GREAT LAKE TAUPŌ
Taupō District Council

ATTACHMENTS

Ordinary Council Meeting

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Table of Contents

Waste Assessment

Prepared by Taupō District Council

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Taupo District Council Waste Assessment 2023

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The Waste Assessment (WA) is a technical document. The key purpose of the WA is to present as clear a picture as possible of what happens with waste in the Taupō District, what forces are driving current behaviours and outcomes, and from that, to highlight the key issues and the basic options for addressing those issues.

Contents

1 Introduction

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

1.1 Structure of this Document

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

Waikato/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

This section includes the statement from the Medical Officer of Health as well as additional detail on legislation.

1.2 Purpose of this Waste Assessment

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

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

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

1.3 Legislative Context

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

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

(a) protect the environment from harm; and

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

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

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. The Council's existing Waste Assessment was written in 2017 and the WMMP was adopted in 2018.

1.4 Scope

1.4.1 General

As well as fulfilling the statutory requirements of the WMA, this Waste Assessment will build a foundation that will enable TDC 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'[1].

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 TDC has reliable data on the waste flows that it controls, data on those services provided by private industry is limited.

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

1.4.2 Period of Waste Assessment

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

1.4.3 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.

[1] Ministry for the Environment (2015), Waste Management and Minimisation Planning: Guidance for Territorial Authorities

Currently the gas emitted from the Broadlands Rd landfill is not captured, as Council does not have a gas capture system in place. Future operating consents will require gas capture and destruction by way of a gas flare.

Biosolids from the WTTP processes are disposed of to a vermicomposting operation and have been diverted from landfill disposal since January 2017. Therefore, apart from some liquid hazardous wastes that are managed through solid waste facilities, this Waste Assessment and the subsequent WMMP will focus primarily on solid waste.

1.4.4 Public Health Issues

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

1.4.4.1 Key Waste Management Public Health Issues

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

- Population health profile and characteristics
- Meeting the requirements of the Health Act 1956
- Management of putrescible wastes
- Management of nappy and sanitary wastes
- Potential for dog/seagull/vermin strike
- Timely collection of material
- Locations of waste activities
- Management of spillage
- Litter and illegal dumping
- Storage of wastes/stockpiling
- 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.
- Landfilling operations

1.4.4.2 Management of Public Health Issues

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

In most cases, public health issues are able to be addressed through setting appropriate performance standards for waste service contracts. The need for public health protection can also influence the location of waste disposal facilities or public litter bin locations, all of which need to be

assessed for their ability to mitigate public health risk. 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.

Local government's ability to set policy through this waste planning process and Council's Solid Waste Bylaw development will also continue to place public health as the main priority.

It is considered that the current mix of assets and services provided by both the private sector and by Council adequately provide for the management of public health in relation to solid waste in the Taupō district. This consideration is based on previous sign off from the Medical Officer of Health on the previous Waste Assessment and the lack of public health implications over the last four years since the last WMMP was enacted.

1.5 Strategic Context

1.5.1 New Zealand Waste Strategy

Central government have signalled that they are looking to review the NZ Waste strategy to make it more relevant to current waste paradigm and are looking to strengthen the strategy to support further waste reduction as well as waste prevention. This strategy includes a proposal to establish a nationally coordinated long-term behaviour change and education program to support both central and local government. This strategy may also include waste reduction targets which will apply to both central and local government.

At the time of writing this Waste Assessment the new strategy has not yet been developed, so we must fall back onto the existing document to consider National direction.

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 (Zero Carbon) Amendment Act 2019
- International conventions
- Ministry for the Environment guidelines, codes of practice
- Voluntary initiatives.
- Waste minimisation fund
- Waste Levy
- Emissions Trading Scheme

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. This may change with the development of the new strategy, where government have signalled their desire to provide waste minimisation targets.

Section 44 of the WMA requires councils to have regard to the NZWS when preparing their WMMP.

For this Waste Assessment and when developing the current WMMP (2024), Council has given regard to the NZWS and has considered the tools available when providing services and setting policy.

1.5.2 International Commitments

New Zealand is party to the following key international agreements:

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

1.5.3 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.

Projects include:

- National food scraps education program
- Kerbside service delivery alignment, including food collection
- National data program

1.5.3.1 Waste Minimisation Fund

The fund invests in a wide range of projects to improve and accelerate New Zealand's ability to reduce landfill emissions from organic waste. These range from multi-million-dollar infrastructure investments to smaller hapū/community-centred projects.

Funding is currently available for:

- Kerbside collection assets, infrastructure and support for the roll-out of services for food scraps and green waste
- Organic waste processing facilities
- Resource recovery infrastructure including construction and demolition facilities and transfer station upgrades to enable greater resource recovery, particularly for organics.

Projects must divert from landfill at least one of the following materials to be eligible for funding: food, green waste, paper and cardboard and wood.

- Weighbridge funding to enable the collection of waste data to enable better investment planning.

1.5.3.2 Covid-19 Response and Recovery Fund – Weighbridge Funding

As part of Budget 2020, the Government established the COVID-19 Response and Recovery Fund, which included a package of waste minimisation and resource recovery infrastructure initiatives. In recognition of the need for improved waste data and levy compliance, this package included up to $2.2 million to fund the purchase and installation of weighbridges.

TDC has successfully applied for this funding which will go towards installing a weighbridge at the Turangi transfer station. This will enable TDC to collect accurate data on volume and types of waste received at the site as well as operate a more transparent charging regime similar to Broadlands Road.

This investment will allow central government to better understand waste and waste movements in order to support better investment decisions in waste minimisation.

1.5.3.3 Increasing and expanding of Waste Disposal Levy

The waste disposal levy provides revenue for the promotion and achievement of waste minimisation. Increases to the waste disposal levy and expansion of its scope started in July 2021 and will progressively increase over four years from $10 per tonne – set in 2009 – to $60 per tonne as of July 2024.

Money raised from the levy increases will provide additional revenue for:

- investment in weighbridges
- expanding data collection and management systems
- strengthening compliance and monitoring activity
- mitigating unintended consequences of the waste disposal levy increases (eg, inappropriate and illegal waste disposal).
- Supporting Councils to align kerbside collection programs to best practise

Increasing and expanding the levy helps recognise the real costs of waste, makes it fairer for everyone and incentivises materials reuse and recycling rather than disposal.

1.5.3.4 Standardising kerbside collections

Work is currently underway to improve household kerbside collection systems to make it easier for households and businesses to recycle and move New Zealand to a low emissions low waste future.

In 2020, MfE commissioned WasteMINZ to run a series of hui with local government and industry to identify opportunities for improving household kerbside recycling. There were six key recommendations in the report:

- standardise materials to be collected in domestic kerbside recycling collections across the country and how they should be presented to:
- increase consistency and reduce confusion for householders
- reduce contamination

- incentivise local authorities to collect food waste for composting to reduce kerbside residual rubbish to landfill
- incentivise local authorities to collect glass separately from other recyclable materials to improve the quality of all materials accepted in kerbside recycling
- provide best practice recommendations for food waste, recycling, and residual rubbish collections to increase consistency across the country.

In 2022, Central government consulted the public on improvements to household kerbside recycling and two other proposals as part of the Transforming Recycling consultation. Submissions are currently being analysed and the expected timing of Cabinet decisions is early 2023.

1.5.3.5 Container return scheme

In 2022, Central government consulted on a container return scheme for New Zealand.

A container return scheme is a recycling system that incentivises people to return their empty beverage containers for recycling in exchange for a small refundable deposit (20 cents proposed).

The proposal outlined the following items to be accepted under the scheme:

- All single-use metal beverage containers (eg, aluminium, steel, tinplate and bimetals).
- All single-use glass beverage containers (all colours of glass).
- All single-use plastic beverage containers (PET 1, HDPE 2 and PP 5; recyclable bio-based PET 1 and HDPE 2).
- All single-use liquid paperboard beverage containers (except fresh milk).

Materials not included in the proposed scheme include:

- Any beverage container made from a material other than metal, plastic, glass or liquid paperboard (such as pouches, bladders, and compostable or biodegradable plastics)
- Fresh milk in all packaging types
- Beverage containers that are intended for refilling and have an established return/refillables scheme
- All cups (including coffee cups)

Submissions are currently being analysed and Cabinet decision is expected early 2023. Central Government has not postponed the mandating of a container return scheme, with the end result being the local Government will continue to fund the collection of these materials.

1.5.3.6 Further ban on hard to recycle plastics

Following the plastic bag ban in 2019, the Government announced the phase-out of a range of single-use plastic items and hard-to-recycle plastic packaging by mid-2025.

From the 1st of October 2022, the following items have been banned:

- PVC food trays and containers* (plastic type #3)
- Polystyrene takeaway food and drink packaging (plastic type #6)
- Expanded polystyrene food and drink packaging (plastic type #6)

- Plastic with pro-degradant additives, eg oxo and photo degradable plastics (subset of plastic type #7)
- Plastic drink stirrers (all plastic types)
- Plastic stemmed cotton buds (all plastic types)

This will be followed by bans on further items by mid-2023 and mid-2025.

1.5.3.7 Product stewardship schemes for priority products

In July 2020, the Government declared six products as priorities for regulated product stewardship schemes. This is where regulations are used to increase incentives for the circular use of a resource.

The priority products are: plastic packaging, tyres, electrical and electronic products (e-waste including large batteries), agrichemicals and their containers, refrigerants, farm plastics.

The focus is now on establishing regulated and accredited product stewardship schemes for the priority products.

1.5.3.8 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 have included 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.

TDC 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.

Taupō District Council is also in a unique position where the vast majority of solid waste generated within the district is disposed of at the Broadlands Road Landfill, so Council is able to collect accurate data from the weighbridge program that weighs all loads into and out of the site.

1.5.3.9 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
- Organics

2 Waikato Region

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

2.1 Overview

Local authorities in the region comprise 11 territorial authorities and the Regional Council.

Figure 1: Map of Region and Territorial Authority Areas

Source: www.waikatoregion.government.nz

3 Our District

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

3.1 Physical Characteristics

3.1.1 Overview

Our district is located in the centre of the North Island of New Zealand and within the Waikato Region. Sitting at the heart of our district is the biggest freshwater lake in New Zealand, which is surrounded by mountains, forests, rivers and national parks. Complementing our natural environment are the vibrant and diverse communities that make up our urban places.

