figures.

Due to the introduction of the new kerbside rubbish and recycling service, the amount of kerbside rubbish going to landfill per capita has significantly decreased from 182kg in 2013 to 95kgs in 2022.[4]



It is estimated Council managed kerbside rubbish only accounts for approximately 13% of the total per capita waste going to landfill in Hamilton.[5]

[3] https://environment.govt.nz/facts-and-science/waste/estimates-of-waste-generated/

[4] Composition of Kerbside Rubbish and Composition of Waste to Lincoln St Resource Recovery Centre Nov 22 Table 5.3 - Comparison of per capita disposal of kerbside rubbish with other areas

[5] 95kgs per capita of kerbside rubbish (taken from Composition of kerbside rubbish and composition of waste to Lincoln Street Resource Recovery Centre Nov 22 Table 5.3) divided by the total waste to landfill per capita rate of 740kg (taken from https://environment.govt.nz/facts-and-science/waste/estimates-of-waste-generated)

4.2.2 Increase (by 10%) in the per capita amount of material diverted from landfill

Lack of high quality data is a persistent issue for the waste sector. There are currently large gaps in our knowledge of what makes up our waste, where it goes, and how we dispose of it.

A key strategy Council is currently pursuing to further divert waste from landfill, is through the use of its Lincoln Street Resource Recovery Centre. Figure 3 illustrates the quantity of different materials that have gone through the Resource Recovery Centre between 2017/18 and 2021/22. Figure 4 provides quarterly quantities between quarter one (2021) to quarter three (2022). Green waste has been accepted at the Resource Recovery Centre from 2019/20.

In the same year, Council has also adopted a different method in sorting recyclables. This has resulted in an increase in quantity for material streams such as steel and glass.

Diverting construction and demolition waste away from landfill is one of Council's key initiatives. Material streams such as reusable items for Habitat for Humanity ReUse Store and wood have been increasing at the Resource Recovery Centre since 2019/20 and is now becoming steady.

A small amount of concrete started to appear at the Resource Recovery Centre in late 2021 and is gradually increasing. The quantity of wood increased significantly in early 2022. The increasing trend is expected to continue as Council deepens its collaborative relationship with the industry to reduce construction and demolition waste.

Figure 3 Materials diverted from landfill at Council's Lincoln Street Resource Recovery Centre – 2017/18 to 2022/23

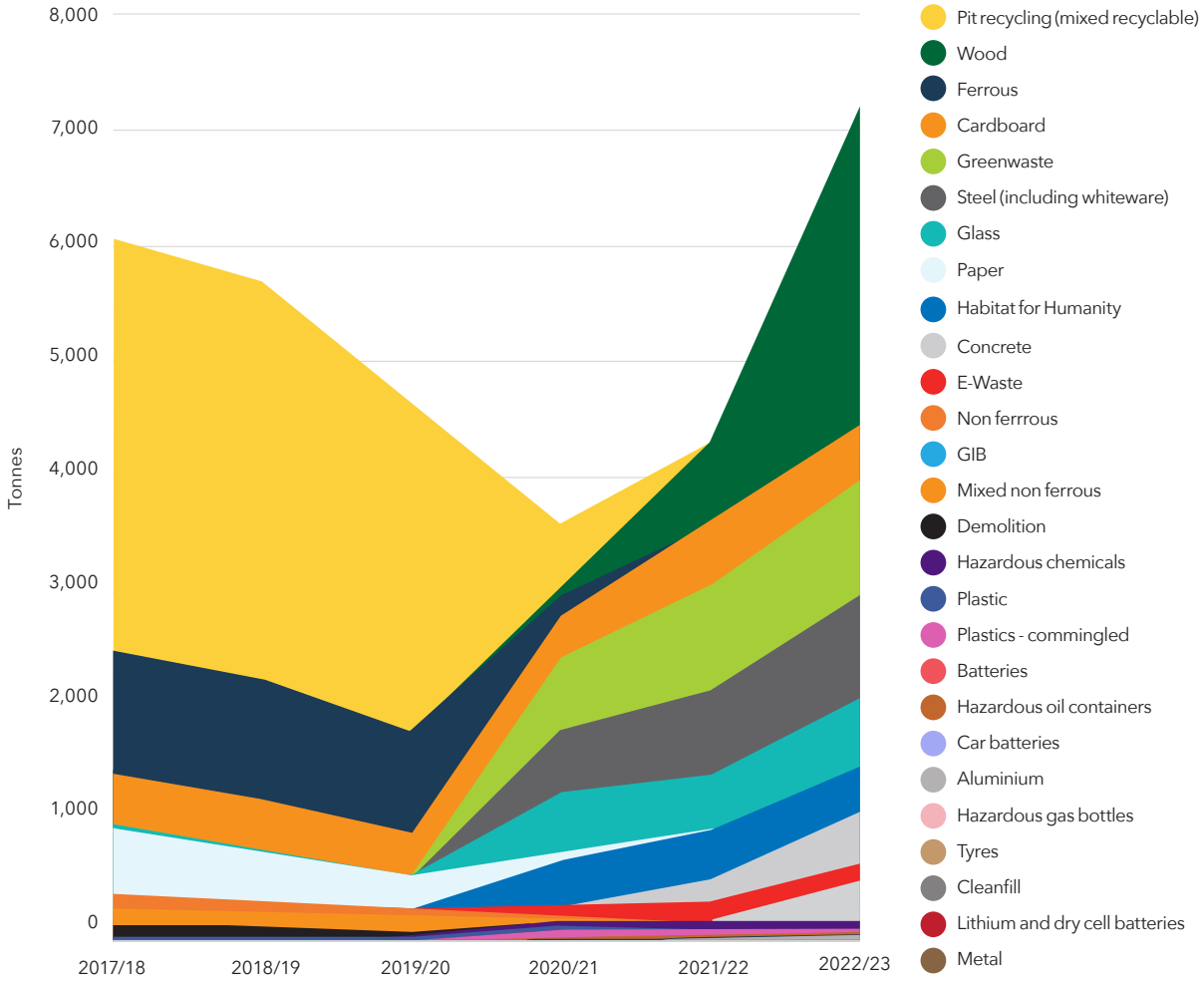


Figure 4 Materials received at Council's Lincoln Street Resource Recovery Centre – Q1 2021 to Q1 2023

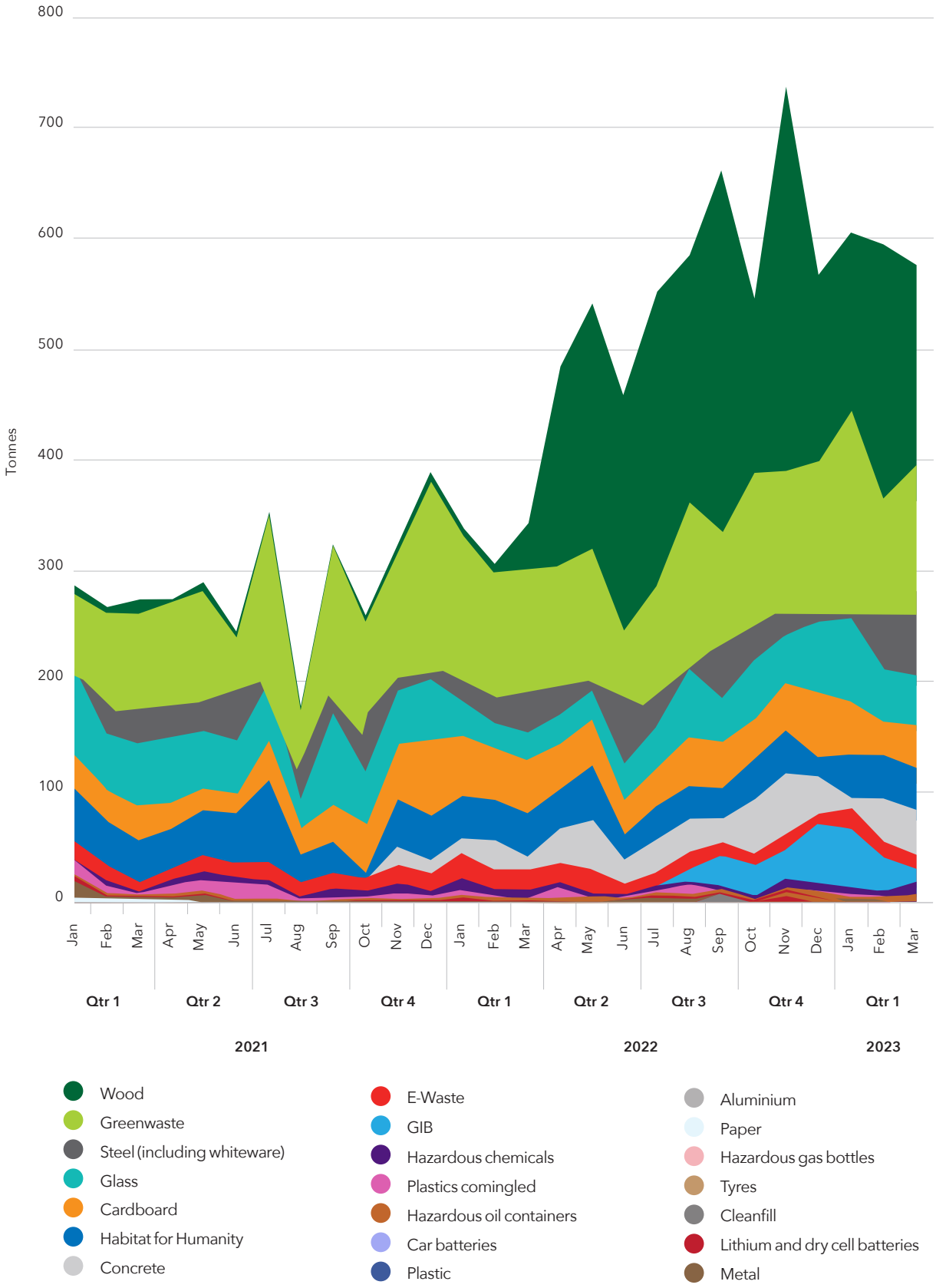
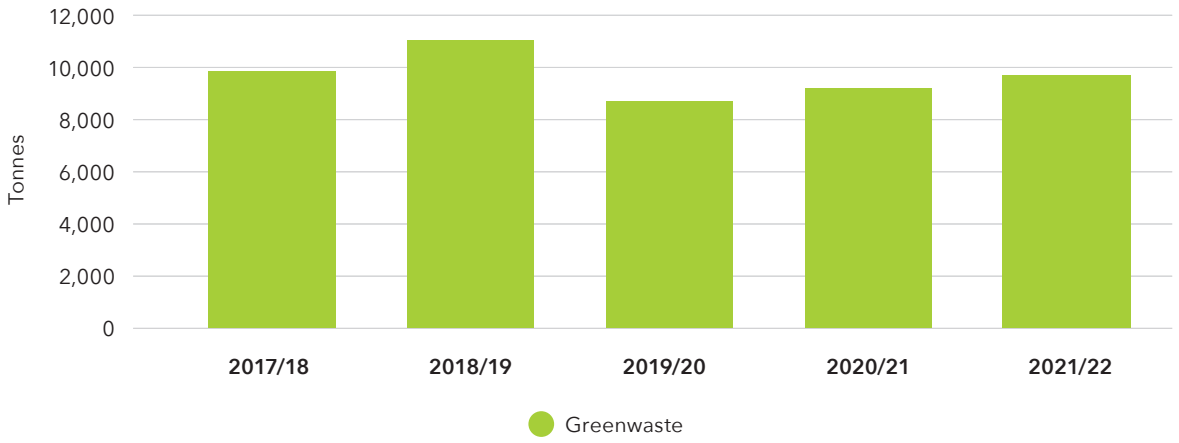


Figure 5 shows the amount of greenwaste received at the Hamilton Organic Centre between 2017/18 and 2021/22. The quantities received were fairly consistent, averaging approximately 9,000 tonnes a year. The projected quantity is expected to increase predominantly with population growth or as customers divert more greenwaste away from their rubbish wheelie bins.

