KAWERAU DISTRICT COUNCIL Waste Assessment

2025



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Glossary of Terms

Class 1-6 Landfills	Classification system for facilities where disposal to land takes place. The classification system is provided in section 10.2 for reference.
Cleanfill	A cleanfill (properly referred to as a Class 5 landfill) is any disposal facility that accepts only cleanfill material. This is defined as material that, when buried, will have no adverse environmental effect on people or the environment.
Construction & Demolition Waste	Waste generated from the construction or demolition of a building including the preparation and/or clearance of the property or site.
	This excludes materials such as clay, soil and rock when those materials are associated with infrastructure such as road construction and maintenance, but includes building-related infrastructure.
Diverted Material	Anything that is no longer required for its original purpose and, but for commercial or other waste minimisation activities, would be disposed of or discarded.
Domestic Waste	Waste from domestic activity in households.
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'. Properly referred to as a Class 1 landfill.
Managed Fill	A disposal site requiring a resource consent to accept well-defined types of non-household waste, e.g. low-level contaminated soils or industrial by- products, such as sewage by-products. Properly referred to as a Class 3 landfill.
Putrescible, garden, & green waste	Plant based material and other bio-degradable material that can be recovered through composting, digestion or other similar processes.

Waste

Anything disposed or discarded.

Includes a type of waste that is defined by its composition or source (for example, organic waste, electronic waste, or construction and demolition waste).

To avoid doubt, includes any component or element of diverted material, if the component or element is disposed or discarded.

Acronyms and Abbreviations

AMP	Asset Management Plan
BOPRC	Bay of Plenty Regional Council
CCC	Climate Change Commission
C&D	Construction and Demolition
ECOP	Engineering Code of Practice
ETS	Emissions Trading Scheme
KDC	Kawerau District Council
ICI	Industrial, Commercial, Institutional
LoS	Level of Service
LGA	Local Government Act 2002
LTP	Kawerau District Long Term Plan
MfE	Ministry for the Environment
MRF	Materials Recovery Facility
NZ	New Zealand
NZWS	New Zealand Waste Strategy
OECD	Organisation for Economic Co-operation and Development
RIBS	Rapid Infiltration Basins
RRP	Resource Recovery Park
RTS	Refuse Transfer Station
ТА	Territorial Authority (a city or district council)
WA	Waste Assessment as defined by s51 of the Waste Minimisation Act 2008.
WMA	Waste Minimisation Act 2008
WMMP	A Waste Management & Minimisation Plan as defined by s43 of the WMA Act 2008
WWTP	Wastewater treatment plant

Version History

Version	Date	Notes	Author
2012	13/04/2012	First Waste Assessment & Plan	Tom McDowall
2020 a	14/06/2020	First Review	Andre Erasmus
2020 b	30/06/2020	Management Review	Hanno van der Merwe
2020 1	28/07/2020	Approved Assessment	Andre Erasmus
2024 a	20/10/2024	Food Waste Assessment	Hanno van der Merwe
2025 a	18/03/2025	Review for 2025 WMMP	Hanno van der Merwe
2025 b	16/05/2025	Management Review	Riaan Nel

SECTION ONE Introduction



1.1. SOLID WASTE ACTIVITY

Council is required through the Local Government Act of 2002 to provide sanitary services and a waste management plan.

The Solid Waste service is highly appreciated by ratepayers. The 2023 Triennial Residents survey achieved an approval rating of 90% for the collection service (73% NZ benchmark) and 78% (66% NZ benchmark) for the transfer station.

The solid waste activity's primary goal is to provide solid waste services and maintain solid waste infrastructure and plant in the District in order to meet the social, cultural, and environmental requirements of our community. The overall aim is to minimise the presence of refuse within the District and to minimise the amount of local waste that goes to landfill.

This requires the provision of refuse, green waste and recycling collection services from all households and businesses, solid waste drop off services at the transfer station and processing sites, and processed solid waste sales services. Providing this service requires effective, efficient and sustainable infrastructure and plant, in order to collect, store, sort, process, sell reusable products, and transport of materials to be processed or disposed elsewhere.

The solid waste service provides:

- A weekly 60/80 litre refuse bin collection.
- A weekly 60 litre recycling crate collection.
- A fortnightly 240 litre green waste collection.
- A transfer station drop off service of selected solid waste materials
- A transfer station sales service of selected processed materials

The kerbside refuse collection service allows all general household waste excluding hazardous (batteries, bio-waste, chemicals etc.).

The recycling crate collection service allows all clean glass, plastics no 1 and 2, paper and cardboard and all metal containers.

The transfer drop-off service allows all general household waste, recycling, green waste, wood, topsoil, other soils, concrete, tyres, oil and whiteware. Asbestos, chemicals, bio-waste and large items such as cars and tractor tyres are not accepted at the transfer station.

Processed green waste, as either mulch or compost, processed wood chip, crushed concrete, topsoil and clean fill are for sale at the transfer station.

The transfer station is open 7 days a week, from 12 pm to 4 pm. The facility is closed on Christmas day with reduced hours during staff annual events.

1.2. WASTE ASSESSMENT

This Waste Assessment has been prepared by Kawerau District Council (KDC) in accordance with the requirements of the Waste Minimisation Act 2008 (WMA). This document provides background information and data to support the Council's waste management and minimisation planning process.

This document is arranged into a number of sections designed to help construct a picture of waste management in our district. The key sections are outlined below.

Introduction

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

BOP Region

This section presents a brief overview of key aspects of the region's geography, economy, and demographics that influence the quantities and types of waste generated and potential opportunities. It also provides an overview of regional waste facilities, and initiatives that may be of relevance to how we manage our waste.

Our District

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

Waste Infrastructure, Services, Data and Performance Measurement

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

Gap Analysis and Future Demand

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

Statement of Options & Council's Proposed Role

These sections develop options available for meeting the forecast future demand and identify the Council's proposed role in ensuring that future demand is met, and that the Council is able to meet its statutory obligations.

Statement of Proposals

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

Appendices

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

1.2.1. Previous Waste Assessments

The first Waste Assessment was conducted in 2012 with the assistance of external consultants and updated in 2020 by Council staff

The 2012 Waste Assessment included physical investigations of kerb side collection materials and analyses of potential diversion options. The 2012 WMMP was developed from this waste assessment. Both the Waste Assessment and the WMMP were adopted by Council.

The 2020 Waste Assessment was reviewed internally by staff and externally by the Medical Officer of Health. The Medical Officer of Health's comments were supportive of Council's actions and outcomes and included recommendations to consider food waste and home composting options. These recommendations will be considered in the WMMP.

Waste Assessments should be reviewed every six years and are due to be updated in the 2025/26 financial year.

The 2012 WMMP was not updated in 2020 and needs to be updated in the 2024/25 financial year. It is therefore useful to update the 2020 Waste Assessment in 2025 so that the Waste Assessment and the WMMP reflect the same information.

1.3. PURPOSE OF THE WASTE ASSESSMENT

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

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

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

1.4. LEVELS OF SERVICE

Levels of Service (LoS) are evaluated and set every three years during S17A reviews of the Solid Waste service. The LoS can be summarised as follows:

Provision of a cost effective refuse collection and disposal service.

Community satisfaction is measured through a Triennial Residents survey.

Refuse and collection service meet the needs of the community and help maintain public and a clean environment.

All resource consent conditions are complied with. No abatement notices, enforcement orders or convictions are issued.

Provision of a cost effective recycling collection and disposal service.

Community satisfaction is measured through a Triennial Residents survey.

Material diverted from landfill by the recycling collection service.

Average amount of recyclable material collected every year is at least 178 kg per household per annum.

1.5. FUNDING

The solid waste service and all solid waste operations are funded through rates (Uniform Annual General Charge and Targeted Refuse Collection) as well as fees and charges collected at the transfer station.

Council also receives the Ministry for Environment waste levy fund allocation to support waste minimisation.

External funding (waste minimisation fund, community lottery fund and energy trusts) is applied for projects when applicable and available.

1.6. MANAGEMENT OF SOLID WASTE SERVICES AND OPERATIONS

Council governs the Solid Waste Service and all services are provided by Council.

Council utilises in-house Asset Management and Project Management to deliver the service as needed.

An external contractor delivers the kerbside refuse and green waste collection service under a 7-year contract.

Council staff provide the kerbside recycling collection service in-house as well as operating the transfer station.

Council staff transport solid waste materials between Council facilities. Contractors transport solid waste materials to external facilities.

Final disposal of all waste is contracted to external contractors operating licenced landfills and processing facilities.

Shared services with other Councils are considered on an ad hoc basis where a financial or other benefit is identified justifying a shared service or contract to provide a shared service.

1.7. LEGAL FRAMEWORK

Council is required through the Local Government Act of 2002 to provide sanitary services and a waste management plan.

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

"encourage waste minimisation and a decrease in waste disposal in order to

(a) protect the environment from harm; and

(b) provide environmental, social, economic, and cultural benefits."

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

The WMA requires every TA to complete a formal review of its existing waste management and minimisation plan at least every six years. The review must be consistent with WMA sections 50 and 51. Section 50 of the WMA also requires all TAs to prepare a 'waste assessment' prior to reviewing its existing plan. This document has been prepared in fulfilment of that requirement. Council's existing Waste Assessment was written in 2020 and the WMMP was adopted in 2012.

1.8. SCOPE

1.8.1. General

As well as fulfilling the statutory requirements of the WMA, this Waste Assessment will build a foundation that will enable Council to update its WMMP in an informed and effective manner.

In preparing this document, reference has been made to the Ministry for the Environment's 'Waste Management and Minimisation Planning: Guidance for Territorial Authorities'.

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

"A description of the collection, recycling, recovery, treatment, and disposal services provided within the territorial authority's district (whether by the territorial authority or otherwise)". This means that this Waste Assessment must take into consideration all waste and recycling services carried out by private waste operators as well as the TA's own services. While the Council has reliable data on the waste flows that it controls, data on those services provided by private industry is limited. Reliable, regular data on waste flows is important if the TA chooses to include waste reduction targets in their WMMP. Without data, targets cannot be readily measured.

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

1.8.2. Period of Waste Assessment

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

1.8.3. Consideration of Solid, Liquid and Gaseous Wastes

In line with the Council's previous WMMP, this Waste Assessment is focused on solid waste that is disposed of to land or diverted from land disposal. The guidance provided by the Ministry for the Environment on preparing Waste Management and Minimisation Plans states that:

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

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

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

The Kawerau landfill was capped and closed in 2006. Because the annual rate of refuse deposition has been comparatively low the production of landfill gas is correspondingly low. The evidence to date shows no detectable concentrations of landfill gas. Therefore it is assumed that gas production is slow and is diffusing evenly through the cover. Based on this past performance the philosophy of design for the final cover is to restrict gas production to a low rate by encouraging stormwater to runoff, to avoid concentrations of gas through cover shape and to allow landfill gas to slowly diffuse through the final cover.

Biosolids from the WWTP processes are managed through vermicomposting and so it is reasonable to consider them in the context of this assessment. Therefore, apart from some liquid hazardous wastes that are managed through solid waste facilities, this Waste Assessment and the subsequent WMMP will focus primarily on solid waste.

1.8.4. Public Health Issues

Protecting public health is one of the original reasons for local authority involvement in waste management. The New Zealand Waste Strategy 2010 contains the twin high-level goals of "Reducing the harmful effects of waste", and "Improving the efficiency of resource use".

In terms of addressing waste management in a strategic context, protection of public health can be considered one of the components entailed in "reducing harm".

Protection of public health is currently addressed by a number of pieces of legislation. Discussion of the implications of the legislation is contained in Appendix 10.3.

1.8.5. Key Waste Management Public Health Issues

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

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

1.8.6. Management of Public Health Issues

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

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

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

1.9. STRATEGIC CONTEXT

1.9.1. New Zealand Waste Strategy

The New Zealand Waste Strategy: Reducing Harm, Improving Efficiency (NZWS) is the Government's core policy document concerning waste management and minimisation in New Zealand. The two goals of the NZWS are:

- 1. Reducing the harmful effects of waste
- 2. Improving the efficiency of resource use.

The NZWS provides high-level, flexible direction to guide the use of the tools available to manage and minimise waste in New Zealand. These tools include:

- The Waste Minimisation Act 2008
- Local Government Act 2002
- Hazardous Substances and New Organisms Act 1996
- Resource Management Act 1991
- Climate Change Response Act 2002 & Climate Change (Emissions Trading) Amendment Act 2008
- International conventions
- Ministry for the Environment guidelines, codes of practice
- Voluntary initiatives.

The flexible nature of the NZWS means that councils are able to decide on solutions to waste management and minimisation that are relevant and appropriate to local situations and desired community outcomes.

The direction of the draft New Zealand Waste Strategy, the supporting actions, and the suggested targets all have clear implications for the future direction of waste management and minimisation in this country:

- The overall direction of the Waste Strategy is towards a circular economy;
- There are specific actions relating to reducing a wide range of waste streams, and specifically and particularly organic waste in concert with work to reduce emissions; and
- The targets focus on reducing waste generation and waste disposal by 2030 by quite significant proportions.

Section 44 of the WMA requires councils to have regard to the NZWS when preparing their WMMP. For the purpose of this Waste Assessment, council has given regard to the NZWS and the current WMMP (2012).

1.9.2. Emission Reduction

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

The recommendations for the waste sector included an increase in waste minimisation infrastructure investments to decrease methane emissions from waste by at least 40% by 2035 from 2017 levels.

New Zealand has a long-term target of net zero greenhouse gases by 2050, and a specific target for biogenic methane of 24 - 47% reduction by 2050 under the Climate Change Response Act (2002 Act).

The advice of the CCC is that unless waste management practices and policy settings in New Zealand change significantly, we will not meet the targets set in the 2002 Act – "current policies will not deliver the emissions reductions we must achieve."