Taupō has become a key visitor and event destination possessing many unique attributes such as its panoramic stunning lake and volcanic landscape.

Figure 2 Taupō district

The Taupō District occupies a large proportion of the Central North Island Volcanic Plateau together with the complete catchment area of Lake Taupō and Upper Waikato River areas.

Whilst the majority of the district is situated within the Waikato Region, a small proportion also intrudes into the Bay of Plenty, Hawkes Bay and Manawatu-Wanganui regions. The district comprises 6, 354 km² of land and 616 km² of lake.

3.1.2 Demographics

Prior to 1950, the district was largely undeveloped and sparsely populated. Since that time, population has increased rapidly to approximately 41,400 in 2022 (Statistics NZ). Urban growth has focused on Taupō township and various lakeshore settlements of Mangakino, Kinloch, Turangi and Omori.

Projected resident population for the Taupō district is shown in Figure 3 below while Figure 4 shows projection numbers for new builds in the district under a low, medium or high scenario.

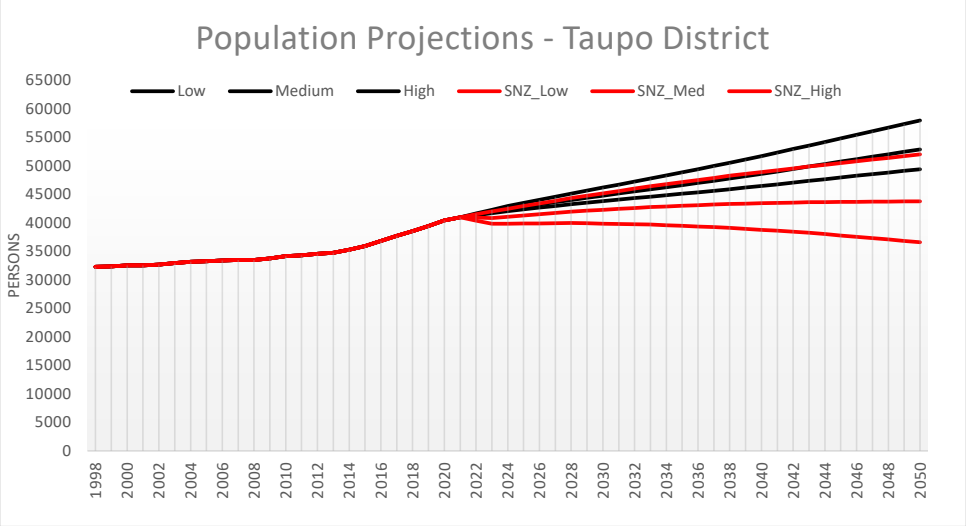


Figure 3 Population Projections for Taupō District September 2022

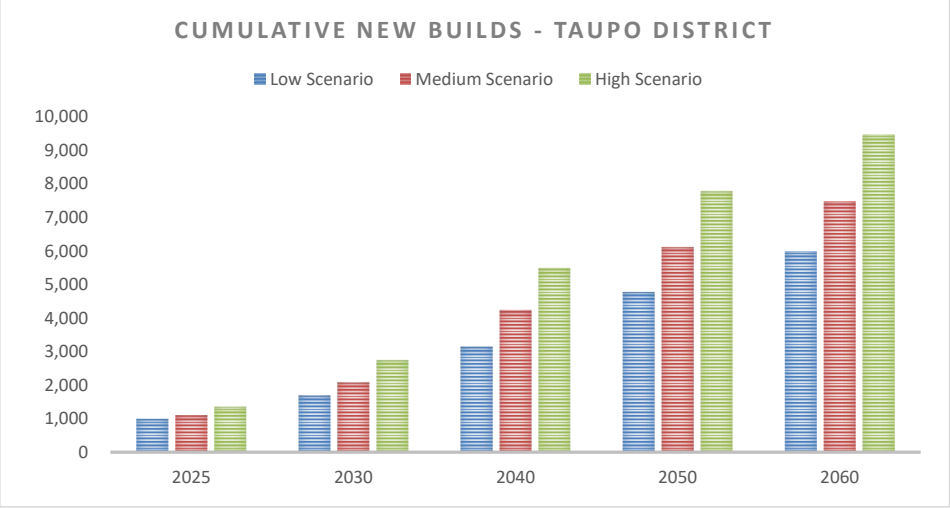


Figure 4 New build projections for Taupō District September 2022

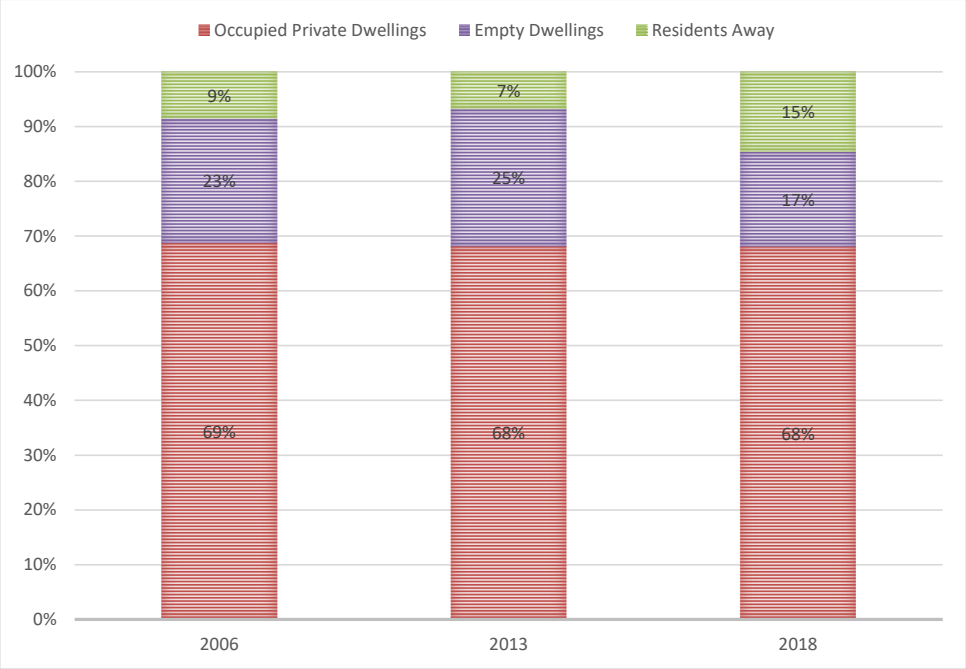


Figure 5 Occupied vs holiday homes from last 3 Census

New builds have shown a steady increase over the last ten years and this profile is set to continue. The Taupō district continues to be a desirable location to live as well as own holiday accommodation.

- As shown, the population for the district has seen steady growth in recent times with projected growth into the future remaining steady.

- The proportion of occupied vs non-occupied dwellings has remained stable over the last three census periods indicating a stable holiday housing market.

3.2 Population Dynamics

The Taupō district's main business are a mix of farming, energy, forestry, and tourist related operations. High summer visitor numbers affect the kerbside refuse and recycling collection, service provision to the urban communities as well as the street litter and recycling bins.

Increases in occupation numbers over summer are dealt with contractually as service providers ramp up their service vehicle numbers and staff to deal with the peak waste volumes.

The district has seen a recent boom in the housing market and with the resulting increase in construction and demolition waste as either new homes have been built or older homes renovated.

Rural waste disposed of to district waste facilities will continue to show an upward trend as tighter regulation on farms regarding waste burning and burying are implemented. More work on farm related waste needs to be undertaken to understand the implications of these new regulations and waste volumes going forward.

4 Waste Infrastructure

The facilities available in the Taupō district area are a combination of those owned, operated and/or managed by TDC 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 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 the needs of the WMA.

TDC has six waste facilities that strategically ring the lake and provide for urban as well as rural waste disposal needs.

The outlying waste transfer stations provide a full suite of recycling options and disposal bins for waste. Bins are transported to the Broadlands Road Landfill for final disposal. These sites are impacted by seasonal increase in home occupancy with the main impact from mid-December to the end of February.

TDC varies the operating hours of all its facilities to cater for these peaks and contractors increase staff numbers as well as servicing vehicles.

The district transfer stations are for the disposal of domestic and commercial waste, but large commercial loads that would overwhelm the site capacity are directed straight to the Broadlands Rd Landfill.

Four of the six transfer stations do not have weighbridges so load volumes are estimated. Recycling services are rate funded and are perceived to be free to drop off which in turn maximises diversion by the community. The two sites with weighbridges (Broadlands Road and Turangi) enables council to provide detailed waste data to government which allows government to have a better understanding of waste generated in the district. They also provide a transparent and accurate system for fee charging based on the weight of the load at the facility as the current system is based on the interpretation of the load by the kiosk operator.

All sites operate reuse facilities, where preloved saleable goods can be offloaded if fit for sale and resold to the community.

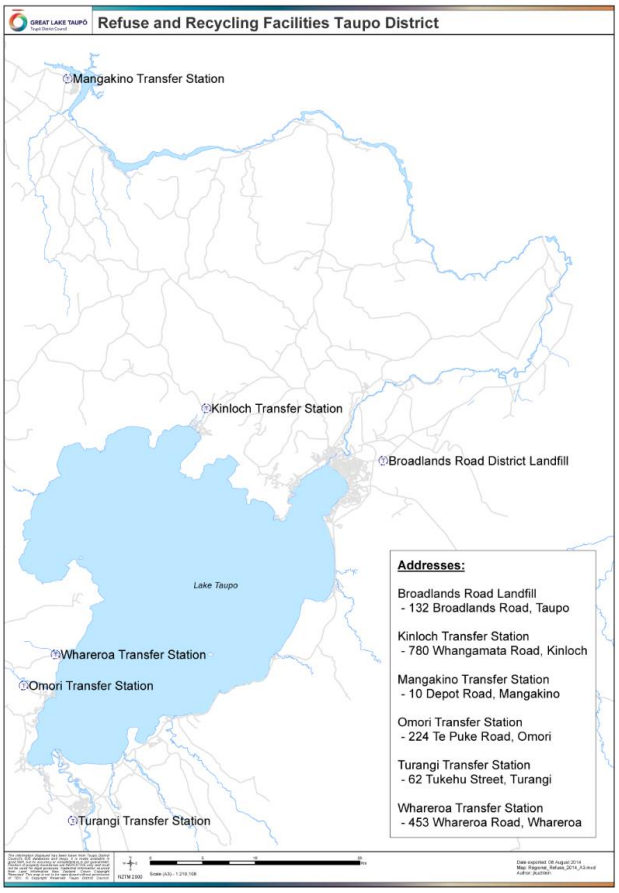


Figure 6 Waste facilities owned by Taupō District Council

4.1 Disposal Facilities

The definitions of the four classes of landfills provided in the Guidelines are summarised below.