Hamilton Organic Centre - greenwaste



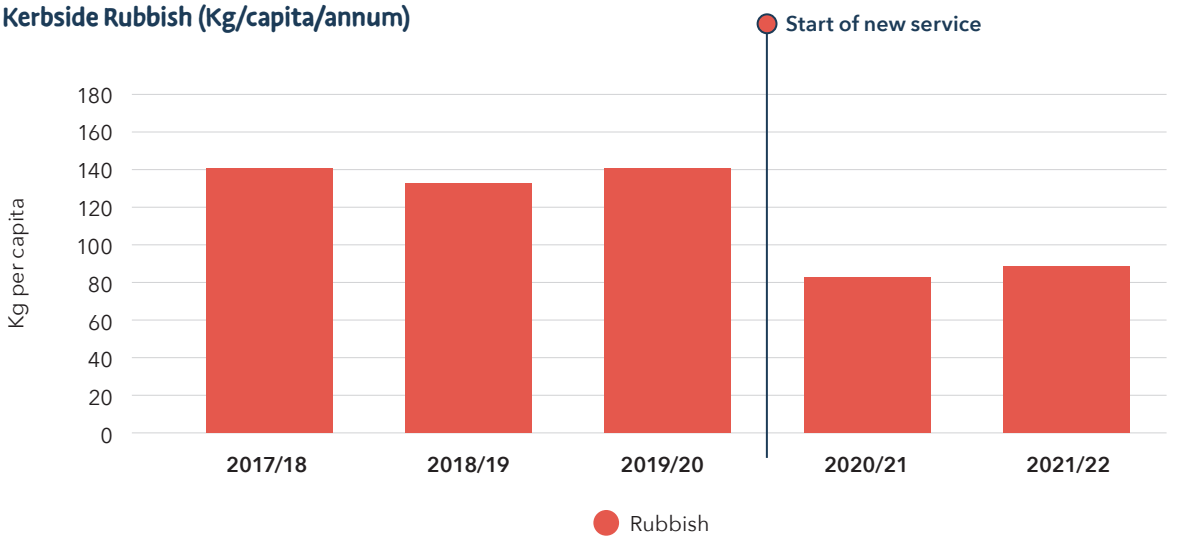
4.2.3 Decrease (by 25%) in the per in the per capita kerbside rubbish to landfill

This target refers to reduction in kerbside household waste to landfill. This target can be measured against kerbside waste from Council's kerbside services (excluding private kerbside collection services). Figure 6 shows kilograms of rubbish per capita, per annum, based on annual population figures from the National Institute of Demographic and Economic Analysis, University of Waikato.

The amount of kerbside rubbish collected has remained relatively steady between 2017/18 and 2019/20, with a significant decrease (approximately 40%) noticeable in the 2020/21 year. This reduction aligns with the new collection services introduced in August 2020 where Council commenced the collection of household food scraps.

Figure 6 Council kerbside collection – rubbish per capita per year

Kerbside Rubbish (Kg/capita/annum)

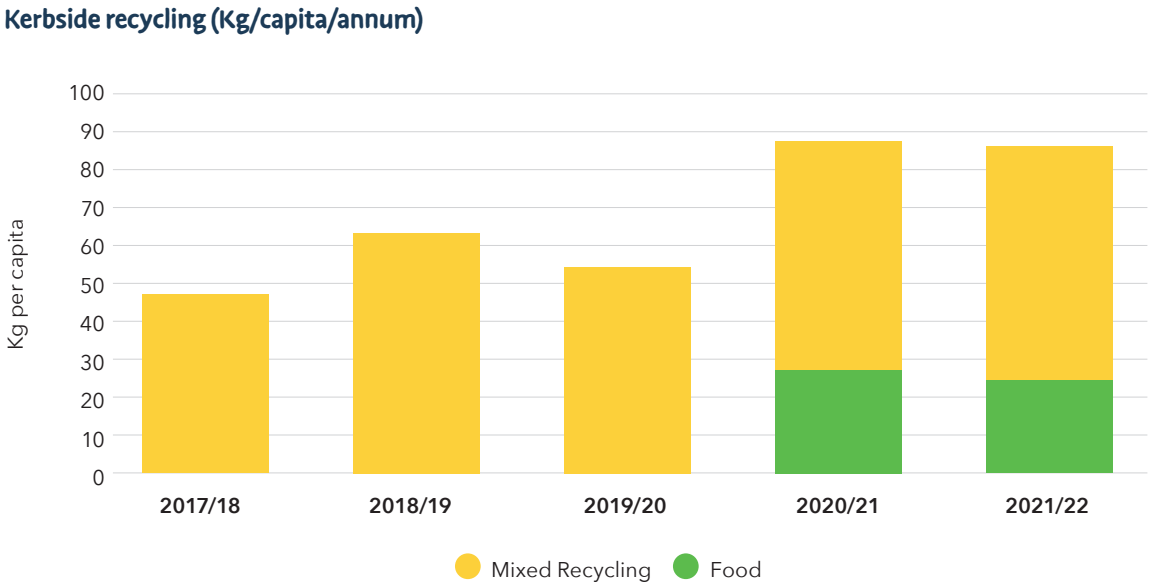


4.2.4 Increase (by 50%) in the per in the per capita kerbside recycling

This target refers to the increase in kerbside recycling. The recycled waste amounts include kerbside collected mixed recyclables and glass, as well as food scraps. Figure 7 shows kilograms of kerbside recycling per capita, per annum, based on annual population figures from the National Institute of Demographic and Economic Analysis, University of Waikato.

The effect of introducing the new collection services in August 2020, can also be observed where the amount of kerbside recycling has increased approximately 67% in 2020/21, when compared with 2019/20. Food scraps account for roughly one third of the total kerbside recycling by weight.

Figure 7 Council's kerbside collection – recycling per capita, per year



4.2.5 SWAP results

The following analysis uses data obtained from the Solid Waste Analysis Protocol report by Waste Not Consulting in November 2022.

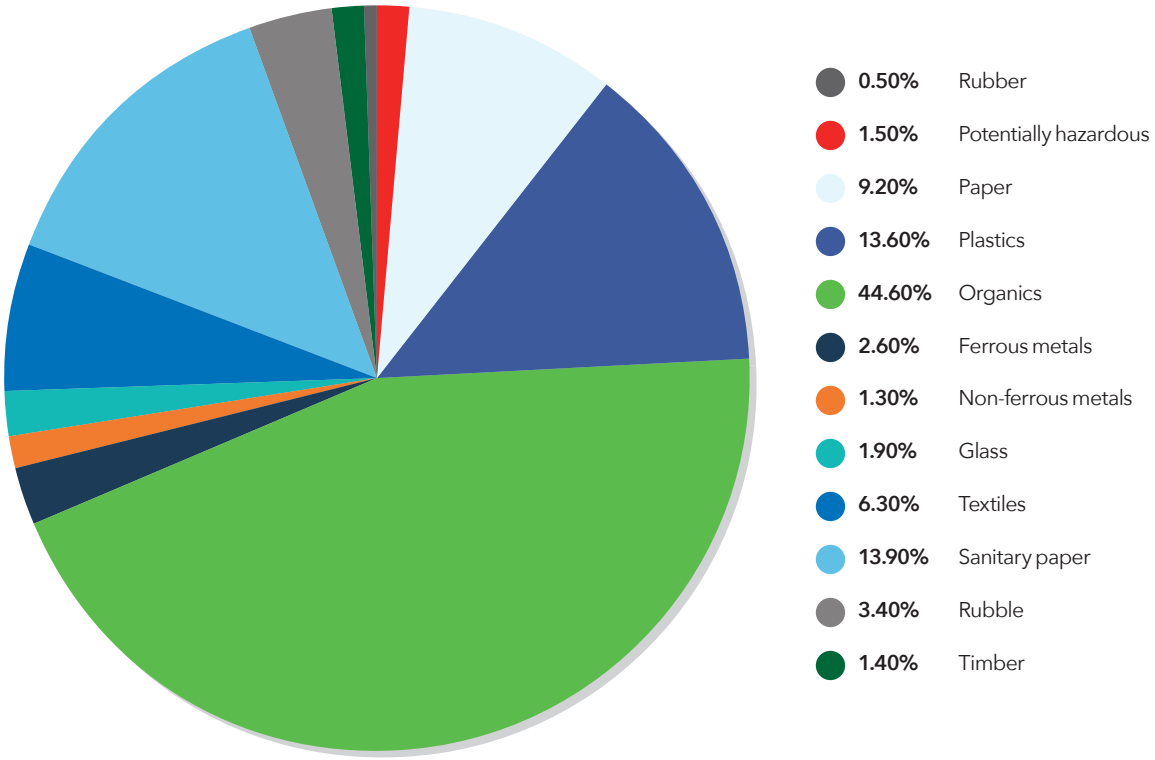
4.3 Kerbside waste to landfill composition

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. The six days of auditing included the contents of 300 120-litre rubbish wheelie bins.

Figure 8 below illustrates the kerbside primary composition of waste disposed in Council's 120-litre wheelie bins destined for landfill. Although there was a 40% reduction in total waste volume, opportunities still exist for further diversion. Organics was the largest component, comprising 44.6% of the total. Sanitary paper was the second largest component of the waste stream, comprising 13.9%.

In addition, plastics also made up 13.6% of the wheelie bins. Of this, plastic film (52%), and plastic grade #1, and plastic grade #2 containers, which could be recycled, made up 14% of the total. Paper too made up 9.2% of the wheelie bins, most of which was recyclable (67%).

Figure 8 Primary composition of Council's 120-litre rubbish wheelie bins – 2022



Source: Composition of kerbside rubbish and composition of waste to Lincoln Street Resource Recovery Centre, Waste Not Consulting, November 2022