The main source of biogenic methane emissions from the waste sector is the anaerobic decomposition of organic wastes in landfill (81%). As one possible way to significantly reduce this, the emissions reduction plan proposes "key organic materials such as food, green, and paper waste could also be banned from Class 1 landfills by 2030" with a note that this could also be extended to wood waste.

Further possible methods to reduce organic waste going to disposal include food and green waste collections, services to enable commercial premises to divert food and green waste, better paper and cardboard recycling, and improvements to infrastructure such as transfer stations and material recovery facilities (MRFs).

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

1.9.3. Waste Minimisation Act 2008

Alongside the development of a revised NZWS, MfE is also currently working on a review of the WMA to improve or amend provisions and consider new provisions. The provisions for use of landfill levy funds and the administrative and decision-making processes around this use will also be reviewed and improved.

As for the NZWS, consultation on possible changes took place during November/December 2021. This review will also consider whether, and how, the Litter Act (1979) could be reviewed to better integrate with and support the WMA.

The WMA has been amended by the 2021 waste disposal levy regulations, which set out the progressive increase and expansion of the landfill levy starting 1 July 2021; and supplemented by regulations banning specific items, including microbeads and plastic shopping bags.

Currently, the WMA provides for half of the revenue from the waste levy to be distributed to territorial authorities (TAs). These funds are provided pro rata, based on population, and must be spent on waste minimisation and in accordance with each authority's Waste Minimisation and Management Plan (WMMP). From April 2022, TAs are reporting on their waste levy expenditure through an online tool TAWLES.

1.9.4. Waste Disposal Levy

In April 2021. the government introduced regulation to expand the scope of the levy from Class 1 landfills to also include classes 2-4. The table below shows the timetable and rates for the new levy regime:

Landfill Class	1 July 2021	1 July 2022	1 July 2023	1 July 2024
Municipal Landfill (Class 1)	\$20	\$30	\$50	\$60
Construction & Demolition (Class 2)		\$20	\$20	\$30
Managed Fill (Class 3)			\$10	\$10
Controlled Fill (Class 4)			\$10	\$10

Table 1: Levy Rates by Fill Type and Year

The landfill levy has an impact on the quantity of material going to the different destinations; however, the extent to which this occurs, and for which materials, depends on a number of other factors. The potential impacts are explored further in Appendix 10.3.3.

1.9.5. Emissions Trading Scheme (ETS)

Since 2013, Class 1 landfill owners have been required by the Climate Change (Emissions Trading) Amendment Act 2008 to surrender emission units to cover methane emissions. If any solid waste incineration plants are constructed, this act would also require emission units to be surrendered to cover greenhouse gas emissions from the incineration of household wastes.

The number of emissions units that needs to be surrendered is based on a calculation of how much methane is generated from a tonne of waste. As a starting point, landfills use a default emissions factor for waste. This is the methane assumed to be generated by each tonne of waste and is currently set at 1.19 tonnes of CO_2e (CO_2 equivalent) per tonne of waste. However, landfill operators can reduce their liabilities under the ETS through use of a unique emissions factor. The UEF is a calculation of methane released by the specific landfill. This can be done by either capturing the methane that is generated or showing (based on the type of waste going into the landfill) that the landfill generates a different amount of methane to the default.

The other component of the calculation of a landfill's liability under the ETS is the price of carbon. The price of carbon has been increasing steadily for the last couple of years, due largely to changes made to the types of offsets that are eligible under the ETS. The implications of the ETS and carbon prices are explored further in Appendix 10.3.8. This scheme does not apply to the Kawerau capped landfill.

1.9.6. International Commitments

New Zealand is party to the following key international agreements:

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

1.9.7. National Projects

A number of national projects are underway, aimed at assisting TAs, business and the public to adopt waste management and minimisation principles in a consistent fashion.

1.9.8. National Waste Data Framework Project

The first stage of the National Waste Data Framework (NWDF) project, led by WasteMINZ, was funded by a grant from the Waste Minimisation Fund. The development of the NWDF took the following form:

- A staged development approach, focusing initially on the most important elements while also setting out a clear 'upgrade' path to include other elements.
- The first stage of the Framework (which has been completed) includes data on waste disposed of at levied disposal sites (Class 1 landfills) and information on waste services and infrastructure as well as other areas where practicable.
- Subsequent stages of the Framework will include more detailed data on diverted materials and waste disposed of at non-levied disposal sites.

The first stage of the Framework is complete. WasteMINZ is now working on the implementation phase. The Framework will only be successful if it is widely adopted and correctly applied. The implementation report clearly sets out a range of options to move the Framework forwards.

The Council intends to be a part of the implementation of the NWDF by using the categories and terminology of the Framework in the Waste Assessment and the forthcoming WMMP.

1.9.9. National Standardisation of Colours of Bins

In October 2015 WasteMINZ, the Glass Packaging Forum, and councils around New Zealand agreed on a standardised set of colours for mobile recycling and rubbish bins, crates and internal office bins. Companies wishing to implement nationwide recycling schemes are strongly encouraged to use these colours both for their bins and also on their signage. This will ensure that the colours used are consistent with both public place recycling and household recycling. The recommended colours are:

For bin bodies:

For 240 litre and 120 litre wheeled bins, black or dark green should be used. These colours maximise the amount of recycled content used in the production of the bins.

For bin lids, crates and internal office bins:

- Red should be used for rubbish
- Yellow should be used for commingled recycling (glass, plastic, metal and paper combined)
- Lime green should be used for food waste and food waste/garden (referring to green) waste combined; noting that food waste-only collections are strongly encouraged to use a smaller bin size than combined food and garden collections.
- Dark Green should be used for garden waste.
- Light Blue should be used for commingled glass collections (white, brown, green glass combined).
- Grey should be used for paper and cardboard recycling.

1.9.10. Rural Waste Minimisation Project

The Kawerau District does not have rural areas.

1.10. LOCAL PLANNING CONTEXT

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

1.10.1. Long Term Plan

A key part of the Long Term Plan (LTP) is the vision that has been set for the Council. Our vision is:

"Working towards zero waste to landfill"

Key objectives:

- To minimise the potential for harm to human health and the environment.
- To reduce the volume of waste going to landfill, primarily by increasing the amount of material diverted into the recycling and green waste collections.

Council aims to achieve this by:

- Increasing information provision and community education.
- Encouraging businesses to recycle more of their waste.
- Council will also keep abreast of new developments and investigate the use of new technology, which may reduce the volume of waste from the district going to landfill.

1.10.2. Other Local Plans

KDC has a number of other plans relating to the Eastern Bay Region, which were considered when preparing this Assessment. These include:

- Establishing an Eastern Bay Regional resource recovery facility.
- Creating drop off zones for recycling in the transfer station and district.
- Commercially processing greenwaste and biosolids for composting.
- Joining Tirewise stewardship scheme.

1.11. REGIONAL CONTEXT

Bay of Plenty is one of the country's primary fruit growing regions, and also has important forestry and tourism industries. It is home to the Port of Tauranga, the country's largest and fastest growing container port, which places Bay of Plenty in a strategic position. The region has a population of approximately 324,000. The largest urban centre is Tauranga with a population of approximately 144,700 in the greater urban area. There are no other centres of significant size in the region.

The region is divided into seven TAs spread across approximately 12,200 km² of land and 9,500 km² of coastal marine area.

1.11.1. Regional Council Plans

The Regional Waste Strategy (2013 – 2023) presents a regional position on managing waste, hazardous substances, hazardous waste and contaminated sites in the Bay of Plenty. The Regional Waste Strategy has a vision of "working together towards a resource-efficient region".

The Strategy also contains six key focus areas through which the vision and associated goals will be achieved:

- 1. Foster collaboration, partnerships and promote forward planning
- 2. Improve data and information management
- 3. Review regulatory environment governing waste
- 4. Increase resource efficiency and beneficial reuse
- 5. Reduce harmful impacts of waste
- 6. Stimulate research and innovation.

The Waste and Resources Advisory Group (WRAG) has been established to support progress within these six focus areas, and to manage a small annual publicly contestable funding round.

1.11.2. Cross-Regional Collaboration

The Bay of Plenty and Waikato regional councils are working together on a number of pan-regional collaborative projects that have been identified as priority actions by the constituent councils. The areas of collaborative work include:

- Waste assessments and waste management and minimisation planning
- Solid waste bylaws, licensing and data
- Education and communication
- Procurement
- Rural waste

Projects are currently under way for the first two of these priorities and there is also ongoing collaborative work among the constituent councils of the two regions on rural waste, tyres and education and communication.



Figure 1: Map of Region and Territorial Authority Areas

1.12. REVIEW

The WMA requires every TA to complete a formal review of its existing waste management and minimisation plan at least every six years. The review must be consistent with WMA sections 50 and 51. Section 50 of the WMA also requires all TAs to prepare a 'waste assessment' prior to reviewing its existing plan.

The waste assessment and waste minimisation management plans will also be reviewed if significant changes to Council, Central or Regional government direction occurs.

1.13. LINKS TO OTHER MANAGEMENT DOCUMENTS AND PLANS

The waste assessment is the essential precursor to developing the waste minimisation and management plan. The WA drives the priorities, strategies, plans and actions in the WMMP.

Other Council documents that pertain to this strategy are:

- Significance and Engagement Policy
- Climate Change Policy
- Procurement Policy
- Transfer Station Site Management Plan
- The Reserves Management Plan
- The Kawerau District Plan
- Waste Water Asset Management Plan
- Waste Water Treatment Plant Site Management Plan

- Climate Change Management Plan / Strategy •
- Infrastructure Strategy •
- Long Term Plan Annual Plan •
- •

SECTION TWO Kawerau District



2.1. OVERVIEW

The Kawerau District, in the Bay of Plenty region, has a total area of 2194 hectares and an estimated population of 8000 (2024 estimate). The whole district is urban and consists of the town of Kawerau, and all the residents of the district live in the town. The district population is considered stable and there is not significant change in population expected in the short term.

The district economy is based on the forestry and wood processing sector and supporting engineering industries. Industrial activity is concentrated at a large industrial site outside town. The significant industries deal with their own waste. Kawerau is located in close proximity to Whakatāne and residents of the two districts travel across boundaries for employment, shopping, recreation and other activities.

The urban nature of the Kawerau District and the independence of the significant industries mean that waste management is relatively straight forward for the Kawerau District Council (KDC). The physical and social relationship with Whakatāne means waste management here is affected by related decisions and practices in Whakatāne.



Figure 2: Map of Region and Territorial Authority Areas

2.1.1. Geography

Kawerau is located centrally in the Eastern Bay of Plenty. The District has a land area of 21.9 km², making it the smallest territorial authority in New Zealand in terms of land area. It is completely surrounded by the Whakatāne District.

The 820 m volcanic cone of Mount Edgecumbe/Putauaki lies 3 km to the east of Kawerau, and is easily visible from the town. The Tarawera River straddles Kawerau to the east and continues north to the Bay of Plenty.

Kawerau has access to vast geothermal resources. There are a number of geothermal hot springs in the surrounding bush owned and operated by local lwi. The Kawerau geothermal field provides steam power for the paper mill, and several geothermal power stations.

2.1.2. Climate

Kawerau enjoys hot summers and mild winters. During summer (December to February) the average daily maximum temperature is a pleasant 23.7 degrees Celsius, and temperatures commonly reach more than 30 degrees Celsius. On some days Kawerau is the hottest place in New Zealand.

Rainfall is spread fairly evenly through the year.

2.1.3. Demographics

The population of the Kawerau District has been relatively static, showing a slight decline between 2006 to 2013, however the population has increased by 11% since 2013. Over the long term the district's population has varied between 6000 and 8000 residents and is not expected to vary beyond this range for the considerable future.

Table 2: Kawerau Population

Population	2006	2013	2018	2023
Kawerau	6921	6363	7146	7910

Table 3: Key Demographic Indicators

Occupied private dwellings	2511
Unoccupied private dwellings	222
Dwellings under construction	12
Privately held home ownership	59.7%
Property held in trust	5.4%
Property not owned or held in trust	34.8%

Kawerau has a high population of Māori with 61.7% identifying as Maori or part-Maori as of the last census. Those identifying as European or part-European made up the second largest ethnic group at 52.3%. Kawerau has an aging population with an above average population of residents in the 45 to 85 years age group.



Figure 3: Age and sex of Kawerau residents

2.2. ECONOMY

Kawerau economy is growing as is evident from the increased new dwellings consented, a substantial increase in the value of all new buildings consented and an increased number of building alterations consented.

The Kawerau economy is dominated by the processing / manufacturing sector, which accounts for 60% of total district GDP. Wood and paper product manufacturing in turn dominates the sector, accounting for over 80% of total processing / manufacturing GDP and employment in the district. Total district employment in the processing / manufacturing sector last year stood at 50% of all Kawerau employment. The local wood and paper product sector, is supported by a specialised and growing machinery and equipment industry, which most recently employed some 365 persons in comparison to previous years.

The Kawerau District Council's Economic Development Strategy emphasises its excellence in wood processing, supported by a highly skilled and internationally competitive engineering and maintenance service industry cluster.

The district is experiencing a proliferation in energy generation and direct heating capability, wood processing, waste disposal and utilisation, and niche manufacturing. The GDP per Capita for Kawerau is still relatively high.

SECTION THREE Waste Infrastructure



3.1. SOLID WASTE FACILITIES

The facilities available in KDC area are a combination of those owned, operated and/or managed by the Council, and those that are owned and/or operated by commercial entities or community groups.

This inventory is not to be considered exhaustive, particularly with respect to the commercial waste industry as these services are subject to change. It is also recognised that there are many small private operators and second-hand goods dealers that are not specifically listed. However, the data is considered accurate enough for the purposes of determining future strategy and to meet the needs of the WMA.