Class 1 - Municipal Landfill

A Class 1 landfill is a site that accepts municipal solid waste. A Class 1 landfill generally also accepts construction and demolition (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 - C&D/Industrial Landfill

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

some activities may generate leachates with chemical characteristics that are not necessarily organic. Hence, there is usually a need for an increased level of environmental protection at Class 2 sites.

Class 3 – Managed Fill

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

Class 4 - Clean fill

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

The actual wording used in the guidelines is provided in Appendix Class 1 Landfills.

There is only one Class 1 landfill disposal facility (as defined above) in the Taupō district. The table below also lists the landfills outside of the district that could take waste from the Taupō district but currently don't unless the waste type is not accepted at Broadlands Rd i.e. Asbestos.

Table 1: Class 1 landfills accessible from Taupō District

Name & Owner/Operator	Description	Location	Capacity and Consent
Name, Operator	Description of what processes take place on site and what wastes are accepted/not accepted	Address	Brief outline of consent – expiry and quantity
Tirohia Landfill, H G Leach	Non-hazardous residential, commercial and industrial solid waste, including special wastes. Sludges with less than 20% solid by weight are prohibited. Compostable material is also processed on site.	Tirohia, Hauraki District	Consented to accept 4 million m^3 - approximately 2025 Is applying to extend

Name & Owner/Operator	Description	Location	Capacity and Consent
Rotorua District Landfill, Rotorua District Council	Non-hazardous residential, commercial and industrial waste, including special wastes (although bylaw may be reviewed to exclude these in future).	Atiamuri SH30, Rotorua District	Consented to 2030. Currently mothballed while undergoing feasibility assessment.
North Waikato Regional Landfill, EnviroWaste Services Ltd	Non-hazardous residential, commercial and industrial solid waste, including special wastes. Sludge's with less than 20% solid by weight are prohibited.	Hampton Downs, Waikato District	Consented to 2030 Undergoing consent renewal
Whitford Landfill, Waste Disposal Services (joint venture between Auckland Council and Waste Management NZ Ltd)	Non-hazardous residential, commercial and industrial solid waste, primarily from South Auckland	Whitford, south-east Auckland	Remaining capacity 6.5M tonnes. Resource consent allows no more than 200,000 tpa.
Taupō District Council, Taupō District	No gas capture system in place. Taupō Council and non-Council wastes	Broadlands Road landfill, Taupō	Consented to 2027.
Waitomo District Landfill Waitomo District Council,	No gas capture system in place	Waitomo District	Consented until 2025. Considering future options

Class 2 Landfills

Intergroup	Construction and demolition/industrial	Rakaunui Road, Taupo	Unknown

4.1.1 Broadlands Rd Landfill

Figure 7 Broadlands Rd landfill current tip head September 2022

The Broadlands Rd landfill is the only consented Class 1 landfill in the Taupō district and receives the majority of waste generated in the district. The current operating consent expires in 2027, but there is an estimated further 20 years of filling capacity past the expiry date as council creates further disposal space by mining dirt for cover over the landfill.

The landfill is fully engineered, with a liner system that prevents contaminants reaching the environment. Leachate (stormwater that comes in contact with refuse) is captured and piped for treatment at the Taupō Wastewater Treatment Plant. The operating consent has numerous conditions around monitoring of ground water and the day-to-day site operations. There is a requirement that an independent peer reviewer of site operations and consent conditions reports on the landfill annually and WRC also undertake yearly audits. To date the landfill has been fully compliant with its resource consent conditions and has not received any operating complaints.

The Broadlands Rd Landfill has been strategically located close to the Taupō town to minimise the cost of refuse haulage from the main urban development in the district. The location also allows for convenient disposal of refuse for the public of Taupō and the disposal of Leachate to the Taupō Wastewater Treatment Plant.

This isolation from other Class 1 landfills has provided a deterrent to commercial operators seeking lower disposal rates at other waste facilities, as they would have to factor in additional handling and transport cost, which currently negates any lower disposal fees at other facilities.

By TDC owning and operating its own landfill, it allows TDC to have some control of the waste stream and have greater ability to influence waste diversion. The community also does not have to pay for the transport of waste out of the district or the disposal fees set by alternative disposal facilities.

The site provides for the full suite of recycling services offered by the kerbside recycling collection service as well as the provision for recycling larger items. A reuse shop operates, green waste is composted, ferrous metal can be recycled, and concrete is crushed and sold as aggregate.

The landfill is operated with a mix of user pays for refuse disposal and rates funded recycling. This funding mix enables TDC to incentivise diversion of materials. Council also uses differing pricing structures to change behaviour and obtain clean material for processing, such as green waste and concrete reuse, with both of these products relying on the community to supply a clean product for processing.

As recycling is rate funded, TDC has set up its waste facilities to incentivise diversion by not charging any fees to recycle. This maximises recycling. Charges are only applied for refuse disposal or where TDC has set fees to assist in the cost of processing the material (clean fill, concrete, green waste)

Council has recently installed a new weighbridge program that uses cameras and licence plate recognition software, which has streamlined the onsite charging process. Waste loads into Broadlands Rd are weighed in and out, and the difference in weight is then applied to the waste category and the fee determined. TDC is also required by the Waste Minimisation Act to keep records of waste tonnages to landfill, as TDC is required to pay central government in the form of a waste levy for every tonne of waste disposed to landfill. A portion of these funds is sent to local authorities based upon population to implement waste minimisation initiatives. The rest is kept in a consolidated hypothecated fund to provide funding for large-scale projects.

There was a fire at the landfill in 2020 with the likely cause being lithium-ion batteries. To mitigate this risk, Council has installed an infrared camera that can detect hotspots and send alerts to key personnel after hours. During operating hours staff undertake regular site inspections. Council has also installed a large pond to enable a helicopter to use a monsoon bucket. The battery recycling program, that has a drop off point at the recycling area, also reduces the risks of these batteries causing a fire.

4.1.2 Transfer Stations

Taupō district has six transfer stations including the Broadlands Rd site that ring the lake and provide refuse disposal and recycling options to the urban and rural communities. These sites also offer the full suite of recycling options, and each site operates a reuse shop. Garden waste is shredded and then offered back to the community.

Two of the six sites use compaction plant (Turangi, Mangakino) to minimise transportation costs with the remaining sites utilising open top bins, which are transported by truck and trailer to Broadlands Road landfill for disposal.

The Whareroa Transfer station is rate funded, as the cost of staffing the site was not cost effective. The local community agreed to be rated and in return have been given full access to the site by use of a turnstile at the gate. As the site is a significant drive from the main highway, the site does not suffer from out of area users or illegal dumping.

All of the facilities have had or are programmed to have upgrades to their onsite recycling facilities, to support the public to recycle as well reduce the amount of manual handling of recyclable material by the onsite contractors to reduce health and safety risks of manual handling.

4.1.2.1 Facility Operating Times and Charges

Broadlands Road Resource Recovery Centre

About 3km north of Taupō on Broadlands Road.

Date	Opening hours
1 September to 30 April	Monday to Friday - 8am to 5.30pm Weekends and public holidays - 8am to 6pm (Closed Christmas Day & Good Friday and up to 1pm Anzac Day)
1 May to 31 August	Monday to Friday - 8am to 5pm Weekends and public holidays - 8am to 5.30pm

Turangi Transfer Station

Te Rangitukehu Street, Turangi

Date	Opening hours
1 September to 30 April	Monday to Sunday including public holiday - 8am to 5.30pm (Closed Christmas Day & Good Friday and up to 1pm Anzac Day)
1 May to 31 August	Monday to Sunday including public holidays - 8am to 4.30pm

Kinloch Transfer Station

Whangamata Road, Kinloch

Date	Opening hours
1 May to 30 September	Closed Mondays Tuesday to Sunday - 11am to 1pm
1 October to 30 April	Closed Mondays Open Tuesday to Sunday - 11am to 3pm Peak Summer (Open Monday to Sunday from the third week of

	December to the second week in January) - 10.30am to 4pm (Closed Christmas Day & Good Friday and up to 1pm Anzac Day)

Omori/Kuratau Transfer Station

Te Puke Road, Omori

Date	Opening hours
Christmas school holiday periods (Secondary Schools)	Monday to Sunday including public holidays - 9am to 4.30pm (Closed Christmas Day)
Other school holiday periods (Secondary Schools)	Monday, Wednesday, Saturday, Sunday & public holidays - 11am to 4.30pm (Closed Good Friday and up to 1pm Anzac Day)
All other periods	Wednesday, Saturday, Sunday and public holidays - 11am to 4.30pm

Whareroa Transfer Station

Whareroa Road

Date	Opening hours
1 June to 31 August	Sunday and public holidays – 11am to 3pm
1 September to 31 May	Wednesday, Sunday & public holidays - 11am to 3pm Peak Summer (Monday to Sunday from the 3rd week of December until the 2nd week in January) - 11am to 3pm (Closed Christmas Day & Good Friday and up to 1pm Anzac Day)

Mangakino Transfer Station

Corner of Waipapa Road and Lake Road

Date	Opening hours
All year	Monday to Friday - 12.30pm to 4pm Saturday, Sunday and public holidays - 8.30am-noon, 12.30pm-4pm (Closed Christmas Day & Good Friday and up to 1pm Anzac Day)

4.1.2.2 Charges at Broadlands Road Resource Recovery Park

2022/23 waste disposal charges at Broadlands Road are based on weight. Load composition will be assessed upon arrival at the site.