4.4 Diversion potential

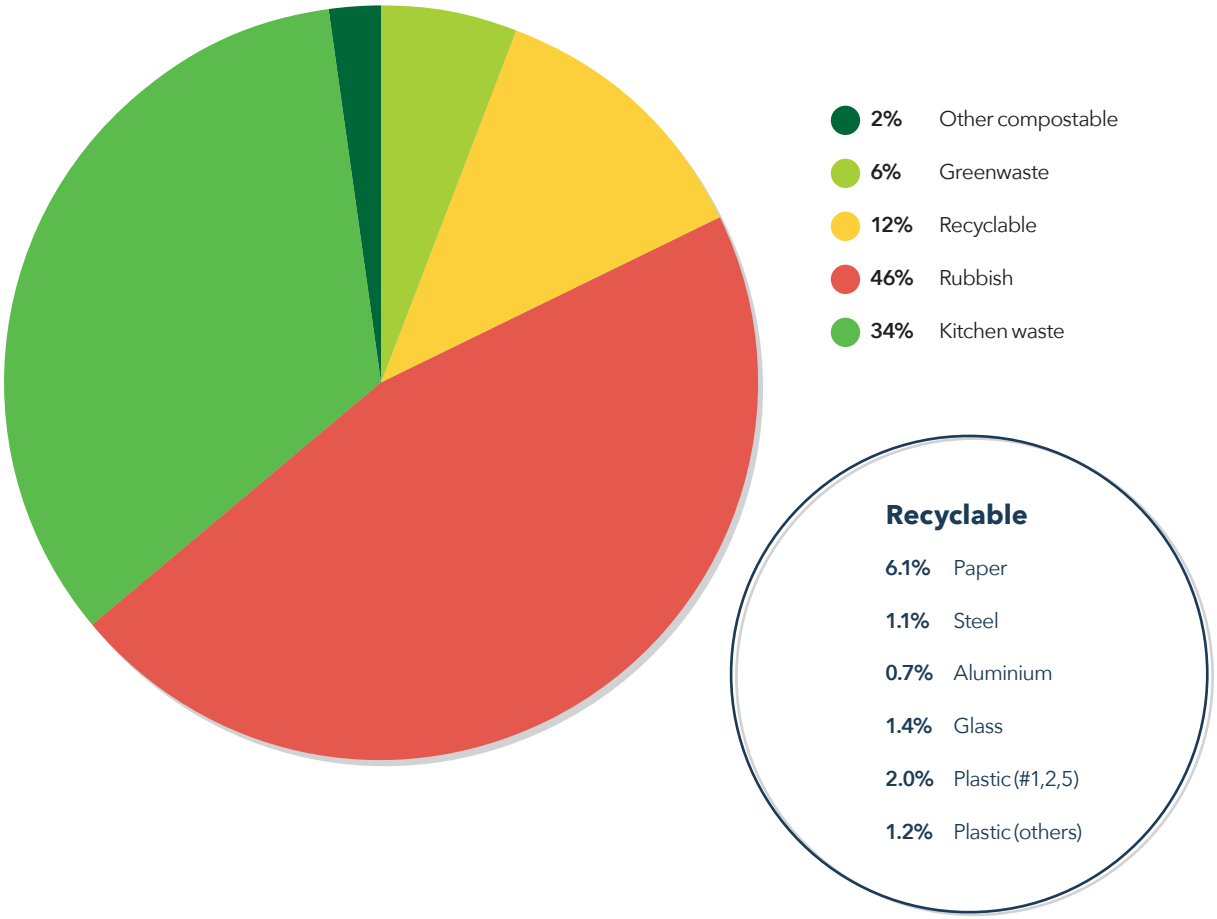
4.4.1 Council 120-litre rubbish wheelie bins

To reduce waste to landfill, Council provides residential properties with separate kerbside collections of mixed recycling, glass, and food scraps. The kerbside mixed recycling collection accepts #1-7 plastic bottles and containers, clean cardboard and paper, and steel and aluminium cans. Council also operates a recycling drop-off facility at the Lincoln Street Resource Recovery Centre accepting, at no charge, all of the materials accepted by the kerbside recycling collections.

Figure 9 below shows the diversion potential of organics and recyclables from Council's kerbside rubbish wheelie bins. The average weight per bin is approximately 8.2kg. Not all materials collected can be recycled. However, it is estimated 54% of Council's kerbside collected waste could be diverted, with 12% recyclable and 42% compostable. Of the recyclable material, 51% was paper, and 12% was glass.
This is promising for the possibility of diverting more recyclables from landfill, and the potential for compostable material to also be removed, using the services already provided by Council.

In addition, plastics also made up 13.6% of the wheelie bins. Of this, plastic film (52%), and plastic grade #1, and plastic grade #2 containers, which could be recycled, made up 14% of the total. Paper too made up 9.2% of the wheelie bins, most of which was recyclable (67%).

Figure 9 Diversion potential of Council's 120-litre rubbish wheelie bins – 2022



Source: Composition of kerbside rubbish and composition of waste to Lincoln Street Resource Recovery Centre, Waste Not Consulting, November 2022

The compostable material compromised of kitchen waste and a small amount of green waste. Kitchen waste is food preparation waste, left-over food waste, both perished goods and wasted food, which would have been fit for consumption. For the disposal of food waste, residents can use Council's weekly kerbside food scraps collection, compost at home, establish a worm farm, or feed the food waste to hens or other animals. For the disposal of greenwaste, residents can compost at home or deliver the material to one of the drop-off facilities in Hamilton.

Plastic was the second highest component of recyclables. Plastic containers labelled #1, 2 and 5 represent 17% of recyclables that could potentially be recycled. The remaining plastics are hard plastics, plastics bags, and film not collected through current kerbside services.

5 Future growth and demand for waste services

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

- demographic changes and growth, e.g. population household changes
- change in commercial and industrial activity/economic conditions
- impact of waste flows from other districts
- consumption patterns and product quality
- the occurrence of natural disaster events or health events such as pandemics
- Central Government direction driven by national policy and legislation, e.g. product stewardship schemes, waste levy changes, Emissions Trading Scheme changes, kerbside recycling standardisation and mandatory reporting
- impact of waste minimisation behaviour change programmes
- community expectation
- changes in the way we live (shift to higher density living)
- increased costs of living affecting household accessibility
- rate payer affordability.

In taking the above demand drivers into account, there will be continued pressure on existing waste management and minimisation infrastructure and services. While there is adequate landfill disposal capacity in the medium to long-term future, Council wants to improve its capacity to divert waste.

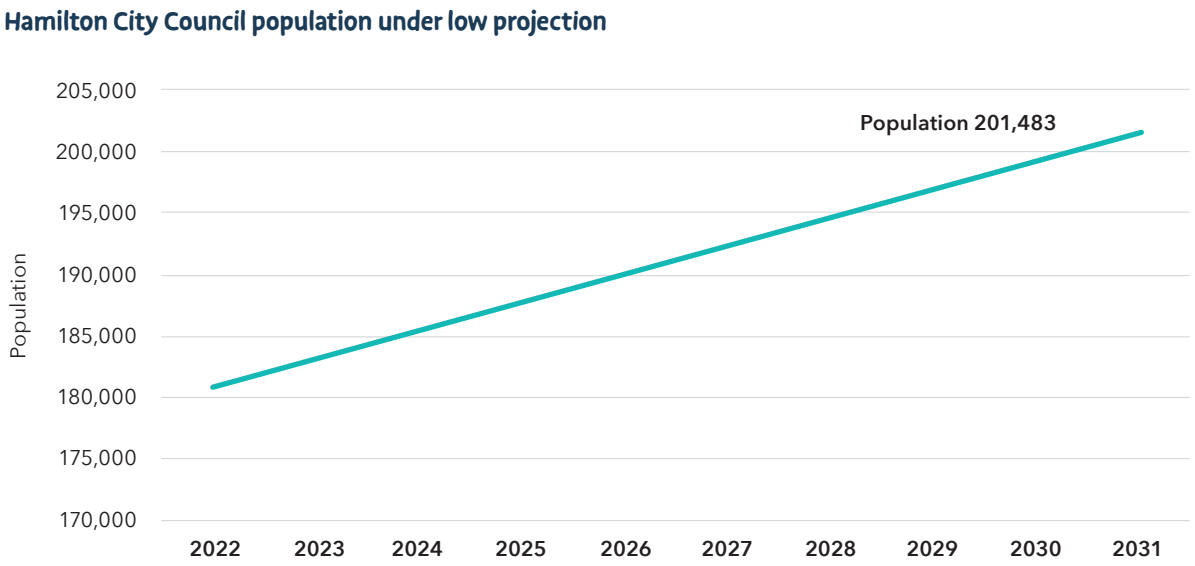
A high projected population growth means there will be increasing demand over time on Council's kerbside collection services. These long-term demands would need to be reviewed and considered through Council's long-term processes.

5.1 Demographics/population change

Total waste is expected to increase due to population growth and economic growth. As the population increases, associated demand for waste services increases. Diversion services are required to limit the pressure on landfill and other waste handling facilities, including the existing refuse transfer station network.

Population growth for Hamilton has been forecast by the National Institute of Demographic and Economic Analysis, University of Waikato. Council has adopted the low series of this projection when preparing the 2021-31 Long-Term Plan. Currently there are 61,000 dwellings in Hamilton. The population is projected to grow from 176,500 in 2020 to more than 200,000 in 2031, with dwellings increasing at a similar rate.

Figure 10 Hamilton City Council population under low projection



Population growth has been forecast for territorial authorities in the Waikato by the National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato

5.2 Commercial and industrial economic activity

The other factor that has a large determinative effect on the volume of waste produced, is industrial activity and economic conditions as measured by the Gross Domestic Product. During the past five years, Hamilton has experienced higher levels of population, Gross Domestic Product and job growth than the rest of New Zealand. Data from 2017 - 2021 shows the Hamilton population grew by 8%, Gross Domestic Product lifted 15% and there was a 12% increase in jobs. This compares to 6%, 10%, and 8% increases respectively for New Zealand.

In 2021, growth continued despite closed borders with an increase of 0.9% compared to -0.1% in Auckland and 0.1% across New Zealand. The most recent updates on the September 2022 quarter[6] show:

- Gross Domestic Product in Hamilton City was provisionally up 1.7% for the year to September 2022, compared to a year earlier. Growth was lower than in New Zealand (2.6%)
- provisional Gross Domestic Product was $12,240 million in Hamilton for the year to September 2022 (2021 prices)
- annual Gross Domestic Product growth in Hamilton peaked at 6.9% in the year to June 2021.

[6] Infometrics Quarterly Economic Monitor, Hamilton, September 2022

5.3 Waste from other areas

The policy, services, and facilities of one district or region can dramatically impact on demand for services in neighbouring districts. This is well demonstrated in other parts of New Zealand, where policy and/or pricing changes have a direct relationship on waste movements between districts. The location and pricing of landfills and transfer stations will have an effect on the amount of waste received by them. Pricing and location are the key causes of waste movement between districts.

Hamilton is, to a relatively high degree, a self-contained waste catchment. That is, a high proportion of the waste generated within Hamilton is disposed of within Hamilton at one of the three transfer stations. A small amount of the waste disposed of at the Refuse Transfer Station on Sunshine Avenue originates in the Waaipa District. Other waste from outside Hamilton may be disposed of at the transfer stations, but no quantitative data is available[7].

5.4 Community expectations and consumer behaviour

The 'build-up of plastic in the environment', and 'too much waste/rubbish generated' were ranked two of the top concerns for New Zealanders (2020 Colmar Brunton Better Futures report). If waste minimisation continues to be important to the community, demand will continue for solutions.

Consumer behaviour is a key driver for household waste generation. Organisation for Economic Co-operation and Development research indicates a number of factors influencing household waste generation, including:

- family composition, e.g. household numbers and children
- household income and size
- attitude toward the environment, consumption and recycling
- presence of volume-based charging systems for waste
- frequency of waste collection
- technological shifts and product supply changes
- increased product packaging
- planned obsolescence (consumer goods rapidly become obsolete and require replacing)
- presence of infrastructure and services to enable resource recovery
- changes in work-from-home dynamics.

These issues are the target of a range of council and government policies and programmes, both at a local and national level. Although contributing factors such as family size and household income are difficult to influence, there are positive correlations between attitudes toward the environment and waste generation that can be influenced. The presence of volume-based charging systems, such as user-pays schemes and other economic disincentives, such as waste levies, are other important factors.

Another example of how these factors can be influenced is through the establishment of product stewardship schemes for priority products (as outlined in Section 3.2.2).

[7] Composition of kerbside rubbish and composition of waste to Lincoln Street Resource Recovery Centre, Waste Not Consulting, November 2022

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.

Due to its contents, this waste may be contaminated in a very short time frame. Cyclone Gabriel, Christchurch and Kaikoura earthquakes, the COVID-19 pandemic, and the management of waste following the Rena disaster, re-emphasise the need for planning. Lessons can be learnt from these events to assist in preparing for future natural disaster events in Hamilton.