3.2. DISPOSAL FACILITIES

In 2021, MfE adopted regulations to extend the landfill levy and apply information requirements to facilities that do not pay the landfill levy. These regulations also established legal definitions for disposal facilities. Previously, disposal facilities had been categorised according to the 2016 Waste Management Institute of New Zealand (WasteMINZ) Technical Guidelines for Disposal to Land. As there are differences, albeit slight, between the two; the legal definitions take precedence. The definitions of the six classes of disposal facilities in the regulations are summarised below

Class 1 - Municipal Landfill / Disposal Facility

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

Class 2 – Construction & Demolition Landfill / Disposal Facility

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

Class 3 & 4 – Managed or Controlled Fill Disposal Facility

A Class 3 landfill accepts managed fill materials. These comprise predominantly clean fill materials, but may also include other inert materials.

A Class 4 landfill accepts material from earthworks or site remediation soils with chemical contaminants at concentrations greater than local natural background concentrations.

Class 5 - Cleanfill

A cleanfill is a landfill that accepts only cleanfill where chemical contaminants do not exceed local natural background concentrations.

Class 6 – Industrial Monofill

A class 6 industrial monofill accepts material that discharge or could discharge contaminants or emissions. Material must be generated form a single industrial process such as pulp and paper making fibres.

The actual wording used in the regulations and examples of types of waste accepted at each facility is provided in Appendix 10.2.

The regulations also define a transfer station as a facility that receives waste and where waste is then transferred to a final disposal site or for further processing. Significantly, if a site does not accept waste that is then transferred to a final disposal site (i.e. residual waste), it is not a transfer station (but is instead a recycling drop-off site or similar) and isn't required to report data.

3.2.1. Class 1 Disposal Facility

There are no operating Class 1 landfill disposal facilities (as defined above) in the Kawerau District. All waste is currently transported to Tirohia Landfill in Hauraki District. There are a number of other landfills that are a similar distance (or closer). The table below lists the landfills that could feasibly receive municipal waste from the Kawerau District.

Name & Owner/Operator	Description	Location	Capacity and Consent
Tirohia Landfill, Waste Management NZ Ltd	Non-hazardous residential, commercial and industrial solid, compostable & special wastes.	Hauraki District	4 million m ³ Consented to 2035
Rotorua District Landfill, Rotorua District Council	Non-hazardous residential, commercial & industrial waste.	Rotorua District	Consented to 2030 Mothballed.
North Waikato Regional Landfill, EnviroNZ Ltd	Non-hazardous residential, commercial and industrial solid waste, including special wastes.	Waikato District	Consented to 2030
Whitford Landfill, Auckland Council	Non-hazardous residential, commercial & industrial waste.	Auckland	4 million m ³ Consented to 2030
Taupo District Council, Taupo District	No gas capture system in place.	Taupo	Consented to 2027.
Tokoroa Landfill. South Waikato District Council	Municipal waste landfill. Landfill and recycling drop-off. No gas capture system in place	South Waikato District	Consented to 2030
Waitomo District Landfill, Waitomo District Council	No gas capture system in place	Waitomo District	Consented to 2030

Table 4: Class 1 la	andfills accessible from	Kawerau District
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Kawerau District Council owns a landfill for which consents are still current. The landfill is no longer used however, as the consent requires the site to be lined for continued use. Lining the site would incur significant cost. To operate the landfill at a reasonable cost per tonne, residual waste would need to be brought into the district. As this would be contrary to Council's Zero Waste philosophy, waste is transported out of district and Council works on reducing quantities.

Tirohia landfill has been operated by Waste Management Ltd since the end of 2016, and is consented until 2035. However, at current rates of fill it may reach capacity within the next ten years.

The distance to disposal facilities and the resulting high cost of disposal has been a driver for KDC to reduce waste to landfill. The prospect that the current disposal facility used by the district may reach capacity within the term of the next WMMP suggests that disposal options should be considered further in KDC's planning.

3.2.2. Closed Landfills

There are three closed landfills in Kawerau and neighbouring districts listed in the table below:

Local Authority	Location	Date closed
Ōpōtiki District Council	Woodlands Landfill	2004
Kawerau District Council	Dump Road	2006
Whakatāne District Council	Burma Road	2008

Table 5: Closed Landfills

3.2.3. Class 2-5 Landfills

The Bay of Plenty Regional Council 2008 Regional Water and Land Plan defines cleanfills as a permitted activity, as long as the operation of these cleanfills is in line with the Ministry for the Environment's Cleanfill Guidelines. There are no formal reporting requirements for these cleanfills, nor are they monitored on a proactive basis.

For this reason, and because few of these cleanfills are open to the public and many are temporary or short term associated with roading projects, it is very difficult to list these fully.

There are three landfills in the region consented as class 2-5 landfills. They accept materials that are free of hazardous, leachable or materials that may present a risk to human or animal health such as asbestos and similar materials.

The class 2-5 landfills are listed in the table below:

Facility	Location	Capacity	Materials and Charges
Waiotahi Contractors	Woodlands Road, Whakatāne	Consented to 2032 10 000 tpa	Soil, rock, concrete, brick, untreated timber and greenwaste.
Jack Show	Tauriko	Consented to 2030 Unknow capacity	Cleanfill, greenwaste and construction materials
Addisons	Welcome Bay, Tauranga	Consent expired 2019	Cleanfill, greenwaste and construction materials

Table 6: Consented Class 2-5 Landfills

Class 2-5 landfills are much less costly than Class 1 landfills to establish and require much lower levels of engineering investment to prevent discharges into the environment. Class 2-5 landfills also have much lower compliance costs than Class 1 landfills.

Class 2 disposal facilities are required to pay the levy at a rate of \$40 per tonne and Class 3 and 4 disposal facilities are required to pay \$10 per tonne. True Class 5 disposal facilities are not required to pay the levy, but do need to report on quantities.

Demolition material that is not able to be cleanfilled is taken to Tirohia for disposal. There is an estimated 50-100 tonnes of Kawerau demolition material taken to landfill annually.

3.2.4. Transfer Stations

Refuse Transfer Stations (RTS) provide for those that can't or choose not to make the journey to a landfill. Waste and recoverable materials can be dropped off at these sites by the public and commercial operators. Waste disposed of at the RTS attract a gate fee, with differential charges depending on the proportion of material that is recyclable or recoverable. Loads with 100% recyclables attract the lowest charge, while those with 100% residual waste attract the highest charge.

Facility Description	Operation	Hours	Materials accepted
Council Refuse Transfer Station Dump Road, Kawerau	Operated by Kawerau District Council	Monday – Sunday 12.00pm – 4.00pm	All recyclable and recoverable materials, household and hazardous waste

Table 7: Transfer Station in the Kaw	verau District
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Once general waste is deposited at the RTS, the waste is bulked for transport to landfill.

3.2.5. Assessment of Residual Waste Management Infrastructure

While there are alternative disposal sites available that are a shorter journey than Tirohia, these are mainly smaller council-owned facilities which have much higher gate fees than Council currently pays at Tirohia, and therefore while the transport cost may be slightly lower, the overall cost would be higher.

The relatively low cost of disposal to sites other than a Class 1 landfill will drive residents' and commercial operators' behaviour in determining where to dispose of material, and this may limit Council's options in using disposal prices as a mechanism to drive more preferable waste management practices. Increasing disposal prices could have the result of simply driving more waste to Class 2-5 disposal sites rather than incentivising recovery.

3.3. HAZARDOUS WASTE FACILITIES AND SERVICES

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

- Organic liquids, such as those removed from septic tanks and industrial cesspits
- Solvents and oils, particularly those containing volatile organic compounds
- Hydrocarbon-containing wastes, such as inks, glues and greases
- Contaminated soils Chemical wastes, such as pesticides and agricultural chemicals
- Medical and quarantine wastes
- Wastes containing heavy metals, such as timber preservatives
- Contaminated packaging associated with these wastes.

Most disposal is either to Class 1 landfills or through the trade waste system or are exported.

The collection and disposal of hazardous wastes is contracted out as required.

3.3.1. Medical Waste

KDC supplies medical waste bins to households that request it. This is collected by Waste Management for disposal at landfill.

3.4. WASTE WATER TREATMENT

The Kawerau Waste Water Treatment Plant (WWTP) is a chemical processing plant and produces screened solid waste and chemically precipitated bio-solids. Screened solids are dried and landfilled. Bio-solids are vermicomposted at the WWTP rapid infiltration basin (RIB) site alongside greenwaste. The product from this facility is used to improve soil on land and to remediate landfill capping.

3.5. RECYCLING AND REPROCESSING FACILITIES

There are a number of waste processing and recycling facilities available in the region or in neighbouring regions. The main applicable facilities are listed below and there are many other smaller facilities and providers. The quantity of waste recycled at each facility is unknown.

Facility	Description
Kawerau Rapid Infiltration Basins	Processing of greenwaste and bio-solids, Kawerau
O-I NZ Ltd	Process colour-sorted glass, Auckland
MetalCo	Metals recycling, Whakatāne
Oji Fibre Solutions	Paper and some cardboard, Kinleith
Envirofert	Green and putrescible wastes into soil amendments, Tauranga
EcoCast	Green and putrescible wastes into soil amendments, Kawerau
MyNoke Ltd	Green and putrescible wastes into soil amendments, Kinleith
Resene PaintWise Collection	Paint and paint containers, Tauranga.
Agrecovery	Agrichemicals and empty containers, Edgecumbe.
CREW	E-waste and other reusable items, Whakatāne
Reclaim	Plastics grade 1 and 2, & baled cardboard, Auckland

Table 8: Recycling and Reprocessing Facilities

KDC collects plastic, paper, cans and cardboard as part of its recycling collection service. The materials collected are relatively cleaner and less contaminated, because it is collected by hand and not via comingle bins. KDC does not sort and compact plastic, paper, cans and cardboard for resale. These recyclables are transported and disposed of at the Tauranga Waste Management resource recovery facility.

SECTION FOUR Waste Services



4.1. COUNCIL PROVIDED WASTE SERVICES

A range of services are provided by Council to residents and businesses in the district.

4.1.1. Council and Council contracted Collection Services

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

Table 9: Council and	Council contracted	Collection	Services

Service	Provision	Service Provider
Residential waste collection 80/60L mobile garbage bins (MGBs)	Weekly 2710 customers	Waste Management Ltd under contract to Council
Recycling collection 60L recycling crates	Weekly 2910 customers Plastics 1 & 2, metal cans, paper, and cardboard	Operated by Council
Green waste collection 240L mobile garbage bins	Fortnightly 2900 customers	Waste Management Ltd under contract to Council
Kawerau Transfer Station	Operation of refuse and recycling drop off facility	Operated by Council
Waste transfer	Cartage of residual waste from Kawerau to Tirohia	Waiotahi Contracting contract to Council
Disposal	Landfilling of residual waste	Waste Management contract
Hazardous waste	Waste collected by Waste Management	Waste Management contract
Fly Tipping	Removal from public spaces	Council and various providers on behalf of Council
Litter removal from 60L litter bins or public spaces	Removal from litter bins and MGBs in public spaces	Council and various providers on behalf of Council
Recycling transfer	Cartage of recycling from Kawerau to Tauranga	Waiotahi Contracting contract to Council

4.1.2. Council and Council contracted Reprocessing Services

Council process council collected greenwaste at its composting facility at the Rapid Infiltration Basins (RIBs) site at the wastewater treatment plant (WWTP). This is a discretionary activity and does not hold a resource consent. Collected greenwaste is mulched, composted and screened. The resulting product is used in Council owned gardens and sportsfields.

Council similarly process biosolids produced at the WWTP at the RIBs under resource consent 67265.

4.1.3. Waste Education and Minimisation Programmes

Council provides a range of communication and education initiatives to inform ratepayers, schools and services users of the available waste services and to promote waste minimisation. Key communication and education initiatives that Council supports include:

- Kerbside Recycling Collection What how and when to recycle
- Sorting of rubbish correct bin assignment of waste
- Greenwaste composting is how not to contaminate it
- Paper4Trees

KDC has communicated this messaging via:

- Print Advertising in the newspaper (Beacon)
- Online via Council website kaweraudc.govt.nz
- Online via Council Facebook page
- Council Community Update, a weekly newsletter delivered to all residences in Kawerau.
- Media Releases to the Radio 1XX and SunFM radio stations

4.1.4. Solid Waste Bylaws

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

- management of litter and illegal dumping under the Litter Act 1979
- trade waste requirements
- Solid Waste related bylaws.

Council has adopted a Solid Waste Bylaw which allows Council to make adequate provision for waste and recycling, and to give Council the ability to introduce controls around construction and demolition waste plans.

All KDC Solid Waste related Bylaws are being reviewed in order to be consistent with the requirements of the KDC WMMP.

4.1.5. Litter Control, Street, Stream and Park Cleaning

Litter collection, street cleaning and park cleaning is undertaken by Council. Stream cleaning is undertaken by Council staff, contractors and local community volunteer groups.

4.1.6. Public Litter Bins

Council has installed street litter bins throughout town. Bins have been provided, in and around reserves and dog walking trails. These bins are designed specifically to limit the size and type of rubbish deposits. Council staff cleaners empty bins on a daily basis.

4.1.7. Abandoned Vehicles

Management of abandoned vehicles is undertaken directly by the Council, whom will collect and store the vehicle, identity the owner and recover costs.

4.1.8. Street Cleaning

Council employs contractors to sweep the local and state highway routes throughout the district.

4.1.9. Hazardous Waste

Hazardous waste and Asbestos is not accepted at the transfer station.

4.2. ASSESSMENT OF COUNCIL PROVIDED SOLID WASTE SERVICES

The capacity allowed for each household in the kerbside recycling collection is reasonable, compared to the quantity of recyclables that each household is likely to have. For example, previous audit data shows that the average household can have around 2kg per week just of plastic bottles such as milk and soft drink bottles. Unless very well compacted, these will take up the majority of the 45L crate provided. Paper and cardboard can be left beside the crate.