Load	Minimum Charge	Cost Per Tonne
Refuse Bags up to 60L (Orange sticker required)	Orange Sticker ($1.50)	n/a
Refuse)	$17	$170
Green waste	$5	$51
Tyre disposal charges	n/a	$3.50-$11.80 each
Clean Fill	$2	$20
Concrete disposal	$2	$20
Crushed concrete sale	n/a	$12
Special waste - immediate burial	n/a	$178

4.1.2.3 Charges at District Transfer Stations

Load composition will be assessed upon arrival at the transfer station.

Load	Refuse	Greenwaste
Refuse Bags (Orange sticker required)	Orange Sticker ($1.50)	n/a
Small load e.g. car boot (under 100 kg)	$17	$5
Medium load e.g. small vans, utes, trailers (under 250 kg)	$42	$12
Large load e.g. large vans, utes, trailers (under 400 kg)	$68	$19
All loads over 400 kg (e.g. large trailers, trucks)	$170 per tonne	$51 per tonne
Tyre disposal (Turangi Transfer Station only)	$3.50 - $11.80 each	n/a

4.1.3 Private Commercial Landfill

There is a commercially run landfill operating off Rakaunui Rd in Taupō, which is classified as a Class 2 - C&D/Industrial Landfill. The site mainly accepts wood waste from the Mill site on Centennial Drive. As this site is not lined, it cannot accept household wastes. Current waste disposal tonnages to site are also currently unknown at this time.

4.1.4 Closed Landfills

There are three consented closed landfills in the Taupō district, located at Broadlands Rd, Turangi RTS, and in Mangakino.

All three have landfill closure consents, which require TDC to monitor for environmental effects, as well as repair damage to landfill capping. As the landfills have been closed for more than 20 years, the environmental effects are diminishing. The landfills were operated prior to the requirement for landfills to be lined and so sites were capped to prevent the ingress of storm water and to minimise the amount of leachate production.

These three sites continue to be monitored and reported on by Council with the results provided to WRC. All three sites have requirements for site inspections to check for ground slumping, erosion, grass cover or any other detrimental effect from the sites. It is envisaged that this monitoring requirement will continue until environmental monitoring determines that these sites no longer pose an environmental risk.

The landfills are not situated in a flood plain or overland flow path, so climate change will not be a factor for any of the three sites.

4.2 Hazardous Waste Facilities and Services

TDC operates only one hazardous waste drop off facility, which is located at the Broadlands Rd Landfill. The facility accepts household quantities of hazardous chemicals only and does not accept commercial or large quantities mainly due to the cost of disposal. Large and commercial volumes of hazardous waste are seen as an operating cost of the business and therefore the business must dispose appropriately.

TDC provides for used oil disposal at Broadlands Rd Landfill, Turangi and Mangakino transfer stations in the form of oil disposal tanks. Domestic quantities of waste oil are accepted, and oil is collected and used for heating.

4.2.1 Fats and oils collection and disposal

Fats, oils and grease from district restaurants and food outlets are regulated by council's Trade Waste Bylaw which require regular collection and appropriate disposal.

4.2.2 Biosolids

The vermicomposting facility located just north of Taupō currently diverts around 2,000 tonnes of the district's Biosolids from being disposed of into the Broadlands Rd Landfill annually.

4.2.3 Medical Waste

Waste from medical facilities (hospitals, surgeries, vet practises) is collected by specialised medical waste collection companies such as NitrogenX. All medical and controlled waste is disposed of to

meet the New Zealand Standard NZS 4303:2002 Management of Healthcare Waste and does not come to the Broadlands Rd Landfill for disposal.

4.2.4 Hazardous Waste types

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

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

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

The waste acceptance criteria detailed in the Broadlands Rd Landfill Site Management Plan details what can be disposed at the site with different materials having different levels of contamination permissible.

Asbestos is not currently accepted at the any of Council's waste facilities with members of the community wanting to dispose of asbestos directed to contractors that are certified to handle the material and then it is disposed of at either the Tirohia or the Hampton Downs Landfill.

4.2.5 Hazardous Waste Operators

Name	Location
Name, operator	**General location**
R&S McGregor Hazardous Substances management	North Island
Rainbow Septic Tank Fats Oils and greases / septic tank waste	Taupō District
Intergroup Ltd	North Island

4.3 Recycling programs and processing facilities

The only recycling processing facility in the Taupō district is in the Taupō industrial area and is operated by Envirowaste Services. This facility processes material collected from kerbside as well as from the Broadlands Rd landfill and Kinloch transfer station. This site can also act as a regional processing hub for EnviroWaste where they take bulk material from out of the Taupō district and include it with the material collected locally.

The facility is part funded by the TDC's kerbside collection contract and Envirowaste receives additional revenue from the bulk load locations from out of the district.

With the kerbside service potentially going to wheelie bins, a manual sort line which is not best practice for sorting co-mingled materials may no longer operate.

TDC also utilises the Waikato Achievement Centre in Tokoroa to process recyclable material from the Mangakino RTS site as it is more cost effective currently than using the Taupō facility.

Recyclables from the three southern Refuse Transfer Stations (RTS) are bulk loaded after manual sorting to market.

Currently a large portion of the material collected through the Taupō district recycling programs is exported overseas. The exception to this is glass, which is reprocessed in Auckland, and paper and cardboard, which are reprocessed at the Kinleith Mill.

As TDC currently operates a kerbside sort collection for recycling, the contamination rates are very low down at 1%. Which means the product currently collected from the Taupō district is of high export quality and provides for a good return from the recovered materials market.

There are a number of scrap metal dealers in the Taupō district, which are influenced by the value of scrap metal in the recovered materials market. Due to international market vulnerability caused by China's green sword policy (a reduction of imported recycled material with more focus on internal) we have seen a decrease in the value of recovered steel over the last four years.

4.3.1 Secondhand good stores/reuse stores

A number of second-hand goods stores operate throughout the Taupō district that reuse anything from clothing to furniture. TDC also operates reuse facilities at all six transfer stations. Council does not have any information regarding the volumes of materials diverted from landfill from these private facilities, but they do provide a valuable reuse opportunity to our district communities.

4.3.2 Concrete

Concrete is diverted at the Broadlands Rd landfill, where material is stockpiled and then crushed. Reinforcing steel is removed by way of a magnet and the crushed material is sold to the market with 7,174 tonnes diverted during the 21/22 year.

4.3.3 Construction and demolition waste

TDC does not currently sort and reuse construction waste (apart from concrete) with the majority being taken straight to the tip face. Construction waste currently makes up around 27% of waste disposed to landfill some 7,700 tonnes annually.

It is likely that more construction and demolition waste could be recovered if the construction industry sorted this waste to at least a basic level on site. However, anecdotal information suggests that the industry view this as difficult and expensive. To enable further diversion of waste Council can apply to the Waste Minimisation Fund from Central Government to upgrade the transfer pit area to enable further sorting.

TDC does not currently supply collection services to construction sites. This is left to the market service providers as their core business. At the current landfill disposal prices, there is currently not enough incentive for construction sites to divert material apart from the heavy material like concrete. This issue is exacerbated by the fact that modern construction sites have multiple users

that come and go and use the skip bins supplied to dispose of all material. Differential pricing of recyclable skips and waste skips works to a limited extent but is undermined by the multiple user problem.

Market development for diverted materials is key as viable markets are needed if sustainable diversion is to continue, otherwise material will be left in stockpiles. Taupō's central location does mean that the main markets are close by. Local and central governments will have to work closely with industry to ensure that barriers to reuse of diverted construction and demolition are removed.

Central government have also signalled that they are willing to introduce the requirement for building sites to have waste minimisation plans, but to date this has not been regulated.

4.3.4 Wood Waste

Wood waste makes up 26% of the total waste to landfill at 7,800 tonnes per annum. Central government is looking to support the diversion of wood waste as wood produces methane gas when it breaks down in landfill. The current processing options are north of Auckland, so any diverted product will face a transport and processing gate price.

4.3.5 Soft plastics

Industry is currently providing a soft plastic recycling program in the district but currently this is only offered in Taupō at the Countdown supermarket. TDC will look to work with industry to try to get this service rolled out across the district. Recovered soft plastic is currently being made into farm fence posts as an alternative to treated wood posts.

Recycling of plastic bags is expensive with limited outlets and uses in New Zealand. The costs of the recovery of bags are high compared to the market price when other variables are considered such as mixed material plastic bags, coloured bags, contamination, and sorting/processing issues. Approximately 180,000 plastic shopping bags are required to make up one tonne of saleable product.

4.3.6 SeatSmart Recycling Program

Children's car seats are recycled in the district at the Taupō transfer station and are processed out of the district. Car seats are stripped of the various materials which are then recycled. Providing this opportunity also helps remind people that the seats have an expiry date after which they can't be used.

4.3.7 Battery recycling program

Batteries can be recycled for free at the Turangi and Broadlands Rd transfer stations. Batteries contain numerous components that are detrimental to the environment, and they can deteriorate if not in use and become hazardous. Collecting batteries before they deteriorate means they can be recycled appropriately, saving valuable components for reuse, and reducing the risk to people and the environment. Lithium-ion batteries have been found to be the cause of numerous recycling facility and landfill fires, so by providing a recycling option Council reduces this fire risk.

4.3.8 E-waste recycling program

Council collects electronic waste at Broadlands Rd, Kinloch, Turangi and Mangakino facilities free of charge. E-waste is then transported to the South Waikato Achievement Centre, where items are dismantled and recycled. E-waste has now been mandated for a product stewardship program, so

costs involved in diverting this material will fall on the scheme. Council will determine the need to be involved in the scheme once the product stewardship program program rolls out.

4.3.9 Used Oil

Household quantities of used oil is accepted at Taupō, Turangi and Kinloch transfer stations for recycling. Commercial volumes are not permitted as this is seen as an operating cost of the businesses. Oil is either refined or used for heating.

4.3.10 Tyres

Currently Council is sending tyres to the Golden Bay cement plant in Wiri through Waste Management, where they are being used to create energy. Tyre derived fuel (TDF) is the main use for end-of-life tyres across the planet. Central government has mandated tyres to be a priority product, and industry are working on finalising the product stewardship program currently. The program includes legacy tyres, and its implementation will mean that end of life tyres will no longer be a fly tipping issue. Council is currently only taking limited tyres from households and is requiring industry to connect with Waste Management who run the TDF program for disposal of their tyres.