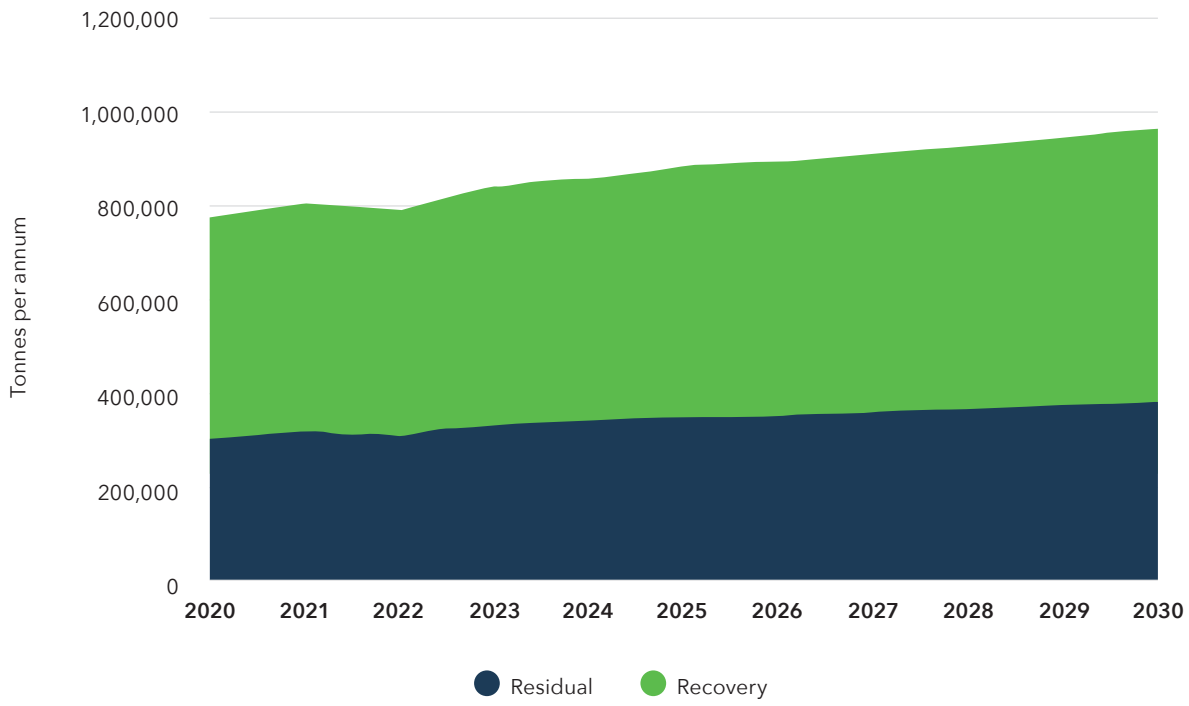
5.6 Projected waste volumes

The total waste volume in Hamilton will continue to grow based on the factors covered earlier in this section. Increased waste volumes would create capacity issues around storage and disposal. The resource consent for Hampton Downs Landfill is currently only valid until 2030.

The following data and commentary is taken from the Waikato and Bay of Plenty Waste and Recycling Stocktake 2021.

Figure 11 below shows the estimates for the quantities of overall waste to Class 1 landfills and recovered materials (i.e. all material recycled, composted, or reused) produced to 2030 in the Waikato Region region. The 2021/2022 dip is due to COVID-19 disruptions to economic activity.

Figure 11 Project quantities of waste and diverted materials for the Waikato Region



As can be seen from the above chart, the total quantity of materials to be recovered or landfilled will increase if no changes are made. Infrastructure in both instances will need to be aligned with an increase of volumes. In the Waikato region, it is predicted there would be approximately 385,000 tonnes of waste to be landfilled, and 580,000 tonnes of material to recover by 2030.

6 Council future planning framework

This section considers Council's direction with regards to vision and targets for achieving waste reduction and for meeting the forecast demand for services.

Council's vision and targets help provide a sense of direction when scoping options. It is difficult to scope what options might be needed if there is no consideration for the outcomes desired. The vision, outcomes, and targets discussed in this waste assessment have been derived from looking at the existing Waste Management and Minimisation Plan 2018 – 2024 and the 2021-31 Long-Term Plan.

6.1 Vision

The proposed vision for the Waste Management and Minimisation Strategy 2024 – 2030 is:
Hamilton Kirikiriroa is leading the way towards a low-waste city.

6.2 Outcomes

The outcomes are the results of the actions and the changes needing to happen to move us from the current, to the future state.

These are:

Low-waste solutions are easy, and we are using them.

By working together, we are sending less to landfill.

Our economy keeps resources in use for as long as possible.

6.3 Guiding principles

In developing options, Council will be guided by the following principles:

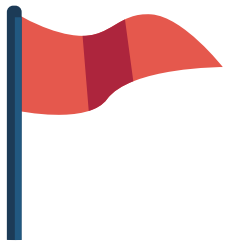
Enriched by Te Ao Maaori:
Te Ao Maaori acknowledges the value and significance of Maaori culture and traditions. We use it to inform and enhance the work we do.

Inclusive and accessible:
we make it easy for our diverse community to do the right thing. We provide equal opportunities for everyone to contribute to a low-waste city.

Collective action:
we work together with iwi, Mana Whenua, Mataawaka, community, business, government, and other key stakeholders to create change.

Acting for the future:
we are innovative and take action for the long-term wellbeing of our people and planet.

Best practice:
we are guided by evidence, data and knowledge.



At the forefront of change:
we lead by example and advocate for change. We are recognised as the go-to council for action and expertise.

6.4 Our targets

This waste assessment will inform the development of a new waste management and minimisation plan. This in turn will guide waste management and minimisation in Hamilton for the next six years. During this time, waste management in New Zealand is likely to change significantly due to work currently underway, including:

- a container return scheme
- increasing levies
- standardised kerbside collections
- the collection and monitoring of waste information
- product stewardship
- legislative review
- investment in waste management facilities.

Council's overall waste minimisation targets are outlined below.

We have four key waste reduction targets for Hamilton to measure over the next six years. These targets have been chosen because:

- they will help us understand how we are progressing towards our vision
- we have access to robust data to measure them
- they align with our overarching goals, strategies and obligations.

We will regularly monitor and report on our progress against these targets.

45%+ diversion

At least 45% of the waste collected via the council kerbside rubbish and recycling service will be diverted from landfill.

40%+ diversion

At least 40% of the waste collected at our facilities, such as libraries and event venues, will be diverted from landfill.

7,000,000 + kgs

Year on year increase of construction and demolition materials being diverted from landfill at our Lincoln Street Resource Recovery Centre. The benchmark of 7,000 tonnes was set in 2023.

16,000,000+ kgs

Each year we will divert a minimum of 16 million kg of waste from going to landfill at Council operated waste sorting and processing facilities.

Measuring our action plan:

Along with reporting on our four targets, Council will also gather other sources of data and information to track the progress of our actions and identify further waste reduction opportunities. Indicative measures for each of the actions will be presented with the Action Plan in the Waste Management and Minimisation Strategy 2024 – 2030.

6.5 Future opportunities for Hamilton

Progress against the previous Waste Management and Minimisation Plan, Action Plan has been reviewed and considered with reference to the change in waste quantities and emerging events since 2018. Council's future focus is to continue to improve the effectiveness of the kerbside rubbish and recycling service, as well as progressing further opportunities and initiatives to reduce waste to landfill beyond kerbside collection.

While waste going to landfill accounts for 3% of the city's carbon emissions, a number of waste reduction actions will have an impact on emissions across the entire value chain (including transport and manufacturing). To continue to advance waste reduction and create a low carbon city, Council has identified the following focus areas:

- **Continue to divert organic waste from landfill**

There are opportunities for Council to expand initiatives to further divert and reduce organic waste to landfill. This includes collaborating with large food waste creators such as the hospitality and retail sector to reduce and divert their food waste. Smaller creators such as educational institutions and hospitals could also be targeted to address the hospitality aspect of their operation. A focus would also be on further enabling community composting initiatives across Hamilton.

- **Ongoing efforts to minimise construction and demolition waste generation**

Several opportunities are available to Council to expand its current initiatives to minimise construction and demolition waste. Central to this, is continuing to collaborate with the construction and demolition industry. Council's role is to advocate and promote industry best practice in managing construction and demolition waste. Implementing the Waste Management and Minimisation 2019 Bylaw requirement of having site waste and designing out waste plans for new properties and developments would further create waste diversion opportunities.

- **Promote circular economy principles**

An opportunity exists to raise awareness and accelerate the implementation of circular principles and create Hamilton as a leader in this space.

- **Recover more from waste streams**

As illustrated in Figure 8, despite the introduction of food waste collection service, the proportion of organic waste continues to remain high (42%) in kerbside rubbish wheelie bins. While not as significant, recyclable materials still represent 12% of bin contents. To encourage behavioural change, there are opportunities for Council to strengthen its kerbside educational campaigns and initiatives. Opportunities also exist for Council to take action on our own waste and to showcase these successes and support the growth of the resource recovery network in Hamilton.

- **The way we live is changing**

Hamilton continues to experience population growth and diversification along with housing intensification. With an increase in the development of higher density housing, there is need to create solutions to enable effective waste reduction and diversion from these residences. Waste minimisation initiatives and services would also need to be extended to the central city. Council would also support the development of local solutions to enable the local recovery of materials so residents don't have to travel as far to divert excess waste, while also reducing their carbon footprint.

- **Shaping national direction on waste and resource recovery**

Council would continue to advocate for change and ensure Hamilton is at the forefront of waste minimisation in New Zealand. As national resource recovery initiatives are announced, Council will support their implementation with a focus on creating a circular economy for Hamilton.

7 Options assessment (statement of proposals)

Based on the opportunities identified, this section considers possible options to address future demand for waste management and minimisation services and programmes in Hamilton.

The following sections expand on the opportunities listed in Section 6.4 and presents focus areas and actions Council could introduce to address them. The actions cover influence, regulation, and service provision options, which are then assessed for alignment with the vision, outcomes, costs and ease of implementation. The options recommended to be taken forward are also highlighted.

The future actions are not an exhaustive list of potential actions, but rather the key future opportunities. The Waste Management and Minimisation Plan 2018 – 2024 has a more detailed action plan. For reference, the full list of existing actions in the Waste Management and Minimisation Plan 2018-24 is appended.

Focus Area 1

Further reduce the amount of organic waste going to landfill

Organic waste is the third largest waste stream in New Zealand and makes up 4% of our national emissions.

There is a significant opportunity to increase awareness and expand initiatives to divert and reduce the amount of organic waste going to landfills in Hamilton.

Action 1 — **Collaborate with businesses and organisations to reduce their food waste.**

Approach Influence	Support a low carbon economy High	Recommended ✓
Ease of implementation Complex	Cost Medium	

Action 2 — **Collaborate with local developers to incorporate food waste reduction and composting solutions in multi-unit apartments and other types of high-density housing.**

Approach Influence	Support a low carbon economy High	Recommended ✓
Ease of implementation Simple	Cost Low	

Action 3 Enable community composting projects (food organics, green organics).

Approach Influence	Support a low carbon economy High	Recommended ✓
Ease of implementation Medium	Cost Low	

Action 4 Explore initiatives to encourage food waste reduction and composting at home.

Approach Influence	Support a low carbon economy High	Recommended ✓
Ease of implementation Simple	Cost Low	

Action 5 Provide food waste collection services to business.

How will we achieve this?

The private sector is responding to increasing demand for commercial food waste collection and therefore Council do not need to provide an additional option.

Approach Service	Support a low carbon economy Medium	Recommended ✗
Ease of implementation Complex	Cost High	

Action 6 Provide a separate collection service for green waste.

How will we achieve this?

Kerbside green waste makes up only 6% of waste. Private collections and the Hamilton Organic Centre are available for those requiring a way to dispose of excess green waste.

Approach Service	Support a low carbon economy Low	Recommended ✗
Ease of implementation Complex	Cost High	

Action 7

Provide a Council funded subsidy to help collect household green waste.