Unfortunately, providing larger bins would increase the volume of waste being collected and decrease the amount of separation for recycling. Additionally, recycling bins creates opportunities for contaminating recyclables because it is easier to hide amongst recycling. Limiting the size of bins and crates, conditions customer behaviour.

4.3. ASSESSMENT OF NON-COUNCIL WASTE SERVICES

There are a number of non-Council waste and recycling service providers operating in the district.

Operator	Services	Location
Handee Can Services	Commercial Waste Collection Skip bins and FEL bins	Whakatāne
Blue Rock Contractors	Commercial Waste Collection Skip bins and private wheeled bins	Whakatāne
Waste Management	Commercial Waste Collection Skip bins and private wheeled/FEL bins	Whakatāne
Foote Bins	Commercial Waste Collection Skip bins and private wheeled/FEL bins	Kawerau

Table 10: Non-Council waste services

SECTION FIVE Situation Review


5.1. WASTE TO CLASS 1 LANDFILLS

5.1.1. Definitions used in this Section

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

5.1.2. Overview of Waste to Class 1 Landfills

Since the closure of local landfills, Council has disposed of all non-cleanfill solid waste out of the district. Municipal solid waste from kerbside collections and transfer station is sent to Tirohia Landfill in Hauraki District, which is approximately 200 km from Kawerau.

It is not known where privately collected material is deposited, but it is assumed that this would mostly go to either the transfer station in Kawerau or Whakatāne (which also sends its waste to Tirohia for disposal).

5.1.3. Waste to Class 1 Landfills

During April 2019 - 31 March 2020, 4008 tonnes of waste was disposed of at Tirohia landfill. This consisted of waste sent to landfill from the transfer station, kerbside refuse collection, privately collected waste, demolition waste and medical waste.

Waste volumes for the 2019 – 2020 period decreased by 225 tonnes when compared to the same period for 2018 – 2019. This is illustrated in *Figure 4:* below. Waste volumes between 2020 and 2024 have been stable between 350 and 400 tonnes per month and 4281 tonnes of waste was disposed in 2023-2024.



Figure 4: Waste to Landfill volumes

5.1.4. Other Waste Disposal to Land

No other solid waste is disposed to land in the District. Greenwaste, biowaste and construction waste is temporarily placed on land while being processed, however are not permanently disposed.

Liquid waste generated by the Council WWTP containing up to 80 mg/litre solids are disposed to the RIBS under resource consent 65081.

5.1.5. Activity Source of Waste

In Kawerau, the majority of waste to landfill is collected at the transfer station and only a third of landfill waste is collected from residences through the contracted collection service. For the period 1 July 2023 – 31 June 2024, 2,627 tonnes of landfill waste was collected at the transfer station from residents and commercial customers.

All council collected waste from public bins, fly tipping and any other Council produced wastes such as non-recyclable old water pipes or non-compostable plant material is also collected at the transfer station.

Due to the relative low disposal fees at the Kawerau transfer station, there is also a significant contribution from out of district customers. It is not possible to quantify the fraction of out of district waste to landfill as non-commercial customer's details are not recorded.

The kerbside collected landfill waste for the same period was 1,654 tonnes.



Figure 5: Source of Waste to Landfill fractions

5.1.6. Composition of Waste to Class Landfills

In June 2005, a sample of domestic kerbside refuse was collected from 165 Kawerau District Council wheelie bins. The sample, with a total weight of 1,205kg was sorted into 20 categories, using a methodology consistent with Section 4.5 of the Ministry for the Environment's Solid Waste Analysis Protocol (SWAP). This analyses was used to drive the development recycling services in Kawerau. This analysis has not been repeated and recycling services were introduced. Therefore, no composition data is available for all residential waste from the Kawerau District.

However, it is fair to expect that Kawerau resident waste behaviour will be similar to the NZ average and therefore estimates of composition of kerbside waste have been made based on existing national Solid Waste Analysis Protocol (SWAP) data. The composition is presented in this section using the 12 primary classifications in the SWAP with putrescible waste divided into kitchen waste and green waste.

	% of total	Apportioned Tonnes
Paper	10.6	131
Plastic	11.5	142
Organic	48.5	599
Ferrous metal	3.0	37
Non-ferrous metal	1.0	12
Glass	3.0	37
Textiles	3.7	46
Sanitary	13.6	168
Rubble	2.6	32
Timber	1.1	14
Rubber	0.5	6
Potentially hazardous	1.0	12
TOTAL	100%	1,235

Table 11: Estimated Composition of Waste to Landfill – Kerbside waste

Almost half the waste produced is organic and a significant fraction is disposable nappies and similar sanitary products. The fraction of plastic is generally heavily contaminated or of classes that are difficult to recycle. It is not considered worth the effort in both cost and potential health and safety risk to attempt to recover some of the potential recyclable materials form the waste to landfill stream.

The largest fraction of landfill waste is collected at the transfer station and has a very different profile to the kerbside collected refuse. The exact fractions have not been determined for all the waste classes. However, for example the timber fraction in waste delivered to the transfer station is 5.5% versus the kerbside collected fraction of 1.1%. Significant household objects such as furniture and non-reprocessable demolition waste (window frames, cladding etc.,) are also only disposed at the transfer station. This means the 'organic' and 'sanitary' classes presents much smaller fractions of the eventual composition of the waste to landfill.



Figure 6: Source of Waste to Landfill volumes

5.2. DIVERTED MATERIALS

5.2.1. Overview of Diverted Materials

All materials that can be cost effectively reprocessed or recycled are diverted from landfill.

Plastics classes 1 and 2, glass, metal cans, paper and cardboard are collected through kerbside collection and at the transfer station.

Compostable greenwaste is diverted to greenwaste processing facilities at the transfer station and the WWTP RIBs.

Demolition waste that can be crushed and used as roading metal are diverted at the transfer station

All clean soil and mulch are collected, stored and sold at the transfer station. Approximately 650 tons of soil was received and sold at the transfer station in the 2023-24 financial year.

The demand for processed demolition waste, clean soil and mulch currently exceed the supply.

Household whiteware are collected at the transfer station where it is collected by scrap metal dealers.

The recyclable materials plastics classes 1 and 2, glass, metal cans, paper and cardboard are collected through kerbside collection and at the transfer station. The collected plastic, paper and cardboard are sent for further sorting and eventual processing as a co-mingled waste stream.



Figure 7: Composition of Kerbside Recycling

The metal cans and other recyclable metal products are collected by scrap metal dealers. Glass is sorted into colours and sold to glass smelters. The diverted recyclable materials are listed in the table below:

	% of total	Tonnes
Paper	9%	65
Plastic	4%	29
Glass	54%	380
Metal	19%	135
Cardboard	14%	12
TOTAL	100%	621

Table 12: Recycling material diverted from Landfill

5.2.2. Processing

Greenwaste

Greenwaste collected within the district via kerbside collection or transfer station is stockpiled for mulching and composting. Approximately 1000 m³ of greenwaste is collected every year.

The composted material is screened and the resulting product is used by Council Parks and Reserves teams in Council owned gardens and sports fields.

The majority of greenwaste is dropped off at the transfer station and only about a quarter of greenwaste is collected through the kerbside collection service.

There is significant contamination in the greenwaste, primarily in the kerbside collected greenwaste and as such, the product quality produced by the greenwaste processing facility is too low to be sold to the public or commercial customers.

Actions are being developed in the WMMP to decontaminate greenwaste.



Figure 8: Sources of Council collected Recycling

Bio-Solids

Council process biosolids produced at the WWTP at the RIBs under resource consent 67265. Approximately 1200 tons of biowaste is processed every year. The resulting product is to be blended with other compost produced from the greenwaste processing facility and used by Council Parks and Reserves teams in Council owned gardens and sports fields.

Concrete

Council accepts clean concrete and other demolition waste at the transfer station as long as it is free of asbestos and other hazardous materials and contains steel reinforcing less than 6 mm.

Council process concrete and other demolition waste by crushing it into roading metal. In the 2023-24 financial year, approximately 816 tonnes of concrete was crushed. All produced roading metal was used by Council and customers.

SECTION SIX Performance Measurement



6.1. CURRENT PERFORMANCE MEASUREMENT

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

6.1.1. Per Capita Waste to Class 1 Landfills

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

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

By combining Statistics NZ population estimates and the Class 1 landfill waste data, the per capita per annum waste to landfill is reflected in Table 13 below. The estimate includes special wastes but excludes non-levied clean fill materials.

Table 13: Waste Disposal per Capita – Kawerau District

Calculation of per capita waste to Class 1 landfills		
Population (Stats NZ 2023 Census)	7,800	
Total waste to Class 1 landfill (tonnes 2023-2024 year)	4,281	
Tonnes/capita/annum of waste to Class 1 landfills	0.549	

The waste disposal per capita metric was compared to other Districts in Table 14.

Overall waste to landfill	Tonnes per capita per annum
Gisborne District	0.305
Waimakariri District	0.311
Westland District	0.331
Carterton/Masterton/South Wairarapa	0.352
Ashburton District	0.366
Tauranga and WBoP District	0.452
Napier/Hastings	0.483
Southland region	0.500
Wellington City & Porirua City	0.507
Christchurch City	0.524
Taupo District	0.528
Kawerau District Council	0.549
Kāpiti Coast District	0.584
Wellington region	0.608
New Plymouth District	0.664
Hamilton City	0.668
Queenstown Lakes District	0.735
Rotorua District	0.736
Auckland region	0.800
Upper Hutt City & Hutt City	0.874

Table 14: Per Capita Waste to Class 1 Landfills Comparison

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

Kawerau sits near the middle of the table as it has significant industry in its borders and is a fully urban area.

6.1.2. Per Capita Domestic Kerbside Refuse to Class 1 Landfills

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

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

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

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

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

The disposal rate of domestic kerbside refuse for district has been calculated to be 179 kg per capita per annum in 2023-2024 year.

Table 15 compares the per capita rate of disposal of kerbside refuse in district/city with other urban areas in New Zealand. Data for the other districts has been taken from SWAP surveys conducted by Waste Not Consulting.

District	Kg/capita/annum	Comment
Christchurch City	110	Fortnightly 140-litre refuse wheelie bin. Weekly organic collection
Auckland Council	160	Range of legacy council services.
Kawerau District Council	179	60L weekly collection
Hamilton City	182	Rates-funded refuse bags, max. 2 per week
Tauranga City	183	User-pays bags in Tauranga.
Wellington region	206	Estimate based on SWAP surveys at Silverstream landfill and Kāpiti Coast
Taupo District	212	User-pays refuse bags
Hastings District/Napier City	214	User-pays refuse bags (Hastings) & rates-funded bags (Napier)
Rotorua District	216	Council rates-funded bags. No kerbside recycling service

Table 15: Per Capita Kerbside Re	iuse Disposal to Lar	ndfills Comparison
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Of the urban areas that have been assessed, Christchurch City has the lowest per capita disposal rate of kerbside refuse. This is associated with the diversion of organic waste through the council's kerbside organic collection and the council's high market share.

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

Kawerau sits near the top of the table due to its relatively inexpensive transfer station fees and urban nature of the district.

6.1.3. Per Capita Recycling

Per capita recycling rates for Kawerau District are shown in Table 16 alongside comparable rates from other council areas.

District	Kg/capita/ annum	System type
Napier City Council	52 kg	Fortnightly bags or crates
Wellington region	53 kg	Various systems
Ōpōtiki District	58 kg	Weekly crate
Ashburton District	62 kg	Weekly bags or crates depending on area
Tauranga City Council	65 kg	Private wheelie bin collection service
Invercargill City Council	69 kg	Fortnightly 240-litre commingled bin
Waipa District	73 kg	Weekly 55-litre crate
Waikato District	74 kg	Weekly 55-litre crate
Dunedin City	77 kg	Fortnightly 240-litre commingled bin
Horowhenua District	81 kg	Weekly crate
Auckland Council	84 kg	Fortnightly 240-litre commingled bin
Waimakariri District Council	85 kg	Fortnightly 240-litre commingled bin
Hamilton City Council	86 kg	Weekly 45-litre crate,
Kawerau District Council 2019-2020	86 kg	Weekly 55-litre crate
Palmerston North City	87 kg	Fortnightly 240-litre commingled bin
Christchurch	109 kg	Fortnightly 240-litre wheeled bin

Table 16:	Per Cap	ita Recycl	ling Com	parison
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While data on kerbside recycling collections is readily available, accurate and reliable data relating to the total quantity of diverted materials, which includes commercial recycling, is not available for most districts.

The current kerbside recycling collection enables householders to put out one 45L crate of recyclables each week, with paper and cardboard beside the crate. However, the average householder probably has around 2kg each week just of plastic containers – such as milk and soft drink bottles – and this alone could fill a 45L crate unless very well compacted by the householder. In practice, many households use additional containers such as cardboard boxes, plastic crates or tubs, and plastic bags to contain additional recycling that doesn't fit in to the 45L crate.

SECTION SEVEN Future Demand and Gap Analysis



7.1. FUTURE DEMAND

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

Overall population growth

- Economic activity
- Changes in lifestyle and consumption
- Changes in waste management approaches

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

The last couple of years have also demonstrated how unpredictable factors can influence demand and provision of services; with COVID-19 pandemic management making normal waste services difficult to deliver at times due to lock-downs and staffing shortages, and disaster-related wastes requiring management often with very short notice.

7.1.1. Population

As noted in section 2, the population in Kawerau is projected by Statistics NZ to decline in the future, but these projections do not take into account the potential impact of significant economic development initiatives. Revised projections suggest a 14% decrease in population over the next 20 years. For the purpose of Gap analyses, it is assumed that the population will remain stable.

7.1.2. Economic Activity

For reference, *Figure 9* below shows the growth in municipal waste in the OECD plotted against GDP and population.



Source: OECD 2001.

Figure 9: Relationship between GDP and Waste Generation

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

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

However in the Kawerau context, there is insufficient data on the total quantities of waste generated and historical GDP to conduct any meaningful analysis.