4.3.11 Paint

Paint can be taken to our district waste facilities and is offered back to the community free of charge if usable. If unusable, it is disposed to landfill. Resene Paints also have a nationwide take back program operating.

4.3.12 Green waste

Green waste is mulched at district facilities and the mulched material is free to the community to take, apart from Broadlands Rd Landfill, where the contractor screens this material and sells it. Diverting green waste means that this material is kept out of the landfill where it would create methane. Currently the district facilities process around 5,000 tonnes annually.

4.3.13 Refillables

In essence this is educating communities that they don't have to buy a new container for water, users could just go to the nearest water fountain. Refillable containers can also be different sizes to enable bulk purchasing such as glass milk bottles or larger drink containers.

By educating communities about the benefits of reusable drink containers council could reduce the amount of drink containers disposed to landfill.

4.3.14 Recycling and Reprocessing Facilities around the District

Table 2 below shows the various reprocessing facilities found in and around the district.

Table 2 List of recycling processing facilities around the Taupo district

Facility	Description
O-I NZ Ltd	Process colour-sorted glass
Global Metal Solutions	Ferrous metals recycling
MetalCo	Scrap metals recycling
Oji Fibre Solutions	Paper and some card
EcoCast	Vermicomposting of industrial, council and some post-consumer organic wastes in Kawerau

MyNoke Ltd	Vermicomposting of industrial, council and some post-consumer organic wastes in Kinleith and Bio solids In Taupō
Resene PaintWise Collection (Waihi Road, Tauranga)	Accept unwanted paint and paint containers, with a small charge for non-Resene product. No automotive or marine paint. Material is reused, recycled, or processed as appropriate.
Agrecovery	Accept unwanted agrichemicals and empty containers. Collection from properties (some charges apply)
Countdown	Soft plastics
E-waste	South Waikato Achievement Centre
Reclaim	Plastics grade 1 and 2, baled cardboard
Eco Gas	Food
Aotearoa Plastic	Number 5 Plastic

4.3.15 Assessment of Recycling and Reprocessing Facilities

The current level of recycling reprocessing facilities for kerbside collected materials is considered adequate for the Taupō district as the Envirowaste facility has additional capacity if volumes were to increase. This facility also takes material from the Broadlands Rd Landfill and Kinloch transfer station.

Currently the Envirowaste facility sorts plastics into grade 1 and 2 and 5 (large Items) then co-mingles any residual smaller plastic with the aluminium cans. Paper and cardboard are separated ready for market and glass is sorted at the kerbside to avoid glass contamination with the other materials. Tin cans are separated out with the use of a magnet placed over the sort line. This process changes as the demand for materials fluctuates with number 5 plastic's now taken separately to Aotearoa Plastic's in Palmerston North.

The nearest MRF (materials sorting facility) is located in Hamilton, with this being a possible destination of comingled district recycling if Council is to implement a kerbside wheelie bin collection service.

5 Waste Services

5.1 Kerbside collections

Waste and recycling collection services (kerbside collections) are provided weekly to all urban communities within the Taupō District. The following materials are currently collected:

Glass bottles and jars

Paper / Cardboard

Tin, Steel and Aluminium cans

Plastics 1, 2, & 5

TDC's service is currently contracted to EnviroWaste Services with the expiry date being July 2024. As council is looking to alter its kerbside collection service, Council is negotiating a possible extension to the kerbside service out to the end of June 2025.

The refuse portion of the collection service is user pays and the service is provided by TDC as well as by private service providers. Some rural service provision is also provided by private service providers also on a "User Pays" basis.

Refuse collected from kerbside operations (both public and private) is ultimately disposed of at the Broadlands Rd Landfill.

There is a number of collection options available, which consist of a 30L bag and 60L bag collections, 120L wheelie bin collections, and some larger bins and skips for multi residential, Commercial and CBD business. TDC has regulated receptacle sizes to incentivise waste minimisation but there is no limit to the amount of bagged refuse placed at the kerb.

The TDC service provides for the collection of a 60L refuse bag with an orange sticker. There is also the option of having 30L bag and the sticker can be halved, this allows service provision for those that put out less waste.

TDC's Solid Waste Bylaw provides regulation for kerbside waste collectors and allows for the licensing of collectors to make sure that their operations do not cause a nuisance. TDC has also set collection areas for each day of the week and kerbside collectors can only undertake collection in residential streets on that day, this is to avoid having refuse and trucks on streets on multiple days of the week.

CBD areas are collected twice weekly under TDC's contract and more often under commercial agreements made by business owners to allow them to deal with greater volumes. As part of the kerbside service review council will review the current collection area maps to look to include urban areas that are not currently collected and rationalise the current collection areas to achieve the best utilisation of resources.

Private service providers are providing a kerbside green waste collection in Taupō Township only with collections being user pays and collections frequency determined by the user.

The collection of refuse bags at the kerbside being user pays does mean that the current service provision faces competition in the market which has resulted in Council's market share being only 27%. The commercial market providing wheelie bins and bags has the rest of the market share and a large proportion of this market share is made up of wheelie bins.

5.2 TDC Waste Education and Minimisation Programmes

TDC supports a number of waste education programs that focus mainly on waste diversion from landfill and assist TDC to achieve its waste goals and vision.

- Enviroschools (school program)
- Paper4Trees (school program)
- Kate Meads (waste free parenting / food waste prevention)
- Love Food Hate Waste (National food waste reduction program)
- Radio advertising (collection days / kerbside recycling options)
- Council web content (Council waste service delivery)
- Council facebook page
- Council Phone App (Council waste service delivery)

- Composting workshops (food waste diversion)
- Litter prevention program
- Plastic free July program

Council's education programs will develop and change as new waste minimisation initiatives and opportunities arise. Council will also look to align our educational programs to support central government direction as they develop a new waste strategy and develop new waste policy and services.

5.2.1 Home Composting Program and Subsidy

To help educate interested residents on how to compost at home, we run regular workshops with Taupō Community Gardens in Taupō and Awhi Farm in Turangi that are free to attend.

We encourage families in the Taupō District to recycle their green and food waste and as an incentive are offering a subsidy toward composting equipment for residents. Residents can save up to $100 on selected composting equipment available from Taupō stores and online. We focus on food waste as it creates methane gas as it breaks down in landfill.

Council's subsidy program includes two worm farms and a composting unit:

- Earth Maker composter
- Hungry Bin worm farm
- Can O Worms worm farm

This program extends to schools in the district, where composting units or worm farms are provided to the schools along with education around how to use the units. The aim is to encourage food waste diversion and reuse at the school. The subsidy program is estimated to divert 280 tonnes per annum.

5.2.2 Resource Wise Business

The Resource Wise Business Programme aims to reduce the amount of waste local businesses send to landfill. As part of the programme, businesses receive an annual waste audit, a summary report with a detailed action plan as well as resources and support to implement actions.

5.2.3 Resource Wise School

The aim of the Resource Wise Schools Programme is to educate students and minimise waste to landfill. To help schools minimise waste to landfill, we have developed a free programme in which schools work their way through five stages. Each stage contains practical activities that take participants on a journey of waste minimisation.

5.2.4 Resource Wise Events

We facilitate and encourage the reduction of waste at Taupō District events by requiring a Waste Management Questionnaire submitted by all events either on council land or part-funded by council, provide one-on-one feedback to event organisers, and share resources in the form of loan-out equipment and Taupō-specific event waste guides.

5.2.5 Para Kore program

We part-fund the local Tūwharetoa branch of Para Kore and work with the kaiārahi to best support zero waste education in Taupō district marae, kura kaupapa, and kohanga reo.

5.2.6 Enviroschools and Paper 4 Trees

TDC part-funds Enviroschools, who work with 16 Taupō District schools, educating on the topics of zero waste, energy, waster, growing food, and more.

TDC also provides funding to Paper 4 Trees, who are currently working with more than 20 Taupō District schools to encourage paper recycling in exchange for trees that can be planted on school grounds or in the local community.

5.2.7 Community Litter Initiatives

We run five or more community litter pick up events per year, getting locals and visitors alike to take part in cleaning up our local streets, parks and reserves, and waterfront areas. We also have a loan-out system of litter supplies for any school, business, or community group who wants to organise their own clean up. We also have regularly scheduled clean ups with schools and Early Childhood Educators throughout the district, to provide hands-on support and litter education to local students.

5.2.8 Kate Meads Workshops

The nationally renowned 'Nappy Lady', Kate Meads, holds waste minimisation workshops in Taupō and Turangi every year. The workshops are for parents who want to make responsible choices to reduce their waste output, minimising families' ecological impact and introducing the community to exciting and modern waste-free alternatives to expensive disposable products. At the workshops, parents and parents-to-be receive tips and information on what they can do at home to reduce their waste output.

A tranche of Kate's educational waste free programs tackles sanitary waste and provides alternatives to the current period products that have long term disposal issues. Central government have recently supported schools with disposable period products and Council will need to continue to lobby for alternative products to tackle this waste issue.

5.2.9 Love Food Hate Waste

We provide funding for the nationwide government supported Love Food Hate Waste campaign and share their campaigns and initiatives throughout the year through our TDC communication platforms.

5.2.10 Taupō Environmental Education Collaborative (EEC)

Taupō District Council is an active member of Taupō EEC - a group of environmental education providers. Through our collaboration we learn from, support, and build on each others' success, together providing better environmental education for students, teachers, and whānau across the Taupō District. This includes hosting teacher professional development workshops, hosting free community events, and collaborating on in-school education opporunities.

5.2.11 Waste Minimisation Grant

Council provides $10,000 of Waste Levy funding in the form of the Waste Minimisation Grant to provide individuals, community groups and organisations with the opportunity to fund initiatives

that: reduce the generation of waste; encourage the reuse and recovery of materials; divert waste from landfill through reuse, repair, recycling, and composting; and raise awareness of issues around food waste, single-use plastics, and other wastes. Applicants can apply for up to $2,000 towards their project.

5.3 Solid Waste Bylaw

The bylaw will continue to support the licencing of waste collectors and waste facility operators.

The Solid Waste Bylaw Objectives are:

- Promote the Council waste strategy and NZ Waste Strategy
- Ensure efficient and effective waste management in accordance with legislative requirements
- Impose performance standards for the benefit of the public and public health
- Monitor and regulate collectors and facility operators
- Promote the safe collection and disposal of waste.