How will we achieve this?

Kerbside green waste makes up only 6% of waste. Household green waste collection is sufficiently covered by the Hamilton Organic Centre and private collections. It is likely that this initiative would not achieve much further diversion.

Approach Service	Support a low carbon economy Low	Recommended ✗
Ease of implementation Simple	Cost Medium	

Focus Area 2

Ongoing efforts to reduce construction and demolition waste

Construction and demolition is the largest waste stream in New Zealand.

An opportunity exists to continue supporting the construction and demolition industry to minimise waste from design through to construction.

Action 1

Continue to collaborate with the construction and demolition industry to reduce their waste.

Approach Influence	Support a low carbon economy High	Recommended ✓
Ease of implementation Medium	Cost Medium	

Action 2

Council could implement construction and demolition waste reduction pilot projects to showcase the potential benefits and 'walk the talk'.

Approach Influence	Support a low carbon economy Medium	Recommended ✓
Ease of implementation Medium	Cost Low	

Action 3

Consider enforcing the existing solid waste bylaw to ensure site waste plans are implemented and reported on.

Approach Regulate	Support a low carbon economy High	Recommended ✓
Ease of implementation Medium	Cost Medium	

Action 4 Investigate and support construction and demolition waste recovery options.

Approach Service	Support a low carbon economy High	Recommended
Ease of implementation Medium	Cost Medium	

Focus Area 3

Support the move to a circular economy

A circular economy is an alternative to the traditional linear economy in which we keep resources in use for as long as possible.

An opportunity exists to raise awareness and accelerate the implementation of circular principles and create Hamilton as a leader in this space.

Action 1 Accelerate the transition to a circular economy in Hamilton

Approach Influence	Support a low carbon economy High	Recommended
Ease of implementation Simple	Cost Medium	

Action 2 Advocate for the circular economy and lead by example.

Approach Influence	Support a low carbon economy High	Recommended
Ease of implementation Simple	Cost Low	

Focus Area 4

Recover more from waste streams

The waste hierarchy is a priority order of how to manage our waste.

We need to continue our focus on increasing resource recovery by moving up the waste hierarchy.

Action 1

Lead by example - Council's own approach to waste diversion.

Approach Influence	Support a low carbon economy High	Recommended ✓
Ease of implementation Simple	Cost Low	

Action 2

Support the growth of the resource recovery network in Hamilton and the wider region.

Approach Influence	Support a low carbon economy Medium	Recommended ✓
Ease of implementation Medium	Cost Low	

Action 3

Continue to provide public educational campaigns and initiatives.

Approach Influence	Support a low carbon economy High	Recommended ✓
Ease of implementation Simple	Cost Medium	

Action 4

Restrict/ban specific types of waste in kerbside rubbish wheelie bins.

How will we achieve this?

While simple in theory, this option requires the development of a bylaw and requires compliance costs that may end up unnecessarily consuming time and resources. This is because the source of the non-compliance will be difficult to determine with the certainty required to enable infringement notices/ fines to be issued. Bans have been introduced by some councils to encourage residents to separate their recycling from rubbish. Formalising this and ensuring compliance would be complex.

Approach Regulate	Support a low carbon economy Medium	Recommended ✗
Ease of implementation Complex	Cost High	

Action 5

Increase diversion of various waste streams in Hamilton.

Approach Influence	Support a low carbon economy Medium	Recommended
Ease of implementation Medium	Cost Medium	

Focus Area 5

The way we live is changing

With a changing population and increased house intensification in Hamilton, we need to support the move to more sustainable and low carbon ways of living.

Action 5

Explore and support localised resource recovery and circular initiatives.

Approach Influence	Support a low carbon economy Medium	Recommended
Ease of implementation Medium	Cost Medium	

Action 2

Work with the design and construction industry to encourage the incorporation of waste reduction into the design and use of multi-unit apartments, high-density housing and communities.

Approach Influence	Support a low carbon economy Medium	Recommended
Ease of implementation Simple	Cost Low	

Action 3

Improve the accessibility of waste reduction options in the central city and areas of increased housing intensification.

Approach Service	Support a low carbon economy Medium	Recommended
Ease of implementation Complex	Cost High	

Action 4

Be able to respond to the needs of a changing population of Hamilton.

Approach Influence	Support a low carbon economy	Recommended
Ease of implementation Low	Cost Low	

Action 5

Investigate how to prepare for waste during a natural disaster.

Approach Influence	Support a low carbon economy Medium	Recommended
Ease of implementation Medium	Cost Medium	

Focus Area 6

Shaping national direction on waste and resource recovery

Council has the opportunity to help shape the future of resource recovery and waste in New Zealand.

Action 1

Advocate for national change.

Approach Influence	Support a low carbon economy High	Recommended
Ease of implementation Medium	Cost Low	

Action 2

Support the implementation of any national policy, legislative, regional or other relevant initiatives within Hamilton.

Approach Influence	Support a low carbon economy High	Recommended
Ease of implementation Medium	Cost Medium	

Appendix A

Progress towards Waste Management and Minimisation Plan 2018 — 2024 action plan

1. Services

Council delivers a range of waste services already and there is scope to review additional services that will support increased waste minimisation in Hamilton. This will be achieved through the implementation of the new rubbish and recycling service in July 2020.

Waste Management and Minimisation Plan 2018 – 2024 performance metrics:

- new services implemented in line with the contract
- reporting annual volume of hazardous waste collected via Council-provided services.

Action 1	Status at March 2023 ✓ Complete
New or existing action	Existing
Timeframe	2018-2021
Proposed funding resources	Levy and rates
WMMP objectives reference	1,2,3,4,5,7
WMMP activity	Implement new rubbish and recycling services and undertake a comprehensive education and information campaign to support the implementation.
What has been done between September 2018 - March 2023	• New kerbside service begins 31 August 2020 (original launch date delayed due to COVID-19). • Suite of educational resources created including 'Now You Know' and 'How To' videos (including a version for the hearing impaired), as well as radio, billboard and online media coverage, multi language education booklet and information pack. • Additional resource and focus added to manage compliance.

Action 2	Status at March 2023 ↻ Ongoing
New or existing action	Existing
Timeframe	Ongoing
Proposed funding resources	Levy
WMMP objectives reference	1,2,4,5,7
WMMP activity	Provide and promote hazardous waste disposal services for household hazardous waste.
What has been done between September 2018 - March 2023	• Household Hazardous Waste Drop off event held in May 2021 in partnership with Waikato Regional Council and ChemWaste. • 171 people registered with 755 items, 3396 kg and 3884 litres of household hazardous waste disposed of. • Ongoing conversations with Waipā District Council and Waikato Regional Council about collaborating on potential future events.

Action 3	Status at March 2023 In progress
New or existing action	New
Timeframe	2018-2024
Proposed funding resources	Levy and rates
WMMP objectives reference	1,2,3,4,5,7
WMMP activity	Review central city waste services to identify and implement opportunities for improved waste minimisation in this area.
What has been done between September 2018 - March 2023	• Working with Centre Place to pilot a city composting initiative. • Partnered with Waikato Tourism to run hospitality stakeholder feedback session. • Pilot commencing on a central city reusable packaging initiative.

Action 4	Status at March 2023 In progress
New or existing action	New
Timeframe	2018-2024
Proposed funding resources	Levy and rates
WMMP objectives reference	1,2,3,5,6,7
WMMP activity	Identify and implement services for targeted waste streams including electronic waste.
What has been done between September 2018 - March 2023	• Link to Action-20 and feasibility study for targeted waste streams included in Contestable Waste Fund review. • Support for e-waste drop off/managed services at Lincoln Street Resource Recovery Centre. • Go Eco and South Waikato Action Trust. • Continued liaison with small private and large public waste operations to support Hamilton building and development stakeholders in separating and managing their construction and demolition waste. Refer Action 11 for full construction and demolition waste update.

2. Partnerships

Council only manages a quarter of the waste generated in Hamilton. If we are going to achieve our vision, goals and objectives, we need to work with others in our community. This will be achieved by developing relationships and partnerships with key sectors and groups including iwi, business industry, and other key stakeholders.

Waste Management and Minimisation Plan 2018 – 2024 performance metrics:

- Identification of champions and detail of support provided.

Action 5	Status at March 2023 Ongoing
New or existing action	Existing
Timeframe	Ongoing
Proposed funding resources	Levy
WMMP objectives reference	1,2,3,5,6
WMMP activity	Recognise the interests of iwi and other cultures and encourage and support the resources to build capacity and participation in sustainable waste management.
What has been done between September 2018 - March 2023	• Integrated across all projects and included within Council reports. • Funding support for Pare Kore programme of zero waste education for marae, organisations and events. • 'How to recycle' booklet in Te Reo available on fighttheandfill.co.nz.

Action 6	Status at March 2023 In progress
New or existing action	New
Timeframe	2018-2024
Proposed funding resources	Levy
WMMP objectives reference	1,2,3,5,6,7
WMMP activity	Work with business and industry organisations to assist local businesses to reduce waste and increase recycling.
What has been done between September 2018 - March 2023	• Pilot trial 'reusable' cup/container lending system eliminating single use waste. • Creation of a Hamilton secondhand shopping guide and launch of Secondhand September waste ambassador video and campaign. • RefillNZ programme digitally mapping all drinking fountains in Hamilton including The Hamilton Gardens. • Annual plastic free internal and external campaigns. • Construction and demolition waste reduction events held for trades people and developers (refer action 11 for full construction and demolition update). • Resource Recovery Advisor invited onto New Zealand Green Building Council Waikato Forum, and presented to 350 Members. • Met with various businesses to explore waste reduction initiatives including SkyCity, RaboBank and Hamilton Central Business Association.

Action 7	Status at March 2023 Ongoing
New or existing action	New
Timeframe	2018-2024
Proposed funding mechanism	Levy and partnerships
WMMP objectives reference	1,2,3,5
WMMP activity	Partner with the Waikato District Health Board and other health related organisations regarding the management of medical waste.
What has been done between September 2018 – March 2023	• Ongoing development of relationship with DHB, specifically around medical waste. • Additional bin collection added for a limited number of high dependency users.

Action 8	Status at March 2023 Ongoing
New or existing action	New
Timeframe	2018-2024
Proposed funding mechanism	Levy, rates and partnerships
WMMP objectives reference	1,2,3,5,6
WMMP activity	Partner with the community sector to identify efficiencies or opportunities for cooperation / partnership, particularly around reuse of materials.
What has been done between September 2018 – March 2023	• Waikato Hospice: hugely successful video campaign 'Reusing with Hospice Waikato' and secondhand pop-up shop at two WasteMINZ conferences. • Habitat for Humanity: developed promotional material including video showcasing Habitat stores and other reuse stores in Hamilton.

Action 9	Status at March 2023 In progress
New or existing action	New
Timeframe	2018-2024
Proposed funding resources	Levy
WMMP objectives reference	1,2,5
WMMP activity	Identify and support community and business champions in waste reduction and avoidance.
What has been done between September 2018 – March 2023	• Waste Business Champion collaborations undertaken with Zibido Hair Salon, Volare Bakehouse and Hospice Waikato. • Early Childhood Centre cloth nappy pilot - collaborative pilot with Waipā District Council to provide nappy laundering.