7.1.3. Changes in Lifestyle and Consumption

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

Consumption habits will affect the waste and recyclables generation rates. For example, there has been a national trend related to the decline in newsprint. In New Zealand, the production of newsprint has been in decline since 2005, when it hit a peak of 377,000 tonnes, falling to 276,000 tonnes in 2011. Further indication of the decline in paper consumption comes from the Ministry for Primary Industry statistics shown in *Figure 10*. This decline is continuing up to 2024.



Figure 10: Paper consumption per Capita

7.1.4. Changes in Waste Management Approaches

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

- Statutory requirement in the Waste Minimisation Act 2008 to encourage waste minimisation and decrease waste disposal with a specific duty for TAs to promote effective and efficient waste management and minimisation and to consider the waste hierarchy.
- Requirement in the New Zealand Waste Strategy 2010 to reduce harm from waste and increase the efficiency of resource use.
- Increased cost of landfill. Landfill costs have risen in the past due to higher environmental standards under the RMA, introduction of the Waste Disposal Levy (currently \$10 per tonne) and the New Zealand Emissions Trading Scheme. While these have not been strong drivers to date, there remains the potential for their values to be increased and to incentivise diversion from landfill

- Collection systems. In brief, more convenient systems encourage more material. An increase in the numbers of large wheeled bins used for refuse collection, for example, drives an increase in the quantities of material disposed of through them. Conversely, more convenient recycling systems with more capacity help drive an increase in the amount of recycling recovered.
- Waste industry capabilities. As the nature of the waste sector continues to evolve, the waste industry is changing to reflect a greater emphasis on recovery and is developing models and ways of working that will help enable effective waste minimisation in cost-effective ways.
- Local policy drivers, including actions and targets in the WMMP, bylaws, and licensing.
- Recycling and recovered materials markets. Recovery of materials from the waste stream for recycling and reuse is heavily dependent on the recovered materials having an economic value. This particularly holds true for recovery of materials by the private sector. Markets for recycled commodities are influenced by prevailing economic conditions and most significantly by commodity prices for the equivalent virgin materials. The risk is linked to the wider global economy through international markets.

7.1.5. Summary of Demand Factors

The analysis of factors driving demand for waste services in the future suggests that changes in demand are most likely to be driven by shifts in population and economic development. If new waste management approaches are introduced, this could shift material between disposal and recovery management routes.

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

7.1.6. Projections of Future Demand

A wide range of factors is likely to affect future demand for waste and resource recovery services and infrastructure and the influence of these is likely to vary over time. This means that predicting future demand has inherent uncertainties. Key factors in Kawerau's context are likely to include the following:

- Population growth and demographics
- Economic growth
- Recycling markets
- Local and central government policy
- Changes in lifestyles and consumption
- Community expectations
- New technologies

7.1.7. Expectations for Waste and Recycling Growth

In general, total waste volumes in Kawerau are unlikely to increase significantly in the foreseeable future. However the demand for services may change due to changes in lifestyle and community composition, and on increasing awareness of the costs and environmental impacts of waste disposal. It is unlikely that total waste volumes will decrease without intervention of some kind.

Statistics New Zealand has predicted population growth over the 25 years from 2006 to 2031, with low, medium and high growth options. The medium growth option predicts that Kawerau's population will drop over the coming years, due to net migration from the District and an ageing population. There is also expected to be a decrease in the occupancy rate from 3.5 people her household in 1986 to fewer than 2.5 people per household projected for 2021. This is a national trend, reflecting the shift towards smaller families and more people living alone.

The projections prepared by Statistics New Zealand are based on a number of assumptions, and do not take into account local and regional growth strategies. Council hopes that its economic development strategy, growth in other parts of the region and ongoing demand for living in areas with good climate and low cost accommodation will encourage the population to at least remain static and hopefully increase slightly in the future.

Furthermore, the large forestry and wood processing plants, (pulp, paper and sawmills) generate considerable quantities of waste. The industries that generate the waste are actively seeking ways to minimise the waste or use it in alternative processes (heat, electricity and biofuels), which will convert the material from waste to a useable product.

This change is being driven by the internal cost of waste disposal and the financial need to make their businesses more profitable.

7.2. GAP ANALYSIS

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

7.2.1. Waste Streams

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

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

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

7.2.2. Hazardous Wastes

Council's waste management contractor manages household quantities of hazardous wastes. Larger volumes of hazardous wastes are contracted out as required. This arrangement is functional for the present, but may need to be reviewed in light of increased demand, including how hazardous waste from farms is managed in the future.

7.2.3. Asbestos Removal

Some commonly used products that contain asbestos include roof tiles, wall claddings, fencing, vinyl floor coverings, sprayed fire protection, decorative ceilings, roofing membranes, adhesives and paints. The most likely point of exposure is during building or demolition work.

KDC does not accept asbestos at the transfer station and scrutinises all demolition waste for evidence of asbestos.

7.2.4. Medical Waste

Medicines, needles, syringes etc. can be dropped off at Medical Centres, or a local health centre. The medical waste that is collected at these sites is picked up by the District Health Board for management. There are not perceived to be significant issues with this approach at present. It is logical for the DHB to take an active role in managing medical wastes, and to ensure adequate service provision in the future. Upon application, Kawerau residents with medical conditions are issued medical waste bins. These bins are collected by Waste Management contractor for disposal to landfill.

7.2.5. E-waste

Without a national product stewardship scheme, the e-waste treatment and collection system will continue to be somewhat precarious. Currently, companies tend to cherry-pick the more valuable items, such as computers and mobile phones. As a result, the more difficult or expensive items to treat, such as CRT TVs and domestic batteries, will often still be sent to landfill.

Council accepts vehicle batteries at the transfer station and stockpiled for collection by contractors.

7.2.6. Food and agricultural organic waste

Food waste is problematic in landfills and leads to greenhouse gas emissions. Providing a food waste collection for household could therefore reduce waste to landfill as well as reduce carbon (CO2e) emissions.

The Labour government of 2021-2024 has indicated they require all councils to provide food waste collections – and also that they may offer some incentives to assist councils to introduce these services.

The requirements were set in government policy, however were not legislated and are therefore not mandatory. However it is expected that food waste collections will be legislated in future.

In anticipation of formal legislation to be passed, the Eastern Bay of Plenty Region District Councils; Ōpōtiki, Whakatāne and Kawerau District Council commissioned Eunomia Research & Consulting Ltd to perform an assessment of food collection and processing options.

Food waste collection options were developed in a series of collaborative workshops with Council staff and consultants.

Eunomia conducted a cost modelling exercise for Eastern Bay of Plenty District Councils on the likely costs and performance of kerbside food waste collections.

Additional costs to collect food waste from Kawerau residences varied from \$400,000 to \$650,000 with CO₂e reductions between 300 tons and 450 tons depending on the collection methods.

The development of a food processing facility in the Bay of Plenty region stalled and will not be available until 2028. Whakatāne, Ōpōtiki and Kawerau District Council therefore opted in August 2024 not to include food waste collection in the 2025 waste collection tenders.

The development of food processing facilities will be monitored and the collection of food waste will be reconsidered when such options become available.





8.1. REVIEW OF THE 2012 WASTE MANAGEMENT AND MINIMISATION PLAN

The last WMMP for Kawerau District was prepared in 2012. The Waste Minimisation Act requires that each Waste Assessment include a review of the last WMMP, including an assessment of data, key issues from the last WMMP, any other issues not addressed, and an update on the action plan from the last WMMP including progress.

8.1.1. Data

Although Council strives to collect data as accurately as possible, it is fair to assume that errors and omissions exist. Where information is unknown, estimates have been used based on previous SWAP and NZ Statistic data.

8.1.2. Key Issues

- How to achieve further waste reductions in a way that is affordable to the Community
- Encouraging people to recycle more and more people including businesses, to recycle, so as to reduce the volume of recyclables going into residual waste streams
- Reducing the amount of putrescible material going to landfill. (This is an issue because it has negative environmental impacts.)
- Consider options and methods to remove food waste from the waste to landfill stream.
- Finding a viable reuse option for composted green waste
- Discouraging fly-tipping

8.1.3. Other Issues not Addressed

No issues were identified, other than discussed in the last WMMP.

8.1.4. New Guidance

New guidance from MfE on Waste Management and Minimisation Planning was released in 2015. The 2012 WA and WMMP, while consistent with the guidance at the time they were written, do not fully align with the new (2015) MfE Guidance. The new guidance places more emphasis on funding of plans, inclusion of targets and how actions are monitored and reported. The 2012 documents also did not provide data in accordance with the National Waste Data Framework, as suggested by the new guidance.

8.2. ACTIONS

8.2.1. Council Role

- Develop educational material
- Retain kerbside collection
- Continue to operate transfer station
- Process residual waste for disposal to landfill
- Process recyclable materials for disposal or sale
- Improve quality of recyclable processing
- Litter collection
- Collect hazardous and e-wastes
- Work with community

8.2.2. Key Initiatives

- Improve recovery of material from residual waste
- Investigate kitchen waste collection
- Work with other councils on common initiatives
- Update solid waste bylaw 2010
- Advocate for product stewardship nationally

8.2.3. Targets

The Council set two targets for itself in the 2012 WMMP. These were:

Target 1: Reduce the volume of residual waste for disposal to landfill by 10% by 2028

Target 2: Increase the volume of recyclable materials collected at Council by 10% by 2028

The actions and targets in the plan focused around maintaining of existing operations and services and making incremental improvements. The Waste Assessment had not identified substantial strategic issues that required a significant change of direction.

8.3. IMPLEMENTATION PLAN

The WMMP implementation plan is listed in the following tables:

Table 17: Communication and Education Plan

Objective	Specific actions	Status	Implementation timeframe
Community and Council working together.	Provide information about waste services, waste prevention and waste reduction, including potential risks to the Community.	Ongoing	Ongoing – Council is lead agency
Lead waste reduction initiatives	Engage directly with the community (including businesses) and encourage a 'cleaner production' approach.	Ongoing	Ongoing – Council is lead agency
	Continue to work with schools through the 'Paper 4 Trees' programme.	Ongoing	Ongoing – Council supports financially
	Continue to build partnership working with other local councils and the regional authority.	Existing	Ongoing – Council is lead agency
	Lead waste projects, proactively offer waste minimisation advice to the community.	Existing	Ongoing

Table 18: New Ideas and Initiatives

Objective	Specific actions	Status	Implementation timeframe
Community and Council work together	Work with BOP councils advocating for a regional approach in waste facility provision by participating in Waikato and Bay of Plenty Waste Liaison Group	Existing	Ongoing
New, local initiatives and infrastructure	 Review service delivery options for collections of recycled, residual and green waste by: looking at costs level of service offered alternatives 	Existing	Ongoing – currently under review
	 Review methods of disposing of refuse delivered to transfer station by: Reviewing costs disposal options increasing recycling at transfer station 	Existing	Yearly - currently under review
	Review disposal of recycled material by:investigate how other TLAs dispose of recycling	Existing	Ongoing – currently under review
	 evaluating costs and income investigating the creation of a regional resource recovery and recycling facility 	New	WWMF application for funding
Consider	Sponsor initiatives by organisations or individuals that may reduce residual refuse	Existing	Yearly
environmental impact	Continue to take action to reduce fly tipping by:	Existing	Ongoing
Use resources more efficiently	 fencing off easy disposal points prosecuting identified offenders increasing monitoring removing rubbish quickly assessing complaints received provide additional recycling drop-off points 		
	Continue to be aware of alternatives for refuse disposal	Existing	Ongoing

Objective (s)	Specific Actions	Status	Implementation timeframe
Community and Council work together	Review other options for increasing source separation of non-household waste.	Existing	Ongoing - Council is lead agency
Use resources more efficiently	Review pricing at the transfer station facility annually to ensure true cost of residual waste disposal is recovered, and reuse/recycling is encouraged.	Existing	Completed and reviewed annually
Consider environmental impact	Increase monitoring to provide more information, especially regarding non-household waste composition, how those not using waste collection services are managing their waste disposal.	Existing	Ongoing – Council holds a monitoring role.
Use resources more efficiently	The Council will regularly review progress on this Action Plan and towards achievement of our goals, objectives and targets. Progress will also be reported annually through the Annual Plan, and regularly through Council newsletters and the website.	Existing	Ongoing - Council is lead agency
Community and Council work together Consider	Provide additional education for home composting of food and garden waste.	Existing	Ongoing - Council is lead agency
environmental impact Use resources more	Investigate how composted material can be used beneficially at no cost to Council.	Existing	Under review
en orong	Continue to monitor actions occurring outside district with green and organic waste.	Existing	Ongoing

Table 19: Monitoring and Evaluation

Table 20: Recycling

Objectives	Specific Actions	Status	Council's role
Community and Council work together	Continue the kerbside recycling collection: encourage householders to put out additional recycling.	Existing	Council is lead agency
Consider environmental impact	Recycling collection: investigate whether additional materials can be included in the kerbside recycling collection with recycled processing company.	Existing	Council is lead agency
Use resources more efficiently	Work with community (including existing private collection providers) to improve the recycling collection services available to industry and businesses.	Existing	Council is joint lead agency
	Work with business and industry to encourage more recycling and waste reduction at source.	Existing	Provide expertise to business to reduce waste
	Council is constructing drop off areas at the transfer station.	New Action	WWMF application for funding

Table 21: Hazardous/liquid/gaseous wastes

Objective	Specific actions	Status	Council's role
Community and Council work together	Continue to provide a hazardous materials, collection through its contractor.	Existing	Council is lead agency
Consider	Continue to treat Bio-solids from wastewater Ex treatment plant using vermiculture.		Ongoing
environmental impact	Provide information to residents and contractors on appropriate disposal of asbestos through newsletter	Existing	Council is lead agency
Use resources more efficiently			

8.4. PROGRESS

Most of the identified actions related to ongoing operations. These were all carried out over the term of the plan.