As the Taupō District is a popular events destination, Council has made provision in its Solid Waste Bylaw for all events to provide a "waste minimisation plan" to ensure that materials are recovered and that the event fits with the district's clean and green image.

Council's Solid Waste Bylaw will need to be aligned with a new kerbside service delivery to make sure that bin sizes are supported, and details will also support the three-strike contamination policy.

As Council has a focus on C&D waste, the bylaw might support the requirement for builders to have a waste plan, this requirement will depend on central government's progress on the regulated plan requirement.

TDC's Solid Waste Bylaw must align with Council's WMMP, so the requirement to review the bylaw will be dependent on any new options taken forward through the WMMP process.

5.4 Litter Control and Enforcement

Taupō is a tourist destination and has large summer visitor numbers, which results in litter being an ongoing issue throughout the district. Local roads suffer from litter in the form of takeaway residuals being disposed from vehicles. In addition, public rest areas and parking spots are often left with litter even though litterbins are provided.

TDC employs full time litter staff who undertake regular roving collections in high use areas. CBD streets are also cleaned and swept under contract on a regular basis. TDC uses either internal resources or local contractors to clear up illegally dumped waste. Staff inspect the dumped materials to locate names and addresses to follow up, however, it is difficult to obtain a prosecution unless the person dumping has been caught in the act.

Council runs educational programs including in-class lessons, litter pickups with schools and school litter competitions are held. For schools to progress through the Resource Wise program they must have completed a litter pick up.

Council also supports the community to reduce litter by hosting regular community litter pick up events and having litter collection loan out equipment for community groups to borrow.

Council liaises with the Tidy Taupō group to identify litter hotspots so that we can coordinate staff litter collections.

Regular community litter collection events are held every New Year's Day, Earth Day, and clean up week and Valentine's Day. Council has twice won the most beautiful large in NZ (Keep NZ Beautiful) and this reflects the amount of good work being done.

Council also lobbies central government to introduce the container return scheme that could reduce litter by 44%.

5.5 Street Litter and Recycling Bins

CBD areas and most reserves owned by TDC have street litter and recycling bins for the disposal of non-domestic waste. New Big Belly bins with solar compaction and the ability to send notification when full are slowly being rolled out in the district.

TDC uses internal staff who drive our tidy trucks to deal with the litter hot spots mainly within or close to the urban settlements. The roading network litter is included in the roading maintenance contract.

TDC's service delivery for bin provision varies throughout the urban settlements. Whareroa, Omori, Kuratau and Pukawa do not have any refuse bins, but do not suffer from litter, as the community is proactive in picking up any material and "packs in and out" any litter. These communities also do not have any fast-food outlets and thus litter that we see from these establishments in other areas is not present. The geographical isolation of these towns also means that most food is brought from supermarkets and consumed at home.

The other urban centres of Taupō, Turangi and Mangakino do have food outlets and are connected to the state highway, so see vast numbers of people passing through the district purchasing material and unfortunately discarding this material on occasion.

There is a high demand for refuse and recycling bins in the three main urban centres and Council's current service delivery covers CBDs and some parks and reserves and high use areas such as the Super Loo and Taupō Lakefront.

Litter is discarded in a number of ways, with a main problem being fast food containers thrown from vehicle windows after consumption, and this mainly affects the rural roads and state highways around the district. Litter is also discarded after items have been unwrapped and the wrapping is discarded, while some litter is generated from windblown kerbside collection material.

Taupō Council was the first Council in New Zealand to install the Big Belly refuse compaction bins, which use sunlight to power them and send a signal to the collector once they are full. Council have placed these bins in the high use areas, and because they compact, they provide additional capacity and thus less empties than the smaller 60L street litter bins. The collection contractor does not have to travel to the bin to check to see if it is full as the bins send the full signal, so this reduces vehicle trips around the bin fleet, resulting in savings for Council. Council also has a number of 60L bins mainly in the CBD, as these are easily emptied as the collection vehicles regular patrol these areas.

Council also provides recycling bins that sit next to refuse bins, with the bins designed to mainly take drink containers, as most other potentially recyclable material is contaminated. Council was able to divert 13 tonnes from Landfill in the 21/22 year. The size of the opening to the recycling bin is significant as a larger opening increases the contamination rate, with the placement of the bins next to the Big Belly compactors means that there is usually sufficient litter capacity, and this then gives the user the option to recycle.

Council's policy for less populated areas and those far from food and beverage outlets is not to supply bins, with the emphasis on "pack it in and pack it out", this is the same policy the Department of Conservation uses for its lakeside reserves, and it works well.

5.5.1 Initiatives to achieve "Cleanest district"

A cross-organisational effort focuses on:

- Collecting discarded material and making public the details of what has been collected
- Educating people around why not to litter and achieving some community ownership of the issue
- Lobbying central government to support a nationwide education program
- Lobbying central government to update the Litter Act to make it easier to enforce
- Working with local police to increase the amount of enforcement on littering in the district
- Lobbying central government to introduce a product stewardship program for drink containers with the possible reduction of litter of 44%
- Having litter collection packs available for those that want to collect litter
- Finding out where most waste is discarded and increasing the service level in these areas.
- Linking in with local litter groups' facebook page / building relationships
- Working with the community to reduce contamination in the street recycling bins

5.5.2 Coffee cups and single-use takeaway packaging

Coffee cups are one of the main contaminants found in the district street recycling bins. Even though a number of cups have a recycling symbol on them, the vast majority of take away coffee cups are not recyclable due to the plastic liner, which prevents burns and makes them waterproof.

These and other single use takeaway packaging require natural resources to create and transport and once thrown out end up in landfills creating potentially harmful leachates and methane.

There is a need for Council to lobby central government to provide national wide education on takeaway coffee cups and other single use takeaway packaging. There is also a need for local cafes to work together to provide alternatives. There are currently several cup return programs running in NZ with varying degrees of success, but to date there is not a program successfully running in the Taupō district.

5.6 Rural and Farm Waste

A 2014 Waikato Regional Council study on farm waste management practices in the Waikato and Bay of Plenty found that a very large number of farms use one of the 'three B' methods of waste management – bury, burn, or bulk storage on property. The study also estimated that there would be an average of 37 tonnes of waste disposed of on each farm property. It is considered that these numbers would reflect tonnages in the Taupō District.

The methods currently used to manage farm wastes are far from ideal and, in some cases, have the potential to have a negative impact on the environment. Farmers generally agree that these methods are not ideal and would like better options. However, the 'three Bs' are perceived to have 'no cost' compared to alternatives that do have a financial cost associated.

Central government have identified farm waste as an issue and have now mandated a number of products to have product stewardship programs which will assist farmers with dealing with waste appropriately.

Current mandated products include:

Tyres, Electrical and electronic products (e-waste), Refrigerants and other synthetic greenhouse gases, Agrichemicals and their containers, Farm plastics, Packaging (beverage packaging, single use plastic packaging).

All these programs will have the consumers pay up front for the end disposal of the material, thus taking away the end-of-life disposal cost that drives undesirable actions.

5.7 Funding for Council-provided Services

Currently TDC waste services are currently funded by a mix of rate funding and fees and charges at district facilities. Kerbside refuse collection is currently fully user pays. Council rate funds recycling to maximise diversion as it is perceived by the community to be free to drop off at waste facilities and at the kerbside.

The review of the kerbside refuse, food and recycling collection will mean that the cost centre may now rate fund these services. A new rate will have to developed for the rural areas where they are not serviced by the kerbside collection service.

5.8 Non-Council Services

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

Both Envirowaste Services and Waste Management, the two biggest waste service providers in New Zealand, currently provide waste collection options within the district. There is also a number of smaller operators in the market offering skips and wheeled bins to commercial premises.

Both larger companies offer wheelie bin and skip bin services throughout the district under commercial user pays contract. These services fill the needs gap where TDC provided services do not cover and both companies compete with TDC provided kerbside refuse collection. All waste from private and TDC provided refuse collection services is currently disposed of to the Broadlands Rd landfill.

With the possible provision of the new rate funded service collection mix, commercial operators will move out of the provision of kerbside collections. But there will be opportunities for the commercial market to provide services over and above those provided by Council.

In some instances, such as restaurants and other businesses that create large amounts of refuse, recycling and food waste the service provided by council may not cater for their needs and these businesses can approach the commercial market as they do currently.

The commercial market may also want to offer kerbside collection in some rural areas, and Council will look to support that outcome, but ultimately it will have to be financially viable for the market to provide service delivery.

The commercial market ultimately will want to compete for waste tonnages as they do now at the kerbside. This competition expands to Landfill and Transfer station operation, with the market actively competing with local government in a number of areas.

Due to the relatively low tonnages coming from our district transfer stations it is unlikely that the market would compete in these locations. The decision to compete with the Broadlands Rd Landfill will be determined by how council sets its gate price, and the market's ability to compete at the price setting considering the transport cost to an alternative disposal location.

If council rolls out a new kerbside service, then Council will have control of around half the waste stream, which is kerbside volumes and transfer station waste combined. The residual tonnage is made up of residential waste and commercially collected waste, which at the right price could be diverted. Council will need to make sure that the price break point is understood going forward.

Commercial operators do have the ability to take waste to other disposal facilities which would reduce the Broadlands Rd Landfill revenue return but the ability to do this cost effectively is governed by the transport and handling cost. With TDC's current and possible future funding mix, TDC should be able to keep the gate charge at a rate that discourages waste flight.

6 Situation Review

6.1 Waste to landfill and Recycling Tonnages

6.1.1 Waste to Class 1 Landfills

The Broadlands Rd landfill is the only Class 1 Landfill in the Taupō district. The site does not accept waste from out of the district as TDC has ring fenced the landfill for district waste only, with this requirement policed by the district facility operators. Landfill tonnages have seen an increase over the last three years in line with the rise in economic activity in the district and nationally.