Action 10	Status at March 2023 Ongoing
New or existing action	Existing
Timeframe	Ongoing
Proposed funding resources	Levy
WMMP objectives reference	1,2,3,5,6
WMMP activity	Collaborate with local government organisations, non-government organisation, and other key stakeholders, to undertake research and actions on various waste issues including (but not limited to) influencing central government regulation and product stewardship for key waste streams such as e-waste, types, plastic bags and packaging etc.
What has been done between September 2018 – March 2023	• Council staff input at WasteMINZ Territorial Authority Forum and sector group projects. • Waste industry submissions including Product Stewardship, Waste Levy, Transforming Recycling. • Relationship with University of Waikato and ongoing discussion regarding investigations into the alternative reuse of materials. • Best practice guidelines and advice continued to be sought from Council's Sustainable Resource Recovery Unit from both local Territorial Authorities and central government Ministry for the Environment. • Council staff continue to partake in and influence front of line thinking, and decision making e.g. WasteMINZ Territorial Authority Officers Forum Steering Committee; Licensing and Data Steering Committee (including Bay of Plenty Local Authority Shared Services and Waikato Local Authority Shared Services project contract service delivery), NZ Green Building Council Waikato Forum Steering Committee.

Action 11	Status at March 2023 In progress
New or existing action	New
Timeframe	2018-2024
Proposed funding resources	Levy, rates and partnerships
WMMP objectives reference	1,2,3,5,6,7
WMMP activity	Collaborate with key stakeholders to investigate and implement opportunities to address the growing construction and demolition waste issue, including waste avoidance, reuse and recovery.

What has been done between September 2018 – March 2023	• Established groups of key influencers internally/externally to support new development and growth with new kerbside collection service.
	• Extensive consultation with local/national industry leaders to support implementation of Council's Waste Management and Minimisation Bylaw 2019 requirements.
	• Design guidelines created for:
	  • designing out waste, ensuring considerations given to standard service, storage, and ease of collection of wheelie bins
	  • site waste plan guidelines, for reducing waste on site.
	• Authority module created to enable the capturing of waste plan data requirements.
	• Sustainable Resource Recovery unit staff member providing input on Council's major growth projects including the Peacocke subdivision, Plan Change 5, and Plan Change 12.
	• Two sold out events held for Hamilton trades people, and developers around waste reduction (sponsored by Placemakers).
	• Dedicated page on fightthelandfill.co.nz for construction and development, including a toolkit, design waste calculator, available resources, and guidelines to support our stakeholders on their waste management and minimisation journey.
	• Developed ongoing relationships with a network of over 30 stakeholders within the local construction and demolition industry.
	• Video launched showcasing four high profile Hamilton construction companies doing great things to reduce waste.
	• Partnered with New Zealand Green Building Council to deliver a waste reduction event for the construction industry, with over 80 attendees.
	• Presented to over 35 local builders at the New Zealand Certified Builders regional development day.
	• Treated timber now being diverted at the Lincoln Street Resource Recovery Centre (250,000kg per month).

3. Events

Events are an increasing source of waste generation, but they are also a great opportunity for education on waste reduction. This will be achieved by improving waste minimisation at events, Council sites, and supporting event organisers to implement effective waste reduction activities.

Waste Management and Minimisation Plan 2018 – 2024 performance metrics:

- 50% reduction in waste to landfill from events (baseline required)
- number of events incorporating waste avoidance and reduction activities.

Action 12	Status at March 2023 Ongoing
New or existing action	New
Timeframe	2018-2024
Proposed funding resources	Levy, rates and partnerships
WMMP objectives reference	1,2,4,5,7
WMMP activity	Improve waste minimisation at events held at Council sites.
What has been done between September 2018 - March 2023	• Council staff have provided ongoing support for the silver service initiative, waste minimisation activities at Rugby Sevens (2018, 2019, 2020), and at the Waikato Show (2018,2019 and 2020), back of house and front of house initiatives. • H3 venues now diverting all compostable packaging.

Action 13	Status at March 2023 Ongoing
New or existing action	New
Timeframe	Ongoing
Proposed funding resources	Levy, rates and partnerships
WMMP objectives reference	1,2,4,5,7
WMMP activity	Support event organisers to implement waste minimisation at events.
What has been done between September 2018 - March 2023	• Provision of wheelie bin and cover hire for small events, event waste minimisation guidelines for all event sizes, and vendor event. • Review of the event permit request process. • Waste Minimisation Education Advisor met with Seddon Park to encourage reusables at large events. • Hamilton Gardens Arts Festival 2021 received support from the Waste Minimisation Fund and delivered a 57% reduction in event waste - refer action 19. • Silver Service initiative (partly funded by Council in 2019) saw on average, 2400 single use containers diverted from landfill at each Gourmet in the Garden event (excluding while COVID-19 restrictions were in place). This was extended to other local events including the Nesian Festival and the Waikato show.

4. Education

A key part of achieving our vision, goals and objectives, is making it easy for all Hamiltonians to do the right thing. To do this, Council needs to ensure the right information is accessible and available for our community. This will be achieved by supporting and developing information and education programmes, raising awareness and promoting waste minimisation.

Waste Management and Minimisation Plan 2018 – 2024 performance metrics:

- annual reporting of education programmes outcomes.

Action 14	Status at March 2023 Ongoing
New or existing action	New
Timeframe	By 2020
Proposed funding resources	Levy
WMMP objectives reference	1,2,3,4,5,7
WMMP activity	Support information and education programmes raising awareness and promoting waste minimisation, including developing multi-language resources.
What has been done between September 2018 - March 2023	• Multi language education booklets and new video produced for the hearing-impaired community. • Overhaul of fightthelandfill.co.nz and content to address key questions, updates, recycling sorter, recycling game, hover house. • Waste minimisation awareness videos developed and released – available on fightthelandfill.co.nz. • Education Room at Materials Recovery Facility opened, and made available to schools, teachers, organisations and community groups. • Council's Waste Minimisation Educator visited 17 schools as part of a waste reduction roadshow.

Action 15	Status at March 2023 Ongoing
New or existing action	Existing
Timeframe	Ongoing
Proposed funding resources	Levy
WMMP objectives reference	1,2,3,4,5,7
WMMP activity	Promote reducing food waste and the beneficial reuse of organic material.
What has been done between September 2018 - March 2023	• Ongoing support and promotion of national Love Food Hate Waste campaign. • Council's summer food waste campaign "Don't have a Stink Summer" highlighting ways to limit smell in the food scraps bins and increase consistent all year around use. • Exploring central city compost initiative - refer action 3. • Waste Minimisation Fund supported the installation of community compost facilities at Western Community Centre, and the Fairfield Project - refer action 19. • 70m3 of compost from kerbside food scraps and green waste, shared free of charge for use in community projects. • Annual BYO Bucket event at the Hamilton Organic Centre. This is an education campaign teaching Hamilton residents how their food scraps get turned into compost.

Action 16	Status at March 2023 Ongoing
New or existing action	New
Timeframe	2018-2024
Proposed funding resource	Levy
WMMP objectives reference	1,2,3,4,5,6
WMMP activity	Develop targeted waste minimisation information and education programmes e.g. for youth, elderly, business and construction and demolition industry.
What has been done between September 2018 - March 2023	• Annual projects linked to actions 8, 9 and 14 including alignment with service change education project stream. • Media coverage and videos, funded through the Waste Minimisation Collaboration Fund, created to promote how to reduce waste and information around plastics #1, 2,and 5. • Targeted stakeholder messaging and tours of the Education Room at the Materials Recovery Facility. • Construction and demolition actions - outlined in action 11.

5. Litter and illegal dumping

Keeping Hamilton clean is an important part of waste management and minimisation. Council already has a strong enforcement program for any illegal dumping but is still experiencing increases in incidents of littering and illegal dumping. This will be achieved by ensuring effective management of litter and illegal dumping is caried out as well as developing and implementing plans to reduce illegal dumping and littering.

Waste Management and Minimisation Plan 2018–2024 performance metrics:

- community satisfaction with litter rates, measured during community surveys
- 10% reduction in litter and 15% reduction in illegal dumping in comparison to 2017 data.

Action 17	Status at March 2023 Ongoing
New or existing action	Existing
Timeframe	Ongoing
Proposed funding tools	rates
WMMP objectives reference	1,2,4,5,7
WMMP activity	Keep the streets clean by clearing litter and illegal dumping.
What has been done between September 2018 - March 2023	• Ongoing membership and support of Keep New Zealand Beautiful. • Inclusion of specific new service provider key performance indicators to mitigate litter.

Action 18	Status at March 2023 Ongoing
New or existing action	New
Timeframe	2018-2024
Proposed funding tools	Levy, rates and partnership
WMMP objectives reference	2,5,6,7
WMMP activity	Develop and implement a plan to reduce illegal dumping and littering, including education and strong enforcement.
What has been done between September 2018 – March 2023	• Council adopted the Waste Management and Minimisation Bylaw 2019 on 28 November 2019 providing increased enforcement and control measures. • Council have approved litter enforcement including the ability to issue infringement notices. • New illegal dumping signage developed, with a more conscious focus to dissuade illegal dumping versus punitive messaging. • Provided illegal dumping signage to charity stores due to the increase of illegal dumping at shop fronts experienced during COVID-19 lockdowns.

6. Grants

Council started the Contestable Waste Minimisation Fund as part of the 2012 waste plan implementation. The $50,000 annual fund has successfully funded a range of projects, providing community groups and businesses with an opportunity to pilot new ideas and to get projects up and running. This will be achieved by continuing to provide grants to third parties for promoting or achieving local waste minimisation initiatives within the community.

Waste Management and Minimisation Plan 2018–2024 performance metrics:

- successful implementation of annual grants programme.

Action 19	Status at March 2023 Ongoing
New or existing action	Existing
Timeframe	Ongoing
Proposed funding resources	Levy
WMMP objectives reference	1,2,3,4,5
WMMP activity	Issue grants to third parties for the purpose of promoting or achieving waste minimisation and to manage grants.
What has been done between September 2018 – March 2023	• Waste minimisation funding rounds completed annually. • Fund now aligned with Waipā District Council to build on increased collaboration and efficiencies with partnership projects. • The most recent funding round saw a 70% increase in applications compared with the previous year.

Action 20	Status at March 2023 ✓ Complete
New or existing action	New
Timeframe	By Dec 2019
Proposed funding resources	Levy
WMMP objectives reference	1,2,3,4,5
WMMP activity	Evaluate the current grant model and investigate and implement opportunities for low interest loans and / or targeted grants.
What has been done between September 2018 – March 2023	• Fund to be reviewed following the April 2023 round. Potential to look at frequency of the fund and targeting the fund towards specific waste streams.

7. Data

Having good data is important for Council to make informed decisions on our waste management and minimisation priorities. This will be achieved by establishing and improving access to information on waste from both Council and private waste collectors and facilities.

Waste Management and Minimisation Plan 2018–2024 performance metrics:

- data available for analysis by 2020
- no weeks with more than 20 complaints of uncollected household rubbish and recycling
- audit carried out three yearly
- all waste data carried out in alignment to the National Waste Data framework.

Action 21	Status at March 2023 In progress
New or existing action	Existing – expanded
Timeframe	Ongoing
Proposed funding resources	Levy and rates
WMMP objectives reference	2,3,4,5,6,7
WMMP activity	Ensure access to information on waste from both council and private waste collectors and facilities. Capture data on quantities, composition, origin and destination, and the use of the service, in line with the National Waste Data Framework.
What has been done between September 2018 – March 2023	• Licensing requirements captured in Waste Management and Minimisation Bylaw linking Action 31. • Waste minimisation staff member on WaiBop Licensing/data Steering Group. • Recent Ministry for the Environment review of the New Zealand Waste Strategy and Waste Minimisation Act may see this rolled out as a national initiative. Link to Action 32.

Action 22	Status at March 2023 Business as usual
New or existing action	Existing
Timeframe	Ongoing
Proposed funding resources	Rates
WMMP objectives reference	2,3,4,5,6,7
WMMP activity	Monitor and report on waste related complaints received through Council's service request system.
What has been done between September 2018 - March 2023	• Targeted waste minimisation email linked to fightthelandfill.co.nz to answer waste-related queries.