The key element is to review the solid waste bylaws and implement changes in 2025 and 2026.

SECTION NINE Statements



9.1. STATEMENT OF OPTIONS

This section sets out the range of options available to the Council to address the key issues that have been identified in this Waste Assessment. An initial assessment is made of the strategic importance of each option, the impact of the option on current and future demand for waste services, and the Council's role in implementing the option. Options presented in this section would need to be fully researched, and the cost implications understood before being implemented.

The following subsections outline the broad options available to Council to manage its waste in order to meet future demand.

Option	Strategic assessment	Comment and analysis of impact on future demand	Council's role
Continue to provide information about Council services	Social/Cultural: awareness of waste issues and behaviour will not change significantly Environmental: waste reduction is not encouraged to a great extent Economic: low cost option with small budget for communication	The community will not change their behaviour and therefore future demand is likely to continue on baseline predictions – i.e. waste to landfill will not significantly change,	Continue to disseminate information
Provide frequent and detailed information about waste services and waste prevention (e.g. nappy schemes, Love Food, Hate Waste) and minimisation, alongside engagement with the community, consultation processes and community leadership (e.g. waste champions, celebrating success	Social/Cultural: community will be more aware of options, more engaged in the waste management process and should take a higher level of ownership of the issue Environmental: diversion from residual waste should increase with resultant reduction in environmental impact Economic: providing more frequent and detailed information to community will require more budget within the Council. Engagement with the consultation events and Waste Focus Group meetings are relatively low cost.	Analysis of data suggests there is significant potential to reduce, reuse and recycle more waste. Zero waste philosophy supports this approach. Community should reduce their reliance on residual waste collections. Demand for recycling services will increase.	Council to produce and deliver more information, and work more closely with the community through proactive consultation processes

 Table 22: Waste reduction, communication, consultation and partnerships

Council forms a partnership with the community (including businesses) following the 'Zero Waste' philosophy to jointly make decisions regarding waste management issues, and develop initiatives and systems that involve the community and provide for more local management of waste	Social/Cultural: community will be strongly engaged in the waste management process, with a high level of ownership of the issue and increased awareness. Council will need to take the risk of working with the community on these issues rather than having sole control of decisions. However as community are involved in making decisions about waste management, any service changes should be easier to introduce and participation should be higher. Environmental: diversion from residual waste should increase above previous options with resultant reduction in environmental impact	Community should further reduce their reliance on residual waste collections. Demand for recycling services will increase further.	Council will take less of a sole-control approach to waste management issues, and will instead share decision making and risk management with the Community. The community will need to take responsibility for the decisions they are helping to make, and become more involved in delivery and participation.
	Economic: Council may need to appoint a Council officer (either as part of an existing role or a new role) to lead on waste management strategy issues and work with the community to address their waste issues.		
Investigate and establish partnership arrangements with other local Councils	Social/Cultural: greater sharing of knowledge and experience, and improved cooperation between communities Environmental: potential to establish facilities to recover materials and or energy from waste streams that Council may not have the capability to do operating alone Economic: opportunity to achieve economies of scale and enhance local economic development through enhanced local processing.	There are likely to be benefits from working closely with neighbouring authorities (in particular those with a commitment to Zero Waste), and BoPRC to establish organic waste and recycling infrastructure and to share knowledge and experience	Establishing links and communication at key levels in Council

Table 23: Organic Waste

Option	Strategic assessment	Comment and analysis of impact on future demand	Council's role
Continue existing services, with additional encouragement for home composting.	Social/Cultural: community will be more informed about garden waste options. Environmental: diversion from residual waste should increase slightly, with a resultant reduction in environmental impact.	Analysis of data shows that there is still green waste in the household residual waste stream, and the overall residual waste stream. Customers will be	Continue to provide existing kerbside collection, and add information on home composting, shredding services, and any other initiatives
	Economic: Cost of the green waste collection may reduce slightly if less tonnage is collected through the system.	more likely to divert organic waste from landfill, and manage it in ways that keeps it from the Council waste stream.	
Improve existing organic waste processing for the District that would accommodate green waste and have a market for end product – for example, contained windrow composting, or anaerobic digestion	Social/Cultural: social and cultural impacts would depend how this is implemented – e.g. a high level of community involvement would have a positive social and cultural impact. Could provide additional employment for the District Environmental: by selling the	The processing of organic waste needs to be cost effective. Material can be processed into compost but the market is weak so minimal process cost options need to be used.	Council will be required to lead any initiatives in this area.
anaeropic digestion.	end product, a valuable resource is not lost to the Environment.		
	Economic: the process needs to be self-sufficient financially so additional processing costs need to result in additional value of end product.		

Table 24: Recycling

Option	Strategic assessment	Comment and analysis of impact on future demand	Council's role
Council recycling collection – expand the range of recyclable material that can be collected from more customer groups.	Social/Cultural: no impacts identified Environmental: waste recovery would be promoted, recovery maximised and the environmental impact of waste reduced by diverting more waste from landfill Economic: more material would be recovered, and materials would be used more efficiently.	Analysis shows that there is still recyclable material in the residual waste collection stream. Increasing the range of materials in the recycling collection may increase demand for this service.	Identify further materials that could be added to the recycling collection systems. Investigate with receivers of existing recyclables if additional material types can be added to the recycling stream.
Eliminate fee at Transfer Station for recyclables.	Social/Cultural: there is a possibility of positive social impacts as financial restraint of recycling removed. May reduce fly tipping. Environmental: recycling could increase and the environmental impact of waste reduced by diverting more waste from landfill Economic: more material would be recovered, however existing fee generated from recyclables at Transfer Station would be lost, so equivalent value would need to be added to rates.	There is still recyclable material in the household residual waste stream, and also waste going direct to Transfer Station.	Council to review the fee structure at Transfer Station to encourage more recycling as part of the Long Term Plan

Table 25: Transfer Station Wastes

Option	Strategic assessment	Comment and analysis of impact on future demand	Council's role
Introduce a bylaw or other regulatory mechanism to encourage more source separation of wastes such as C&D	Social/Cultural: social and cultural impacts would depend how this is implemented – e.g. a high level of community involvement would have a positive social and cultural impact Environmental: additional recyclable or clean fill material could be diverted from the residual waste stream Economic: the construction industry may experience additional costs in separating these wastes at source	Analysis shows that there is C&D waste still going to landfill. Demand for alternative services will increase – such as C&D waste recycling and access to clean fill disposal	Council will work with the community and private sector to encourage the recycling of C&D waste
Divert more wastes at the Transfer Station through pricing tools, changed layout and more reuse and recycling options	Social/Cultural: social and cultural impacts would depend how this is implemented – e.g. a high level of community involvement would have a positive social and cultural impact	Analysis of data and experience elsewhere suggests that more waste could be diverted from landfill at the transfer station stage.	Council considers the existing fee structure is high and should provide incentive to recycle.
	Environmental: additional recyclable or clean fill material could be diverted from the residual waste stream Economic: increased diversion of waste at the transfer station would probably have additional operational costs. However reduced waste to landfill would have a positive economic benefit.	Less residual waste will need transporting to landfill disposal. Demand for various recycling and recovery facilities will increase.	Continuing to talk to users about recycling and provide best possible facilities

Table 26: Hazardous Wastes

Option	Strategic assessment	Comment and analysis of impact on future demand	Council's role
Continue to provide a collection options through its waste management contractor.	Council may wish to lead on the provision of more reuse, recycling and recovery facilities, or to work with the community and private sector to encourage the development of these services. In this area in particular, there is significant potential to work with the community (e.g. local non-profit community groups).	Tonnage of hazardous waste is relatively small and not predicted to increase. Ongoing costs should therefore remain fairly stable.	Ensure hazardous waste dropped off is disposed of appropriately. Continue to provide information about how to deal with hazardous waste to communities.
Continued disposal of Biosolids	Social/Cultural: existing treatment and disposal process meets various regulatory requirements. Environmental: the biosolids have been assessed as having low heavy metal levels. The environmental impact of disposal is minimal. Processing in to a soil improver product mitigates a large proportion of the environmental impact. Economic: cost to dispose of and process the biosolids is currently low compared to other communities	The existing treatment and disposal process of biosolids will meet future demands, meet environmental standards and is low cost.	Continue to meet environmental standards.

Option	Strategic assessment	Comment and analysis of impact on future demand	Council's Role
Council residual waste collections – continue status quo	Cultural/Social/Environmental: no new impacts Economic: the Council is currently over budget on residual waste transport and disposal costs.	Would not impact on status quo prediction of demand.	Maintain existing service arrangements
Council residual waste collections – change service configuration to further reduce the quantity of waste collected; for example reducing service frequency to fortnightly, change receptacle from bins to bags	Cultural/Social: international experience shows that residual waste collections are most successfully reduced (e.g. frequency reduced to fortnightly or container size reduced) when paired with the introduction of a food waste collection. There are other mechanisms that could reduce waste quantities collected – e.g. change from MGBs to bags or introducing user pays. This could also prompt a negative social reaction. There is potential for problems with increased fly tipping although there is little evidence to suggest this is likely to be a significant issue Environmental: reducing residual waste to landfill and encouraging more diversion of recycling will help to recover more materials and to achieve environmental goals Economic: there would be savings on residual waste collection, transport and disposal, but more would need to be spent on recycling/recovery services.	Analysis shows that a large amount of recyclables is still in the residual waste stream. Experience suggests that only restricting access to the residual waste service will change this significantly. Would reduce future service demand for residual collection but could increase demand for recycling/composting services.	Negotiate service changes and alter service delivery. Service changes could be developed in partnership with the community, or with the Council having sole responsibility.
Refuse disposal for the District – continue status quo, using transfer station and transporting out of District to landfill.	Social/Cultural: no impacts identified Environmental: ongoing transport of waste out of the District will continue to have a negative environmental impact Economic: the current fee structure comers the cost for handling, transporting and landfilling residual refuse.	Increase in prices at transfer stations could increase demand for recycling services	Maintain existing systems, and review charges at Kawerau Transfer Station to ensure full cost recovery takes place.

Table 27: Refuse collection, treatment and disposal

of hazardous facilities will to provide for osal of is waste. Council to continue to provide a facility for disposal/processing of hazardous waste.
s of Continue to seek and ion and develop re-use n waste options so more s the construction & fluctuate. demolition waste can
be recycled.

Table 28:	Measuring	and	monitoring
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Option	Strategic assessment	Comment & Analysis of impact on Future Demand	Council's Role
Status quo – occasional SWAP audits, participation surveys, and monitoring of waste flows through contracts	No new impacts	Would not impact on status quo prediction of demand.	Maintain existing service arrangements.
Increase monitoring to provide more information in certain areas, such as commercial waste composition, and waste management in rural areas, need for seasonal services. This should assist with gaining a clearer understanding of how those not using waste collection services are managing their waste disposal.	Social/Cultural: could raise awareness of waste management and alternative disposal options. Environment: if data highlights areas where additional services could be provided, localized issues addressed or certain customer groups targeted, then diversion of waste from landfill could be increased. Economic: if the above is achieved, transport and disposal costs would be reduced along with income. There may be additional costs for new programmes put in place.	There are some gaps in knowledge and understanding of the waste streams in the District. Availability of more data, and tailoring of services accordingly, could increase demand for recycling services and reduce waste to landfill. Availability of more data, assessment of, for example, complaints, unlawful disposal incidents and nuisance information and tailoring of services accordingly, could increase demand for recycling services and reduce waste to landfill.	Council to initiate and oversee research, studies and audits and feed results in to future iterations of WMMP and action plans.

9.2. STATEMENTS OF COUNCIL ROLE

9.2.1. Statutory Obligations and Powers

Councils have a number of statutory obligations and powers in respect of the planning and provision of waste services. These include the following:

- Under the WMA each Council "must promote effective and efficient waste management and minimisation within its district" (s 42). The WMA requires TAs to develop and adopt a Waste Management and Minimisation Plan (WMMP).
- The WMA also requires TAs to have regard to the New Zealand Waste Strategy 2010. The Strategy has two high levels goals: 'Reducing the harmful effects of waste' and 'Improving the efficiency of resource use'. These goals must be taken into consideration in the development of the Council's waste strategy.
- Under Section 17A of the Local Government Act 2002 (LGA) local authorities must review the provision of services and must consider options for the governance, funding and delivery of infrastructure, local public services and local regulation. There is substantial cross over between the section 17A requirements and those of the WMMP process in particular in relation to local authority service provision.
- Under the Local Government Act 2002 (LGA) Councils must consult the public about their plans for managing waste.
- Under the Resource Management Act 1991 (RMA), TA responsibility includes controlling the
 effects of land-use activities that have the potential to create adverse effects on the natural and
 physical resources of their district. Facilities involved in the disposal, treatment or use of waste
 or recoverable materials may carry this potential. Permitted, controlled, discretionary, noncomplying and prohibited activities and their controls are specified within district planning
 documents, thereby defining further land-use-related resource consent requirements for wasterelated facilities.
- Under the Litter Act 1979 TAs have powers to make bylaws, issue infringement notices, and require the clean-up of litter from land.
- The Health Act 1956. Health Act provisions for the removal of refuse by local authorities have been repealed by local government legislation. The Public Health Bill is currently progressing through Parliament. It is a major legislative reform reviewing and updating the Health Act 1956, but it contains similar provisions for sanitary services to those currently contained in the Health Act 1956.
- The Hazardous Substances and New Organisms Act 1996 (the HSNO Act). The HSNO Act provides minimum national standards that may apply to the disposal of a hazardous substance. However, under the RMA a regional council or TA may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances.
- Under current legislation and the new Health and Safety at Work Act the Council has a duty to ensure that its contractors are operating in a safe manner.

The Council, in determining their role, needs to ensure that their statutory obligations, including those noted above, are met.
9.2.2. Overall Strategic Direction and Role

Council aims to establish a measure of control over the handling of waste in the district through its solid waste bylaw. This bylaw largely focuses on the management of waste on private properties, such as accumulation and storage issues.