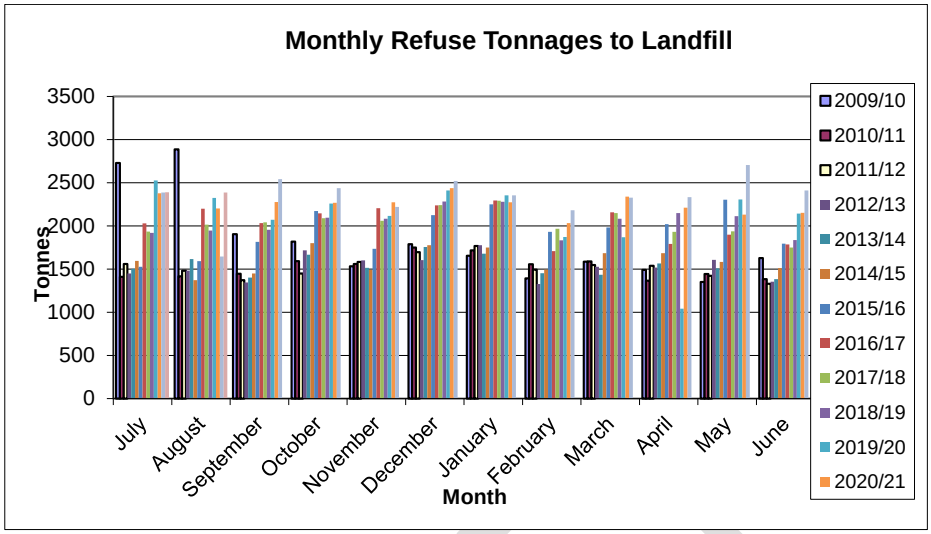


Figure 8 Monthly tonnages to landfill 2009-2022

Table 3 Monthly tonnages to landfill 2009-2022

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
July	2730	1410.97	1558.6	1448	1502.95	1594.47	1527.22	2029.61	1934.26	1919.14	2527.53	2378.1	2386.65
August	2886	1417.26	1482.23	1482.66	1616.13	1373.27	1592.42	2198.63	2015.12	1945.35	2323.45	2203.5	1645.57
Septembe	1904	1444.88	1372.23	1345.95	1402.59	1450.07	1814	2033.29	2041.41	1956.81	2072.67	2277.28	2541.88
October	1818	1592.06	1448.44	1715.96	1666.97	1800.8	2171.65	2144.58	2090.59	2094.74	2258.24	2269.4	2438.44
November	1534	1558.83	1582.05	1601.64	1515.43	1491.25	1736	2206.23	2059.57	2083.06	2115.07	2275.22	2219.98
December	1789	1750	1697.72	1604.05	1757.31	1775.44	2125.5	2239.38	2242.12	2281.87	2412.4	2437.05	2521
January	1655.7	1717.61	1766.87	1775.53	1679.22	1749.91	2250.85	2293.95	2291.73	2278.65	2354.82	2275.36	2355.21
February	1394.03	1556.47	1493.79	1326.12	1451.05	1492.62	1930.57	1709.35	1968.46	1832.38	1873.46	2033.31	2182.02
March	1584.95	1589.67	1548.54	1527.34	1433.47	1685.77	1981.57	2157.02	2148.19	2084.12	1870.52	2340.27	2328.42
April	1491.66	1364.48	1538.04	1517.1	1564.1	1683.29	2020.48	1792.15	1930.14	2148.26	1042.35	2211.04	2333.09
May	1350.71	1443.83	1421.99	1605.68	1507.35	1584.50	2302.28	1900.3	1938.73	2112.66	2307.43	2132.25	2704.71
June	1627.97	1384.01	1330.66	1352.72	1382.55	1511.16	1794.96	1786.35	1750.34	1836.49	2142.83	2150.63	2411.54
Total	21766.02	18230.07	18241.16	18302.75	18479.12	19192.55	23247.5	24490.84	24410.66	24573.53	25300.77	26983.41	28068.51

6.2 Composition of Waste to Landfill

As part of the Waste Assessment, an analysis of the overall composition of waste going to landfill was performed in August/September 2022. The results are shown in Table 4 below.

Table 4 Primary composition of overall waste to Broadlands Road Landfill from 1 August to 25 September 2022

Overall waste to landfill - Primary composition 1 August - 25 September 2022	% of weight	Tonnes/week	Tonnes per annum (indicative only)
Paper	7.6%	43 T/week	2,218 T/annum
Plastics	15.9%	90 T/week	4,673 T/annum
Organics	19.2%	108 T/week	5,643 T/annum
Ferrous metals	2.6%	15 T/week	777 T/annum

Non-ferrous metals	0.6%	3 T/week	167 T/annum
Glass	2.8%	16 T/week	823 T/annum
Textiles	5.8%	33 T/week	1,708 T/annum
Sanitary paper	4.1%	23 T/week	1,208 T/annum
Rubble	12.4%	70 T/week	3,633 T/annum
Timber	26.8%	151 T/week	7,873 T/annum
Rubber	1.1%	6 T/week	313 T/annum
Potentially hazardous	1.1%	6 T/week	316 T/annum
TOTAL	**100.0%**	**563 T/week**	**29,351 T/annum**

The tonnes per annum are indicative only as they are based on the survey data gathered over the survey period only.

Timber was the largest primary category of waste disposed of at the transfer pit, comprising 26% of the total. Organics was the second largest category, comprising 19% of the total weight. Paper, plastics, and rubble all comprised 36% of the total. Volumes will vary during the year with population and spring growth periods.

6.3 Activity Source of Waste

Weighbridge data for the survey period (5 August – 22 September 2022) shows that 563 tonnes of material per week were disposed of at Broadlands Road over the week period analysed. The proportions of the different waste sources of waste are shown below.

General waste direct to the tip-face was the largest source of waste at the landfill during the survey period, comprising 46% of the total. Kerbside waste collections, including both Council and private collections were the second largest type of waste, comprising 22% of the total. Waste from the transfer spit represented 22% of the total weight of waste.

Table 5 Sources of waste to landfill

Sources of levied waste to Broadlands Road landfill – 1 August - 25 September 2022	% of weight	Tonnes/week
General waste to tip face	46%	258 T/week
Kerbside rubbish collections	22%	123 T/week
Rural transfer stations	8%	42 T/week
Special wastes	0%	3 T/week
Transfer pit	22%	127 T/week
Cleanfill material to tip face	2%	11 T/week
TOTAL	**100%**	**563 T/week**

Table 6 Activity sources of waste to landfill

Activity sources of all levied waste fromTaupō District 1 August - 25 September 2022	% of weight	Tonnes/week
Construction & demolition	27%	149 T/week
Industrial/commercial/institutional	35%	200 T/week
Landscaping	2%	12 T/week
Residential	12%	66 T/week
Subtotal – General waste	**76%**	**427 T/week**
Kerbside rubbish collections	22%	123 T/week
Specials	0%	3 T/week
Cleanfill material to tip face	2%	11 T/week
TOTAL	**100%**	**563 T/week**

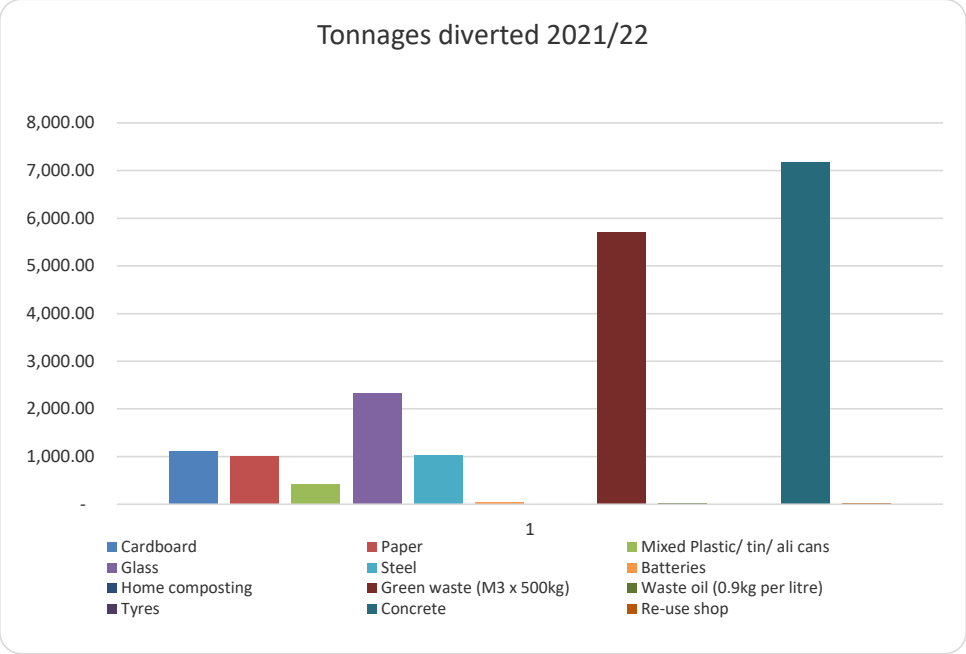
The activity source of the waste to landfill identifies from what activities the waste was generated. The bulk of the general waste coming to the site is construction and demolition (C&D) waste, and waste from industrial, commercial and institutional sources (ICI). Kerbside waste collected makes up the majority of the remaining tonnages.

6.4 Diverted Materials

6.4.1 Overview of Diverted Materials

Overall, TDC services have diverted 26,301 tonnes of material from being disposed of to the Broadlands Rd Landfill. This sum does not take into consideration material diverted from commercial re-use facilities, as weights have not been given. The breakdown of materials is shown in Figure 9 below.

Figure 9 Total tonnes of diverted material 2021/22



The overall tonnage of material processed combines 21/22 waste to landfill figure of 26,983 and the diverted material tonnage of 26,301 for a total tonnage of 53,284, and a waste diversion rate of 49%.

While the tonnage of plastic and glass are smaller than the concrete and green waste tonnages, these two material types require significant extra effort to process due to the numbers of items being processed.