Action 23	Status at March 2023 Complete
New or existing action	New
Timeframe	Ongoing
Proposed funding resources	Levy
WMMP objectives reference	2,3,4,5,6,7
WMMP activity	Carry out community surveys on waste management and minimisation services within Hamilton.
What has been done between September 2018 - March 2023	• Community and staff surveys completed in April 2019 and May 2021.

Action 24	Status at March 2023 In progress
New or existing action	Existing
Timeframe	Ongoing
Proposed funding resources	Levy
WMMP objectives reference	2,3,4,5,6,7
WMMP activity	Ensure a household rubbish and recycling composition analysis is undertaken at least every three years for both Council and private kerbside services.
What has been done between September 2018 - March 2023	• Waste Assessment completed in 2017. Next waste assessment due July 2023. • Solid waste analysis protocol complete June 2022, composition analysis completed March 2023.

Action 25	Status at March 2023 Ongoing
New or existing action	New
Timeframe	Ongoing
Proposed funding resources	Levy
WMMP objectives reference	3,5,6,7
WMMP activity	Monitor progress and support WasteMINZ National Waste Data Framework project.
What has been done between September 2018 – March 2023	• Regular liaison, input and updates from WasteMINZ. • Ongoing and updated in accordance with National Waste Manifesto. • Council's Sustainable Resource Recovery unit member influenced and provided input in National Waste Manifesto Update 2021.

Action 26	Status at March 2023 Ongoing
New or existing action	Existing – expanded
Timeframe	Ongoing
Proposed funding resources	Levy and rates
WMMP objectives reference	2,3,4,5,6,7
WMMP activity	Monitor and report on Council's contracted waste services including rubbish and recycling collection data from kerbside collections.

What has been done between September 2018 – March 2023	• Dedicated rubbish and recycling contract manager employed.
	• 10-Year Plan non-financial performance measures reported quarterly, refer action 1, for the implementation of the new rubbish and recycling kerbside collection service and inclusion of contract key performance indicators to provide monthly data.
	• 10-Year Plan – non-financial performance measures reported quarterly – Q3 2022.
	• Results (as at April 2022):
	  • amount of waste received at Council operated facilities diverted from landfill - target: 4000 tonnes per quarter - result: 3762 tonnes
	  • percentage of waste recovered for recycling through Council facilities – target: 30% - result: 42.72%
	  • the percentage of waste removed for recycling through the kerbside collection – target: 45% - result: 51.74%.

8. Council Management

Council staff will implement the actions contained within the Waste Management and Minimisation Plan 2018–2024 and will ensure that Council is learning by doing with waste minimisation. This will be achieved by implementing best practice waste avoidance, reduction and minimisation within Council sites and operations.

Waste Management and Minimisation Plan 2018–2024 performance metrics:

- health and safety incident reports received from contractor at each contractor meeting – no serious incidents reported
- report on the number of sites implementing waste minimisation, with quarterly reporting to track progress against waste and recycling rates.

Action 27	Status at March 2023 Completed/Ongoing
New or existing action	Existing
Timeframe	Ongoing
Proposed funding resources	Levy
WMMP objectives reference	1,2,3,4,5,6,7
WMMP activity	Fund waste minimisation advisors to lead waste management and minimisation within Council and coordinate the implementation of this plan.
What has been done between September 2018 - March 2023	• Staff resourced to implement new service link to Action 1. • Additional staff resourced to coordinate and project lead Waste Management and Minimisation Plan actions and Waste Management and Minimisation Plan review.

Action 28	Status at March 2023 In progress
New or existing action	Existing
Timeframe	By 2024
Proposed funding resources	Levy
WMMP objectives reference	1,2,3,4,5,6,7
WMMP activity	Review of the Waste Management and Minimisation Plan 2018–2024 and development of the Waste Management and Minimisation Strategy 2024–2030.
What has been done between September 2018 - March 2023	• Review of Waste Management and Minimisation Plan was commenced in March 2022. • Development of the Waste Assessment commenced in March 2022.

Action 29	Status at March 2023 Ongoing
New or existing action	Existing
Timeframe	Ongoing
Proposed funding resources	Rates
WMMP objectives reference	3,7
WMMP activity	Ensure that services provided by Council are in line with, and promote, current health and safety guidelines.
What has been done between September 2018 – March 2023	• Linked to Action 1, ensuring new rubbish and recycling kerbside collection service contract includes specific key performance indicators and reporting around health and safety.

Action 30	Status at March 2023 Ongoing
New or existing action	Existing
Timeframe	By 2024
Proposed funding resources	Levy
WMMP objectives reference	1,2,4,5,7
WMMP activity	Implement best practice waste avoidance, reduction and minimisation within Council sites and operations, and share knowledge and experience gained from such activities.
What has been done between September 2018 – March 2023	• Link to Action 1, the new service includes all Council facilities to provide rubbish, recycling and organic collection services.

9. Regulatory

Effective bylaws and plans will be integral to delivering a range of waste minimisation actions. They can provide Council with both the driver for change and the ability to undertake enforcement. This will be achieved by:

- completing an update of the Solid Waste Bylaw to align with the Waste Management and Minimisation Plan 2018–2024
- obtain regional consistency
- facilitate data collection
- ensure planning supports the changes in the rubbish and recycling kerbside collection service
- allow the implementation of waste licensing for operators and collectors.

Waste Management and Minimisation Plan 2018–2024 performance metrics:

- suite of tools, guidelines
- all waste collectors and operators are licensed by 2020
- new developments meet the needs of the kerbside collection service.

Action 31	Status at March 2023 ✓ Complete
New or existing action	New
Timeframe	2018/19
Proposed funding resources	Levy and rates
WMMP objectives reference	2,3,4,5,6,7
WMMP activity	Update the Solid Waste Bylaw for regional consistency, to facilitate data collection and to ensure it supports the changes in kerbside service.
What has been done between September 2018 – March 2023	• Completed review of the Solid Waste Bylaw and Waste Management and Minimisation Bylaw 2019 (adopted 28 Nov 2019). • Processes developed in conjunction with building and planning groups to support requirements of Waste Management and Minimisation Bylaw 2019 link to Action 21.

Action 32	Status at March 2023 In progress
New or existing action	New
Timeframe	By 2019
Proposed funding resources	Levy and rates
WMMP objectives reference	2,3,4,5,6,7
WMMP activity	Implement waste licensing for operators and collectors, potentially as part of a regional or sub regional initiative.
What has been done between September 2018 – March 2023	• Licensing requirements and improved waste data collection captured in Waste Management and Minimisation Bylaw. • Refer Action 21.

Action 33	Status at March 2023 In progress
New or existing action	Existing – expanded
Timeframe	In conjunction with Council planning processes
Proposed funding resources	Levy and rates
WMMP objectives reference	1,2,3,4,5,6,7
WMMP activity	Implement and enforce requirements for any properties and developments to ensure waste management and minimisation considerations are taken into account at the design phase, including storage space requirements and access for collection vehicles.
What has been done between September 2018 – March 2023	• Waste Management and Minimisation Bylaw 2019 includes the requirement for waste plans. • Processes being developed to capture waste plans at consent stage of applications. • Suite of tools and guidelines, calculators, processes and procedures completed to support and inform industry stakeholders. Refer Action 11.

Appendix B

Legislation The Waste Minimisation Act (WMA) 2008

The enactment of the Waste Management Act in 2008 represented a change in the Government's approach to managing and minimising waste. The Waste Management Act recognises the need to focus efforts higher on the waste hierarchy in terms of reducing and recovering waste earlier in its lifecycle, shifting focus away from treatment and disposal. The purpose of the Waste Management Act (s3) is to "encourage waste minimisation and a decrease in waste disposal in order to protect the environment from harm, and to provide environmental, social, economic and cultural benefits".

The Waste Management Act introduced a number of useful tools such as a framework for developing accredited product stewardship schemes and the creation of a national waste disposal levy.

The Government has a waste programme to drive national waste sector improvements. Consultation is underway regarding priority products, and an increase in the Waste Disposal Levy and Emission Trading Scheme. Work is also underway to design a national container return scheme and to standardise kerbside collections in conjunction with national investment plans. The impact of these changes on future demand for waste services is discussed in Chapter 4.

While the Waste Management Act provides many benefits to local councils, it also provides a number of responsibilities. Part 4 is fully dedicated to the responsibilities of Territorial Authorities which "must promote effective and efficient waste management and minimisation within their districts" (s42).

Climate Change Response Act 2002 and amendments

The Climate Change Response Act 2002 and the Climate Change Response (Emissions Trading Reform) Amendment Act 2020 provide the basis for a New Zealand Greenhouse Gas Emission Trading Scheme. The Act requires landfill owners to purchase emission trading units to cover methane emissions generated from their landfill. Should any future solid waste incineration plants be constructed, the Act would also require emission trading units to be purchased to cover carbon dioxide, methane, and nitrous oxide emissions from the incineration of household waste. The impact of increased charges is covered in Chapter 4.

The Local Government Act 2002

This Act requires Territorial Authorities to assess how well they provide collection and reduction, reuse, recycling, recovery, treatment and disposal of waste in their district, and makes Territorial Authorities responsible for the effective and efficient implementation of their Waste Management and Minimisation Plan.

The Local Government Act 2002 contains various provisions that may apply to Territorial Authorities when they are preparing their waste management and minimisation plans, including consultation (Part 8, sections 145-146) and bylaw provisions (Part 8, section 158). The procedure for making a bylaw and the requirement for completing a special consultative procedure, when making a bylaw, are contained in sections 155 and 156.

The Local Government Act 2002 (Part 6, section 77) refers to legislative requirements for Territorial Authority decision-making, including consideration of the benefits and costs of different options in terms of the present and future social, economic, environmental and cultural wellbeing of the district. Schedule 10 of the Act also includes requirements for information to be included in a Long-Term Plan, including summary information about their Waste Management and Minimisation Plan.

The Resource Management Act 1991

The Resource Management Act provides guidelines and regulations for the sustainable management of natural and physical resources. Although it does not specifically define 'waste', the Resource Management Act addresses waste management and minimisation activity through controls on the environmental effects of waste management and minimisation activities and facilities through national, district and local policy, standards, plans and consent procedures.

In this role, the Resource Management Act exercises considerable influence over facilities for waste disposal and recycling, recovery, treatment, and others in terms of the potential impacts of these facilities on the environment.

Under section 30 of the Resource Management Act, district councils are responsible for controlling the discharge of contaminants into or onto land, air or water. These responsibilities are addressed through district planning and discharge consent requirements. Other district council responsibilities that may be relevant to waste and recoverable materials facilities include managing the adverse effects of storing, using, disposing of, and transporting hazardous wastes, the dumping of wastes from ships, aircraft and offshore installations into the coastal marine area, and the allocation and use of water.

Under the Resource Management Act, Territorial Authority responsibility includes controlling the effects of land-use activities that have the potential to create adverse effects on the natural and physical resources of their district. Facilities involved in the disposal, treatment or use of waste or recoverable materials may carry this potential. Permitted, controlled, discretionary, non-complying and prohibited activities and their controls are specified within district planning documents, thereby defining further land-use-related resource consent requirements for waste-related facilities.

In addition, the Resource Management Act provides for the development of national policy statements and for the setting of National Environmental Standards. There is now a National Policy Statement on renewable electricity generation, which is defined as 'generation of electricity from solar, wind, hydro, geothermal, biomass, tidal, wave, or ocean currents resources. This is also relevant to the waste assessment as organic and garden waste can be defined as forms of biomass, and therefore a source of renewable electricity generation.