The bylaw also aims to protect the general public from waste creating a nuisance or annoyance or becoming a danger to health and also provides for the protection of waste collectors and the public by prohibiting hazardous materials being placed out for collection.

Council views its role in the provision of waste management services as being not only to meet its statutory obligations but to promote sustainable management of the District's resources.

Council adopted a Zero Waste approach in 1999, and this has been one of the key principles of the existing waste management plan.

Council's role in specific areas is outlined in the WMMP. It should be noted Council will ensure that public health is adequately protected in taking forward any of the proposed actions described in the statement of options.

9.3. STATEMENT OF PROPOSALS

Based on the options identified in this Waste Assessment and the Council's intended role in meeting forecast demand a range of proposals are put forward. Actions and timeframes for delivery of these proposals are identified in the Draft Waste Management and Minimisation Plan.

It is expected that the implementation of these proposals will meet forecast demand for services as well as support the Council's goals and objectives for waste management and minimisation. These goals and objectives will be confirmed as part of the development and adoption of the Waste Management and Minimisation Plan.

9.3.1. Statement of Extent

In accordance with section 51 (f), a Waste Assessment must include a statement about the extent to which the proposals will (i) ensure that public health is adequately protected, (ii) promote effective and efficient waste management and minimisation.

Protection of Public Health

The Health Act 1956 requires the Council to ensure the provision of waste services adequately protects public health.

The Waste Assessment has identified potential public health issues associated with each of the options, and appropriate initiatives to manage these risks would be a part of any implementation programme.

In respect of Council-provided waste and recycling services, public health issues will be able to be addressed through setting appropriate performance standards for waste service contracts and ensuring performance is monitored and reported on, and that there are appropriate structures within the contracts for addressing issues that arise.

Privately-provided services will be regulated through local bylaws.

Uncontrolled disposal of waste, for example in rural areas and in cleanfills, will be regulated through local and regional bylaws.

It is considered that, subject to any further issues identified by the Medical Officer of Health, the proposals would adequately protect public health.

Effective and Efficient Waste Management and Minimisation

The Waste Assessment has investigated current and future quantities of waste and diverted material and outlines the Council's role in meeting the forecast demand for services.

It is considered that the process of forecasting has been robust, and that the Council's intended role in meeting these demands is appropriate in the context of the overall statutory planning framework for the Council.

Therefore, it is considered that the proposals would promote effective and efficient waste management and minimisation.





10.1. MEDICAL OFFICER OF HEALTH STATEMENT - 2020



Bay of Plenty + Lakes Districts
Toi Te Ora Public Health

PO Box 241 WHAKATĀNE 3158

10 July 2020

Hanno van der Merwe Manager Operations and Services Kawerau District Council Private Bag 1004 KAWERAU 3169

Dear Hanno

Comment on Waste Assessment - Revision A June 2020

Thank you for the opportunity to provide comment on the June 2020 revision of the Council's waste minimisation assessment, that will then inform the Waste Management and Minimisation Plan.

Medical Officers of Health have a responsibility through their designated positions for reducing conditions within their local community, which are likely to cause disease or be injurious to health. Improperly disposed waste can lead to public health risk, for example, by encouraging vermin which carry disease, creating odour, or contaminating land and water. Good waste management and minimisation practices can reduce health risks and environmental contamination, thereby safeguarding the health of current and future generations.

Feedback has not been provided on all aspects of the Assessment, but highlights areas I would like to see the Council keep in mind as develops the Waste Management and Minimisation Plan.

Organic waste

Organic waste forms a significant part of the waste stream and has high potential for creating public health issues. Food waste from households and businesses is highlighted as being a significant part of the waste stream (Section 10.2) while section 10.6 identifies the effectiveness of pairing food waste collection with reduced collection frequency or container size, in reducing residual waste collections. Diversion of food waste should be a high priority area.

Options in the Assessment for diverting organic waste from landfill include encouraging home composting by <u>subsidising</u> home composting bins or increasing the inclusion of food waste into green waste collection. I would encourage the Council to engage with the community and

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bther councils to identify and explore the acceptability of a range of other options for reducing the quantity of organic waste going to landfill.

Inappropriately designed and implemented systems for reducing organic waste can lead to public health problems. Organic waste is odorous by nature, with a high potential to be offensive, and attract rodents, flies and other pests. Other risks exist, for example composting can expose the operator or user to Legionella bacteria. The public health issues would need to be addressed regardless of what option(s) are implemented.

Hazardous substances

Inappropriate collection, storage and disposal of hazardous waste can result in environmental contamination, and people being exposed to the hazardous substances. Continuing to provide hazardous waste collection facilities is supported.

Regional Strategies and collaboration

Engagement with the regional Waste and Resources Advisory Group and other pan-regional projects is supported as it provides opportunities for collaborative approaches for resource sharing and effectively addressing issues related to hazardous substances and other waste management issues. This approach is supported.

Further consultation

Once the Council has reviewed the Waste Assessment and considered what will be included in the Waste Management and <u>Minimisation</u> Plan, Toi Te Ora Public Health would appreciate the opportunity for further consultation and comment regarding the management of public health risks.

If you have any questions please contact Catherine Lochore, Health Protection Officer, in the first instance.

Yours sincerely

James miller,

Dr Jim Miller Medical Officer of Health

10.2. CLASSIFICATIONS FOR DISPOSAL TO LAND

In the 'Technical Guidelines for Disposal to Land' (2016) the following definitions are given:

Class 1 - Landfill

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

Class 1 landfills require:

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

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

Waste acceptance criteria (WAC) comprises:

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

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

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

Class 2 Landfill

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

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

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

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

Waste acceptance criteria comprises:

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

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

Class 3 Landfill – Managed/Controlled Fill

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

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

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

Waste acceptance criteria comprises:

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

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

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

Class 4 Landfill – Controlled Fill

A Class 4 landfill accepts controlled fill materials. These comprise predominantly clean fill materials, but may also include other inert materials and soils with chemical contaminants at concentrations greater than local natural background concentrations, but with specified maximum total concentrations.

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

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

Waste acceptance criteria comprises:

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

A Class 4 landfill does not include any form of engineered containment. Due to the nature of material received it has the potential to receive wastes that are above soil background levels. The WAC criteria for a Class 4 landfill are therefore the main means of controlling potential adverse effects.

Class 5 – Landfill

A Class 5 landfill accepts only clean fill material. The principal control on contaminant discharges to the environment from Class 5 landfills is the waste acceptance criteria.

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

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

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

Waste Assessment Waste acceptance criteria:

- virgin excavated natural materials, including soil, clay, gravel and rock; and
- maximum incidental inert manufactured materials (e.g. concrete, brick, tiles) to be no more than 5% by volume per load; and
- maximum incidental5 or attached biodegradable materials (e.g. vegetation) to be no more than 2% by volume per load; and
- maximum chemical contaminant limits are local natural background soil concentrations.

Materials disposed to a Class 5 landfill should pose no significant immediate or future risk to human health or the environment.

The WAC for a Class 5 landfill should render the site suitable for unencumbered potential future land use, i.e. future residential development or agricultural land use. The WAC for a Class 5 landfill are based on the local background concentrations for inorganic elements, and provide for trace concentrations of a limited range of organic compounds.

Class 6 – Industrial Monofill

A class 6 industrial monofill accepts material that discharge or could discharge contaminants or emissions. Material must be generated form a single industrial process such as pulp and paper making fibres.

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

10.3. NATIONAL LEGISLATIVE AND POLICY CONTEXT

10.3.1. The New Zealand Waste Strategy 2010

The New Zealand Waste Strategy 2010 provides the Government's strategic direction for waste management and minimisation in New Zealand. This strategy was released in 2010 and replaced the 2002 Waste Strategy.

The New Zealand Waste Strategy has two goals. These are to:

- reduce the harmful effects of waste
- improve the efficiency of resource use.

The strategy's goals provide direction to central and local government, businesses (including the waste industry), and communities on where to focus their efforts to manage waste. The strategy's flexible approach ensures waste management and minimisation activities are appropriate for local situations.

Under section 44 of the Waste Management Act 2008, in preparing their waste management and minimisation plan (WMMP) councils must have regard to the New Zealand Waste Strategy, or any government policy on waste management and minimisation that replaces the strategy. Guidance on how councils may achieve this is provided in section 4.4.3.

A copy of the New Zealand Waste Strategy is available on the Ministry's website.

10.3.2. Waste Minimisation Act 2008

The purpose of the Waste Minimisation Act 2008 (WMA) is to encourage waste minimisation and a decrease in waste disposal to protect the environment from harm and obtain environmental, economic, social and cultural benefits.

The WMA introduced tools, including:

- waste management and minimisation plan obligations for territorial authorities
- a waste disposal levy to fund waste minimisation initiatives at local and central government levels
- product stewardship provisions.

Part 4 of the WMA is dedicated to the responsibilities of a council. Councils "must promote effective and efficient waste management and minimisation within its district" (section 42).

Part 4 requires councils to develop and adopt a WMMP. The development of a WMMP in the WMA is a requirement modified from Part 31 of the Local Government Act 1974, but with even greater emphasis on waste minimisation.

To support the implementation of a WMMP, section 56 of the WMA also provides councils the ability to:

- develop bylaws
- regulate the deposit, collection and transportation of wastes
- prescribe charges for waste facilities
- control access to waste facilities
- prohibit the removal of waste intended for recycling.

A number of specific clauses in Part 4 relate to the WMMP process. It is essential that those involved in developing a WMMP read and are familiar with the WMA and Part 4 in particular.

The Waste Minimisation Act 2008 (WMA) provides a regulatory framework for waste minimisation that had previously been based on largely voluntary initiatives and the involvement of territorial authorities

under previous legislation, including Local Government Act 1974, Local Government Amendment Act (No 4) 1996, and Local Government Act 2002. The purpose of the WMA is to encourage a reduction in the amount of waste disposed of in New Zealand.

In summary, the WMA:

- Clarifies the roles and responsibilities of territorial authorities with respect to waste minimisation e.g. updating Waste Management and Minimisation Plans (WMMPs) and collecting/administering levy funding for waste minimisation projects.
- Requires that a Territorial Authority promote effective and efficient waste management and minimisation within its district (Section 42).
- Requires that when preparing a WMMP a Territorial Authority must consider the following methods of waste management and minimisation in the following order of importance:
 - o Reduction
 - o Reuse
 - o Recycling
 - Recovery
 - o Treatment
 - o Disposal
 - Put a levy on all waste disposed of in a landfill.
 - Allows for mandatory and accredited voluntary product stewardship schemes.
 - Allows for regulations to be made making it mandatory for certain groups (for example, landfill operators) to report on waste to improve information on waste minimisation.
 - Establishes the Waste Advisory Board to give independent advice to the Minister for the Environment on waste minimisation issues.

Various aspects of the Waste Minimisation Act are discussed in more detail below.

10.3.3. Waste Levy

From 1 July 2009 the Waste Levy came in to effect, adding \$10 per tonne to the cost of landfill disposal at sites which accept household solid waste. The levy has two purposes, which are set out in the Act:

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

This levy is collected and managed by the Ministry for the Environment (MfE) who distribute half of the revenue collected to territorial authorities (TA) on a population basis to be spent on promoting or achieving waste minimisation as set out in their WMMPs. The other half is retained by the MfE and managed by them as a central contestable fund for waste minimisation initiatives.

Currently the levy is set at \$10/tonne and applies to wastes deposited in landfills accepting household waste. The MfE published a waste disposal levy review in 2014. The review indicates that the levy may be extended in the future:

"The levy was never intended to apply exclusively to household waste, but was applied to landfills that accept household waste as a starting point. Information gathered through the review supports consideration being given to extending levy obligations to additional waste disposal sites, to reduce opportunities for levy avoidance and provide greater incentives for waste minimisation."

10.3.4. Product Stewardship

Under the Waste Minimisation Act 2008, if the Minister for the Environment declares a product to be a priority product, a product stewardship scheme must be developed and accredited to ensure effective reduction, reuse, recycling or recovery of the product and to manage any environmental harm arising from the product when it becomes waste.

The following voluntary product stewardship schemes have been accredited by the MfE:

- Agrecovery rural recycling programme
- Envirocon product stewardship
- Fonterra Milk for Schools Recycling Programme
- Fuji Xerox Zero Landfill Scheme
- Holcim Geocycle Used Oil Recovery Programme (no longer operating)
- Interface ReEntry Programme
- Kimberly Clark NZ's Envirocomp Product Stewardship Scheme for Sanitary Hygiene Products
- Plasback
- Public Place Recycling Scheme
- Recovering of Oil Saves the Environment (R.O.S.E. NZ)
- Refrigerant recovery scheme
- RE:MOBILE
- Resene PaintWise
- The Glass Packaging Forum

Further details on each of the above schemes are available on the ministries website.

10.3.5. Waste Minimisation Fund

The Waste Minimisation Fund has been set up by the Ministry for the Environment to help fund waste minimisation projects and to improve New Zealand's waste minimisation performance through:

- Investment in infrastructure;
- Investment in waste minimisation systems and
- Increasing educational and promotional capacity.

Criteria for the Waste Minimisation Fund have been published:

- 1. Only waste minimisation projects are eligible for funding. Projects must promote or achieve waste minimisation. Waste minimisation covers the reduction of waste and the reuse, recycling and recovery of waste and diverted material. The scope of the fund includes educational projects that promote waste minimisation activity.
- 2. Projects must result in new waste minimisation activity, either by implementing new initiatives or a significant expansion in the scope or coverage of existing activities.
- 3. Funding is not for the ongoing financial support of existing activities, nor is it for the running costs of the existing activities of organisations, individuals, councils or firms.
- 4. Projects should be for a discrete timeframe of up to three years, after which the project objectives will have been achieved and, where appropriate, the initiative will become self-funding.
- 5. Funding can be for operational or capital expenditure required to undertake a project.
- 6. For projects where alternative, more suitable, Government funding streams are available (such as the Sustainable Management Fund, the Contaminated Sites Remediation Fund, or research funding from the Foundation for Research, Science and Technology), applicants should apply to these funding sources before applying to the Waste Minimisation Fund.