There is currently one enacted National Environmental Standards that directly influences the management of waste in New Zealand – the Resource Management (National environmental standards relating to certain air pollutants, dioxins, and other toxics) regulations 2004 (the National Environmental Standards for air quality). This National Environmental Standards requires certain landfills (e.g. those with a capacity of more than one million tonnes of waste) to collect landfill gases and either flare them or use them as a source of energy. The result is increased infrastructure and operational costs for qualifying landfills, although with costs potentially offset by the harnessing of captured emissions for energy generation.

Unless exemption criteria are met, the National Environmental Standards for air quality also prohibits the lighting of fires and burning of waste at landfills, the burning of tyres, bitumen burning for road maintenance, burning coated wire or oil, and the operation of high-temperature hazardous waste incinerators. These prohibitions limit the range of waste treatment/disposal options available within New Zealand with the aim of protecting air quality.

Other legislation

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

The Hazardous Substances and New Organisms Act 1996

The Hazardous Substances and New Organisms Act 1996 addresses the management of substances that pose a significant risk to the environment and/or human health, from manufacture to disposal. The Act relates to waste management primarily through controls on the import or manufacture of new hazardous materials and the handling and disposal of hazardous substances.

Hazardous substances may be explosive, flammable, have the capacity to oxidise, be toxic to humans and/or the environment, corrosive, or have the ability to develop any of these properties when in contact with air or water. Depending on the amount of a hazardous substance on site, the Hazardous Substances and New Organisms Act 1996 sets out requirements for material storage, staff training and certification. These requirements would need to be addressed within operational and health and safety plans for waste facilities. Hazardous substances commonly managed by councils include used oil, asbestos, agrichemicals, LPG and batteries.

The Hazardous Substances and New Organisms Act 1996 provides minimum national standards that may apply to the disposal of a hazardous substance. However, under the Resource Management Act, a district council or Territorial Authority may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances.

The Health Act 1956

The Health Act 1956 places obligations on Territorial Authorities (if required by the Minister of Health) to provide sanitary works for the collection and disposal of refuse, for the purpose of public health protection (Part two – powers and duties of local authorities, s 25). It specifically identifies certain waste management practices as nuisances (s 29) and offensive trades (third schedule). The Health Act enables Territorial Authorities to raise loans for certain sanitary works and/or to receive government grants and subsidies, where available.

The Health Act provisions for the removal of rubbish by local authorities have been repealed by local government legislation. The Public Health Bill is currently progressing through Parliament. It is a major legislative reform reviewing and updating the Health Act 1956, but it contains similar provisions for sanitary services to those currently contained in the Health Act 1956.

The Litter Act 1979

The Litter Act provides Territorial Authorities with powers to create litter enforcement officers or litter control officers who have powers to issue infringement notices with fines for those who have committed a littering offence.

The Litter Act was amended on 27 June 2006. The principal amendment was to strengthen the powers of Territorial Authority infringement fees, which are now increased from the original $100 to a maximum of $400. Territorial Authorities may adopt the amended infringement notice provisions provided they pass a new resolution including the 14 days' public notification.

Councils use the Litter Act as a method for regulating litter and illegal dumping although the enforcement process is difficult and often unsuccessful. There have been very few successful prosecutions in New Zealand under the Litter Act. It is accepted prosecuting litter offenders through the courts is not the most efficient way of dealing the litter problem as the fines imposed are not high enough to act as a deterrent and full costs are usually not recovered.

The Health and Safety at Work Act 2015

The Health and Safety at Work Act 2015 sets out the principles, duties and rights in relation to workplace health and safety. The Health and Safety at Work Act 2015 outlines health and safety responsibilities for the management of hazards in relation to employees at work. This could potentially include working with hazardous substances and in the collection and management of waste.

The Health and Safety at Work Act 2015 requires employers to identify and manage hazards present in the workplace, provide adequate training and supervision, and supply appropriate protective equipment. Employers must take all practicable steps to ensure the safety of employees while at work, and in particular, must take all practicable steps to (among other things) ensure employees are not exposed to hazards arising out of the arrangement, disposal, organisation, processing, storage, transport or use of things in their place of work.

The Health and Safety at Work Act 2015 places duties on any person in control of a place of work, (e.g. a principal), to ensure people are not harmed by any hazard resulting from work activities. Those who employ contractors therefore 'have the same occupational health and safety obligations to contractors or contracted labour as they do their own employees'. Employers therefore need to establish systems to manage the health and safety of any contractors or contracted labour.

Principals cannot contract out of their responsibilities for health and safety through contract disclaimer clauses. From discussions with council waste officers, it is believed council staff are aware the council is principal to the contract and they take health and safety responsibilities seriously. At the time services are procured, many councils now require robust data and information (including health and safety) to ensure they can make a considered choice of future collection methodology.

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 green-house 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 relating 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

Letter from Medical Officer of Health

Te Whatu Ora
Health New Zealand

5 September 2023

Tania Hermann
Unit Director Sustainable Resource Recovery
Hamilton City Council
Garden Place
Hamilton
3204

Dear Tania,

Re: Medical Officer of Health Consultation: Hamilton City Council Waste Assessment

Thank you for the opportunity to provide comments on the 2023 draft Hamilton City Council Waste Assessment, dated August 2023, as required by section 51 of the Waste Minimisation Act 2008. I have reviewed the document and am pleased to be able to provide the following feedback.

Effective waste management is vital for good public health outcomes. From a public health perspective, sanitary collection and disposal of solid waste is essential for:

- Human disease control such as managing pathogenic wastes and reducing harbourage of human disease vectors like rats, fleas, and mosquitoes
- Control of health nuisances from dust, odour, pest species or smoke from indiscriminate burning of waste
- Control of health risks from hazardous wastes such as asbestos
- Prevention of contamination of drinking or recreational water from runoff or leachate
- Public safety, in terms of uncluttered thoroughfares.

In your letter to me you requested feedback on waste-related deaths, injuries, and hospitalisations in Hamilton. Unfortunately it is not possible to provide information on the number of people impacted, as hospital and emergency department data do not specify whether admissions are waste-related or not.

Waste services and strategies, at both the local and national levels, should be provided in a manner that is:

- Affordable and accessible to all
- In alignment with Te Tiriti o Waitangi and local iwi values.

I firmly endorse the guiding principles outlined in the Waste Assessment, particularly emphasising enrichment by Te Ao Maaori and collective action. I would strongly recommend that Hamilton City Council actively engage and partner with iwi, Mana Whenua and Mataawaka to ensure their perspectives and aspirations are reflected in the final Waste Management and Minimisation plan (WMMP).

Waste data

Good quality waste data is crucial for understanding the quantity and composition of waste coming into facilities. This information is essential for implementing effective and appropriate initiatives to minimise waste. The waste assessment recognises that there are gaps in certain aspects of waste

data collection, particularly concerning the private and commercial sectors where no data is available. I recommend that Council investigate ways of obtaining data in these areas to better guide actions in the future.

Data gaps have made it difficult to report on the progress towards targets set in the 2018-2024 WMMP. I recommend that effort is made to obtain the data necessary to measure progress against new targets that are established in the forthcoming WMMP.

Population growth

Future waste management planning must account for projected population growth as total waste is expected to increase in tandem with population growth. The draft waste assessment has reported the low series of the NIDEA population growth projection. I recommend considering and providing a range of population growth projections, rather than just the low series. Hamilton City Council should not rely solely on the low projection to determine future waste volumes.

Given the expected and estimated increase in total waste secondary to population and economic growth, early consideration and pre-emptive planning is imperative to address capacity issues related to storage and disposal.

Waste minimisation

Public health can be protected by waste minimisation practices that decrease waste generation and subsequently reduce associated health hazards and adverse environmental outcomes. I support the Council's actions to reduce waste to landfill, such as reducing, recycling and reusing, and endorse efforts to promote circular economy principles, in which resources are utilised for as long as possible.

I commend Hamilton City Council for introducing bin-based kerbside collection in 2020, particularly the inclusion of a food bin to divert organic waste from going to landfill. This is a significant step considering that food scraps account for approximately one third of the total kerbside recycling by weight. I support the proposed actions in "Focus Area 1", which aim to further reduce the amount of organic waste going to landfill. Reducing the amount of organic waste in landfill will extend the life of existing landfills and reduce greenhouse gas emissions.

It is encouraging that per capita kerbside landfill waste decreased significantly by 47.8% in 2022 compared to 2013. However, I note that there remains significant diversion potential, with an estimated 54% of Council's kerbside collected waste being potentially recyclable (12%) and compostable (42%), including kitchen waste, green waste, and other compostables. I support proposed actions aimed at addressing this issue. Promoting composting initiatives, both at the community level and for home composting, is a commendable approach. Educational efforts should include information on the risk and prevention of legionellosis.

Hazardous waste

Given the nature of hazardous waste and its high risk potential for harm to health, it is an important public health issue. It is pleasing to see that the Council has a permanent facility for the collection

and disposal of hazardous materials requiring treatment. I understand that the Lincoln Street Resource Recovery Centre is the facility where residents can safely dispose household quantities of hazardous waste or chemicals for free. I recommend that this information be included in the waste assessment. Free disposal of hazardous waste is important to discourage people from disposing of it in the kerbside collection. The waste assessment shows that hazardous waste makes up 1.5% of kerbside rubbish.

The 2018 WMMP included the action to provide and promote hazardous waste disposal services for household hazardous waste, which I recommend continuing as an action going forward. I recommend not limiting this service to a single drop-off point, or to annual events, as these may not be accessible to all members of the community.

I particularly recommend initiatives for responsible disposal of lithium batteries. At least three lithium battery fires have occurred in Hamilton's kerbside bin collections.[1]

Medical waste

The Waste Assessment does not mention domestic medical waste. I would encourage the Council to define domestic medical waste and provide opportunities for more education and community initiatives that support safe disposal of sharps. Inappropriate sharps disposal through general waste and recycling systems poses a risk for collection and processing staff and is a significant infectious disease safety concern. I support the ongoing partnership with Te Whatu Ora Waikato (previously the Waikato District Health Board) and other health-related organisations regarding the management of medical waste, as outlined in the current action within the 2018 WMMP.

Natural disaster waste

I support the Council's consideration for waste management during natural disasters. With the effects of global warming, we have experienced more severe weather events, and it is essential to consider natural disasters, which have been identified as significant waste generators. This may pose a challenge for Council, given the absence of local landfills and the potential for limited capacity at Council-owned transfer stations. I would recommend that the Council not only investigate how to prepare for waste during a natural disaster but also develop a plan for managing disaster waste. This would align with the Council's Climate Change Strategy.

Construction and demolition waste

The waste assessment has identified that construction and demolition is the largest waste stream in New Zealand, presenting a significant opportunity for waste minimisation in this area. I commend the Council for its initiatives aimed at diverting construction and demolition waste away from landfill, including the ongoing collaborative relationship with the industry. It is encouraging to see that there are increasing quantities of wood and concrete appearing at the resource recovery centre.

---

[1] https://hamilton.govt.nz/your-council/news/community-environment/batteries-cause-three-fires-in-six-months#:~:text=On%20Friday%2030%20June%2C%20a,Lincoln%20Street%20Resource%20Recovery%20Centre

It is important to ensure that demolition waste does not contain contaminants, such as asbestos. There is no mention of asbestos waste within the waste assessment. Consideration should be given to how asbestos waste is managed and disposed of.

Conclusion

I hope that these comments will add to the value to the Waste Assessment and be helpful in further development of the Waste Management and Minimisation Plan.

Once again thank you for the opportunity to comment. The Waikato Public Health Service recognises that effective waste management contributes to better health outcomes for the community.

Kind regards

Dr Richard Wall
Medical Officer of Health
Waikato Public Health Service

Hamilton City Council
Garden Place, Private Bag 3010, Hamilton

HamiltonCityCouncil
@hamilton_city_nz
07 838 6699

hamilton.govt.nz