- 7. The applicant must be a legal entity.
- 8. The fund will not cover the entire cost of the project. Applicants will need part funding from other sources.
- 9. The minimum grant for feasibility studies will be \$10,000.00. The minimum grant for other projects will be \$50,000.00.

Application assessment criteria have also been published by the Ministry.

10.3.6. Local Government Act 2002

The Local Government Act 2002 (LGA) provides the general framework and powers under which New Zealand's democratically elected and accountable local authorities operate.

The LGA contains various provisions that may apply to councils when preparing their WMMPs, including consultation and bylaw provisions. For example, Part 6 of the LGA refers to planning and decision-making requirements to promote accountability between local authorities and their communities, and a long-term focus for the decisions and activities of the local authority. This part includes requirements for information to be included in the long-term plan (LTP), including summary information about the WMMP. More information on the LGA can be found at ww.dia.govt.nz/better-local-government.

Section 17A Review

Local authorities are now under an obligation to review the cost-effectiveness of current arrangements for meeting community needs for good quality infrastructure, local public services and local regulation. Where a review is undertaken local authorities must consider options for the governance, funding and delivery of infrastructure, local public services and local regulation that include, but are not limited to:

- in-house delivery
- delivery by a CCO, whether wholly owned by the local authority, or a CCO where the local authority is a part owner
- another local authority
- another person or agency (for example central government, a private sector organisation or a community group).

Local Authorities have three years from 8 August 2014 to complete the first review of each service i.e. they must have completed a first review of all their services by 7 August 2017 (unless something happens to trigger a review before then).

Other than completion by the above deadline, there are two statutory triggers for a section 17A review:

- The first occurs when a local authority is considering a significant change to a level of service
- The second occurs where a contract or other binding agreement is within two years of expiration.

Once conducted, a section 17A review has a statutory life of up to six years. Each service must be reviewed at least once every six years unless one of the other events that trigger a review comes into effect.

While the WMMP process is wider in scope – considering all waste service provision in the local authority area – and generally taking a longer term, more strategic approach, there is substantial crossover between the section 17A requirements and those of the WMMP process, in particular in relation to local authority service provision. The S17A review may however take a deeper approach go into more detail in consideration of how services are to be delivered, looking particularly at financial aspects to a level that are not required under the WMMP process.

Because of the level of crossover however it makes sense to undertake the S17A review and the WMMP process in an iterative manner. The WMMP process should set the strategic direction and gather detailed information that can inform both processes. Conversely the consideration of options under the s17A process can inform the content of the WMMP – in particular what is contained in the action plans.

10.3.7. Resource Management Act 1991

The Resource Management Act 1991 (RMA) promotes sustainable management of natural and physical resources. Although it does not specifically define 'waste', the RMA addresses waste management and minimisation activity through controls on the environmental effects of waste management and minimisation activities and facilities through national, regional and local policy, standards, plans and consent procedures. In this role, the RMA exercises considerable influence over facilities for waste disposal and recycling, recovery, treatment and others in terms of the potential impacts of these facilities on the environment.

Under section 30 of the RMA, regional councils are responsible for controlling the discharge of contaminants into or on to land, air or water. These responsibilities are addressed through regional planning and discharge consent requirements. Other regional council responsibilities that may be relevant to waste and recoverable materials facilities include:

- managing the adverse effects of storing, using, disposing of and transporting hazardous wastes
- the dumping of wastes from ships, aircraft and offshore installations into the coastal marine area
- the allocation and use of water.

Under section 31 of the RMA, council responsibility includes controlling the effects of land-use activities that have the potential to create adverse effects on the natural and physical resources of their district. Facilities involved in the disposal, treatment or use of waste or recoverable materials may carry this potential. Permitted, controlled, discretionary, noncomplying and prohibited activities, and their controls, are specified in district planning documents, thereby defining further land-use-related resource consent requirements for waste-related facilities.

In addition, the RMA provides for the development of national policy statements and for the setting of national environmental standards (NES). There is currently one enacted NES that directly influences the management of waste in New Zealand – the Resource Management (National Environmental Standards for Air Quality) Regulations 2004. This NES requires certain landfills (e.g., those with a capacity of more than 1 million tonnes of waste) to collect landfill gases and either flare them or use them as fuel for generating electricity.

Unless exemption criteria are met, the NES for Air Quality also prohibits the lighting of fires and burning of wastes at landfills, the burning of tyres, bitumen burning for road maintenance, burning coated wire or oil, and operating high-temperature hazardous waste incinerators.

These prohibitions aim to protect air quality.

10.3.8. NZ Emissions Trading Scheme

The Climate Change Response Act 2002 and associated regulations is the Government's principal response to manage climate change. A key mechanism for this is the New Zealand Emissions Trading Scheme (NZ ETS) The NZ ETS puts a price on greenhouse gas emissions, providing an incentive for people to reduce emissions and plant forests to absorb carbon dioxide. Certain sectors are required to acquire and surrender emission units to account for their direct greenhouse gas emissions or the emissions associated with their products.

Landfills that are subject to the waste disposal levy are required to surrender emission units to cover methane emissions generated from landfill. These disposal facilities are required to report the tonnages landfilled annually to calculate emissions.

The NZ ETS was introduced in 2010 and, from 2013, landfills have been required to surrender New Zealand Emissions Units for each tonne of CO_2 (equivalent) that they produce. Until recently however the impact of the NZETS on disposal prices has been limited. There are a number of reasons for this:

- The global price of carbon crashed during the GFC in 2007-8 and has been slow to recover. Prior to the crash it was trading at around \$20 per tonne. The price has been as low as \$2, although since, in June 2015, the Government moved to no longer accept international units in NZETS the NZU price has increased markedly.
- The transitional provisions of the Climate Change Response Act, which were extended in 2013 (but have now been reviewed), mean that landfills have only had to surrender half the number of units they would be required to otherwise. These transitional provisions were removed in January 2017 which will effectively double the price per tonne impact of the ETS.
- Landfills are allowed to apply for 'a methane capture and destruction Unique Emissions Factor (UEF). This means that if landfills have a gas collection system in place and flare or otherwise use the gas (and turn it from Methane into CO2) they can reduce their liabilities in proportion to how much gas they capture. Up to 90% capture and destruction is allowed to be claimed under the regulations, with large facilities applying for UEF's at the upper end of the range.

Taken together (a low price of carbon, two for one surrender only required, and methane destruction of 80-90%) these mean that the actual cost of compliance with the NZETS has been small for most landfills – particularly those that are able to claim high rates of gas capture. Disposal facilities have typically imposed charges (in the order of \$5 per tonne) to their customers, but these charges have mostly reflected the costs of scheme administration, compliance, and hedging against risk rather than the actual cost of carbon.

The way the scheme has been structured has also resulted in some inconsistencies in the way it is applied – for example class 2-4 landfills and closed landfills do not have any liabilities under the scheme. Further, the default waste composition (rather than a SWAP) can be used to calculate the theoretical gas production, which means landfill owners have an incentive to import biodegradable waste, which then increases gas production and which can then be captured and offset against ETS liabilities.

Recently, however the scheme has had a greater impact on the cost of landfilling, and this is expected to continue in the medium term. Reasons for this include:

- In June 2015, the Government moved to no longer accept international units in NZETS. This has had a significant impact, as cheap international units which drove the price down cannot be used. Many of these were also of dubious merit as GHG offsets. This has resulted in a significant rise in the NZU price.
- The transitional provisions relating to two-for-one surrender of NZUs were removed from 1 January 2017, meaning that landfills will need to surrender twice the number of NZUs they do currently effectively doubling the cost of compliance.
- The United Nations Climate Change Conference, (COP21) held in Paris France in November December of 2015, established universal (but non-binding) emissions reduction targets for all the nations of the world. The outcomes could result in growing demand for carbon offsets and hence drive up the price of carbon. Balanced against this however is the degree to which the United States, under the new Republican administration, will ratify its commitments.

These changes to the scheme mean that many small landfills which do not capture and destroy methane are now beginning to pay a more substantial cost of compliance. The ability of landfills with high rates of gas capture and destruction to buffer the impact of the ETS will mean a widening cost advantage for them relative to those without such ability. This could put further pressure on small (predominantly Council owned) facilities and drive further tonnage towards the large regional facilities (predominantly privately owned).

If for example, the price of carbon were to rise to \$50 per tonne, the liability for a landfill without gas capture will be \$65.50 (based on a default emissions factor of 1.31 tonnes of CO_2e per tonne of waste), whereas for a landfill claiming 90% gas capture (the maximum allowed under the scheme), the liability will be only \$6.55. This type of price differential will mean it will become increasingly cost competitive to transport waste larger distances to the large regional landfills.

More information is available at www.climatechange.govt.nz/emissions-trading-scheme.

10.3.9. Litter Act 1979

Under the Litter Act it is an offence for any person or body corporate to deposit or leave litter:

- In or on any public place; or
- In or on any private land without the consent of its occupier.

The Act enables Council to appoint Litter Officers with powers to enforce the provisions of the legislation.

The legislative definition of the term "Litter" is wide and includes refuse, rubbish, animal remains, glass, metal, garbage, debris, dirt, filth, rubble, ballast, stones, earth, waste matter or other thing of a like nature.

Any person who commits an offence under the Act is liable to:

- An instant fine of \$400 imposed by the issue of an infringement notice; or a fine not exceeding \$5,000 in the case of an individual or \$20,000 for a body corporate upon conviction in a District Court.
- A term of imprisonment where the litter is of a nature that it may endanger, cause physical injury, disease or infection to any person coming into contact with it.

Under the Litter Act 1979 it is an offence for any person to deposit litter of any kind in a public place, or onto private land without the approval of the owner.

The Litter Act is enforced by territorial authorities, who have the responsibility to monitor litter dumping, act on complaints, and deal with those responsible for litter dumping. Councils reserve the right to prosecute offenders via fines and infringement notices administered by a litter control warden or officer. The maximum fines for littering are \$5,000 for a person and \$20,000 for a corporation.

Council powers under the Litter Act could be used to address illegal dumping issues that may be included in the scope of a council's waste management and minimisation plan.

10.3.10. Health Act 1956

The Health Act 1956 places obligations on TAs (if required by the Minister of Health) to provide sanitary works for the collection and disposal of refuse, for the purpose of public health protection (Part 2 – Powers and duties of local authorities, section 25). It specifically identifies certain waste management practices as nuisances (S 29) and offensive trades (Third Schedule). Section 54 places restrictions on carrying out an offensive trade and requires that the local authority and medical officer of health must give written consent and can impose conditions on the operation. Section 54 only applies where resource consent has not been granted under the RMA. The Health Act enables TAs to raise loans for certain sanitary works and/or to receive government grants and subsidies, where available.

Health Act provisions to remove refuse by local authorities have been repealed.

10.3.11. Hazardous Substances and New Organisms Act 1996 (HSNO Act)

The HSNO Act addresses the management of substances (including their disposal) that pose a significant risk to the environment and/or human health. The Act relates to waste management

primarily through controls on the import or manufacture of new hazardous materials and the handling and disposal of hazardous substances.

Depending on the amount of a hazardous substance on site, the HSNO Act sets out requirements for material storage, staff training and certification. These requirements would need to be addressed within operational and health and safety plans for waste facilities. Hazardous substances commonly managed by TAs include used oil, household chemicals, asbestos, agrichemicals, LPG and batteries.

The HSNO Act provides minimum national standards that may apply to the disposal of a hazardous substance. However, under the RMA a regional council or TA may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances.

10.3.12. Health and Safety at Work Act 2015

The new Health and Safety at Work Act, passed in September 2015 replaces the Health and Safety in Employment Act 1992. The bulk of the Act came into force from 4 April 2016.

The Health and Safety at Work Act introduces the concept of a Person Conducting a Business or Undertaking, known as a PCBU. The Council will have a role to play as a PCBU for waste services and facilities.

The primary duty of care requires all PCBUs to ensure, so far as is reasonably practicable:

- 1. the health and safety of workers employed or engaged or caused to be employed or engaged, by the PCBU or those workers who are influenced or directed by the PCBU (for example workers and contractors)
- 2. that the health and safety of other people is not put at risk from work carried out as part of the conduct of the business or undertaking (for example visitors and customers).

The PCBU's specific obligations, so far as is reasonably practicable:

- providing and maintaining a work environment, plant and systems of work that are without risks to health and safety
- ensuring the safe use, handling and storage of plant, structures and substances
- providing adequate facilities at work for the welfare of workers, including ensuring access to those facilities
- providing information, training, instruction or supervision necessary to protect workers and others from risks to their health and safety
- monitoring the health of workers and the conditions at the workplace for the purpose of preventing illness or injury.

A key feature of the new legislation is that cost should no longer be a major consideration in determining the safest course of action that must be taken.

WorkSafe NZ is New Zealand's workplace health and safety regulator. WorkSafe NZ will provide further guidance on the new Act after it is passed.

10.4. OTHER LEGISLATION

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

- Hazardous Substances and New Organisms Act 1996
- Biosecurity Act 1993
- Radiation Protection Act 1965
- Ozone Layer Protection Act 1996
- Agricultural Chemicals and Veterinary Medicines Act 1997.

For full text copies of the legislation listed above see www.legislation.govt.nz.

10.5. INTERNATIONAL COMMITMENTS

New Zealand is party to international agreements that have an influence on the requirements of our domestic legislation for waste minimisation and disposal. Some key agreements are the:

- Montreal Protocol
- Basel Convention
- Stockholm Convention
- Waigani Convention
- Minamata Convention.

More information on these international agreements can be found on the Ministry's website at www.mfe.govt.nz/more/international-environmental-agreements.