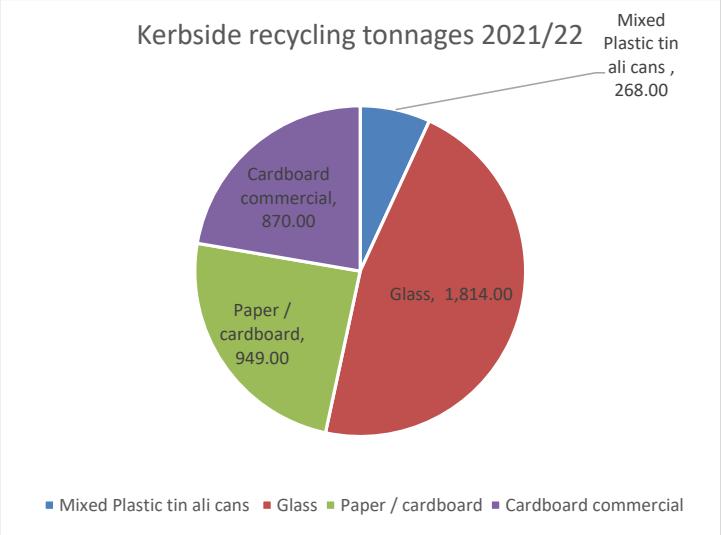
The Broadlands Road Landfill is the main contributor to the diverted tonnage totals. The main materials making up this volume are from concrete and green waste diversion due to bulk green waste and the weight of the concrete. Concrete is crushed and resold to the market and is used locally for tanker tracks and driveways and the green waste is windrow composted and is the landfill contractor's responsibility to sell to the market.

Glass, paper/cardboard and the mixed plastic and aluminium cans are collected and sorted by Envirowaste before being sent to market.

6.4.2 Composition of Kerbside Recycling

The data regarding composition of the kerbside mixed recyclables (Figure 10) comes from the EnviroWaste Services sorting yard where the materials are loaded out to market. The material is collected from all urban areas in the district and tonnages include materials collected from commercial businesses. The contamination rate of material collected from kerbside is between 1-2%

Figure 10 Tonnages of diverted material from kerbside collection 2021/22



7 Performance Measurement

7.1 Current Performance Measurement

This section provides comparisons of several waste metrics between districts 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.

7.1.1 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)

7.1.2 Per capita disposal of waste - comparison with 2008, 2013 and 2017

The per capita disposal of waste to landfill by residents of Taupō District in 2022 is calculated in Table 7 and compared to the same figures from SWAP surveys by Waste Not Consulting in 2008, 2013, and 2017 but is only a snap shot in time and will vary on a day to day basis.

The 2022 population estimate for Taupō District has been provided by Council. The annual tonnage of levied waste disposed of at Broadlands Road landfill has been extrapolated from weighbridge records for the eight-week period 1 August - 25 September 2022.

Table 7 Per capita disposal of waste to landfill

Taupō District - Per capita disposal of waste to landfill	2022	2017	2013	2008
Usually resident population - Taupō District	41,000	37,000	34,300	32,148
Tonnes per annum to landfill	29,351	24,901	18,118	19,700
Disposal of waste to landfill - tonnes per capita per annum	**0.716**	**0.673**	**0.528**	**0.613**

Based on the available data, per capita disposal of waste to Broadlands Road landfill has increased by 17% between 2013 and 2022, from 0.613 tonnes/capita/annum to 0.716 tonnes/capita/annum.

7.2 Per capita disposal of waste - comparison with other areas

In Table 8 below, the 2022 Taupō District per capita figure for landfilled waste is compared to disposal figures from previous surveys in Taupō District and other local authorities previously surveyed by Waste Not Consulting. The national average has been calculated using MfE's waste levy data and Stats NZ figures.

Table 8 Taupō District disposal rates compared to other areas

Overall waste to landfill including special wastes (excluding cover materials)	Tonnes per capita per annum
Waimakariri District 2017	0.325
Invercargill City 2018	0.528
Taupō District 2013	*0.528*
Palmerston North 2017	0.545
Kāpiti Coast District 2017	0.546
Dunedin City 2018	0.554
Tauranga and WBOP District 2020	0.560
Napier/Hastings 2022	0.595
Wellington region 2016	0.608
Taupō District 2008	*0.613*
New Zealand (2021)	0.685
Taupō District 2017	*0.673*
Taupō District 2022	*0.716*
Hamilton City 2017	0.718
Queenstown Lakes District 2020	0.833
Auckland region 2016	1.053

The per capita disposal rate for Taupō District in 2022 was higher than the New Zealand average for 2021 and compared to most other provincial centres. Areas with high tourism activity, such as Taupō, Queenstown, and Rotorua, tend to have higher per capita disposal rates than areas with lower levels of tourism activity. Tourism activity generates waste however tourists are not counted as usually resident by the census.

Higher disposal rates are also associated with areas with significant numbers of holiday homes. This affects the per capita disposal rates, as non-permanent residents are not counted in the census as being usually resident. Approximately 30% of dwellings in Taupō District are not permanently occupied.[2] Users of holiday homes generate waste but the occupants are not included in the population statistics.

8 Resource recovery potential of overall waste to landfill

Of the 25 material classifications used in the visual survey, nine are commonly recycled or recovered in New Zealand. A further four materials are compostable. There are currently diversion options available in Waikato or Bay of Plenty regions for most of these 13 materials. Based on these 13 materials, Table 9 shows the proportion of the overall waste disposed of at Broadlands Road landfill that could potentially be diverted from landfill disposal.

Table 9 - Overall waste to landfill diversion potential - August/September 2022

Overall waste to landfill Diversion potential August/September 2022	% of total	Tonnes /week
Recyclable and recoverable materials		
Paper - Recyclable	3.6%	16 T/week
Paper - Cardboard	3.2%	14 T/week
Plastic - Recyclable	2.7%	12 T/week
Ferrous metals	2.4%	11 T/week
Non-ferrous metals	0.7%	3 T/week
Glass - Recyclable	2.6%	11 T/week
Textiles - Clothing	1.2%	5 T/week
Rubble - Cleanfill	1.9%	8 T/week
Timber - Reusable	0.9%	4 T/week
Subtotal	**19.2%**	**84 T/week**
Compostable materials		
Organics - Food waste	13.3%	58 T/week

Organics - Compostable greenwaste	5.4%	24 T/week
Rubble - New plasterboard	0.2%	1 T/week
Timber - Untreated/unpainted	5.2%	23 T/week
Subtotal	**24.1%**	**105 T/week**
TOTAL - Potentially divertable	**43.2%**	**189 T/week**

Recyclable and recoverable materials comprised 19.2% of overall waste to landfill, or 84 tonnes/week. Compostable materials comprised 24.1% of overall waste to landfill, or 105 tonnes/week. Overall, approximately 43.2% of overall waste to landfill, 189 tonnes/week, could have been diverted from landfill disposal. Food waste, primarily in kerbside rubbish, was the largest recoverable component, comprising 13.3% of the total weight.

The diversion rates presented in this section are theoretical maximums, as recovery systems are not capable of diverting 100% of a material from landfill disposal and some recovered materials may be in a condition that makes them unsuitable for diversion. When considering diversion and recycling options Council will focus on the lower cost higher volume materials and will also need to determine if viable markets exist.

8.1 Divertible materials - By activity source

Waste minimisation initiatives can be directed at a specific material type, such as food waste, at a waste-generating activity, such as domestic activity, or at a combination of both, such as food waste in kerbside rubbish. The cells for the individual materials have been formatted from the lowest value (no shading) to the highest value (red shading).

Table 10 shows in the first four columns, divertible materials disposed of at both the transfer station and tip face combined. It also shows the assumed composition of kerbside rubbish. For the analysis, all waste from rural transfer stations has been assumed to be residential waste.

Table 10 - All waste - Divertible materials - By activity source - August/September 2022

All waste to landfill - Divertable materials - By activity source - August/September 2022	C&D	ICI	Landscaping & earthworks	Residential	All kerbside rubbish
Paper - Recyclable	0.3 T/week	6.3 T/week	0.0 T/week	3.3 T/week	7.8 T/week
Paper - Cardboard	2.2 T/week	11.9 T/week	0.1 T/week	4.5 T/week	0.9 T/week
Plastic - Recyclable	0.0 T/week	9.2 T/week	0.0 T/week	0.7 T/week	2.2 T/week
Food waste	0.2 T/week	12.4 T/week	0.0 T/week	9.3 T/week	39.1 T/week
Compostable greenwaste	0.8 T/week	1.8 T/week	5.3 T/week	5.2 T/week	18.3 T/week
Ferrous metals	3.9 T/week	4.6 T/week	0.0 T/week	4.1 T/week	2.4 T/week

Non-ferrous metals	0.0 T/week	1.5 T/week	0.0 T/week	0.6 T/week	1.0 T/week
Glass - Recyclable	0.0 T/week	1.8 T/week	0.0 T/week	0.8 T/week	9.3 T/week
Textiles - Clothing	3.1 T/week	0.0 T/week	2.3 T/week	2.2 T/week	0.0 T/week
Rubble - Cleanfill	2.3 T/week	0.0 T/week	1.7 T/week	0.2 T/week	2.4 T/week
New plasterboard	1.7 T/week	0.0 T/week	0.0 T/week	0.1 T/week	0.0 T/week
Timber - Reusable	5.1 T/week	1.1 T/week	0.0 T/week	0.3 T/week	0.0 T/week
Timber - Untreated/unpainted	17.5 T/week	12.7 T/week	0.0 T/week	0.5 T/week	0.0 T/week
TOTAL	**37.1 T/week**	**63.3 T/week**	**9.4 T/week**	**31.8 T/week**	**83.4 T/week**

The largest tonnages of divertible material in waste direct to landfill were food waste in kerbside rubbish (39.1 tonnes per week) and compostable greenwaste (18.3 tonnes per week). It is noted that an assumed composition for kerbside rubbish has been used in the calculations. As such, the reliability of the analysis is uncertain.

Other than the materials in kerbside rubbish, the largest tonnages of divertible materials in overall waste to landfill were untreated/unpainted timber in C&D waste (17.5 tonnes per week) and in ICI waste (12.7 tonnes per week).

9 Future Demand and Gap Analysis

9.1 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
- Transfer station location
- Refuse collection area boundaries
- Expanded recycling options
- Tourism
- Out of district home ownership
- Service provision by the private sector
- Lifestyle trends
- Council policy and plans
- Construction and demolition activity

- Product Stewardship schemes
- Changes in legislation and national direction

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.

9.1.1 Landfill Tonnage projections for Taupō district

Landfill tonnages have been increasing by approximately an average of 4.6% annually, which would result in an annual tonnage in 2043 of 47,000 tonnes if no additional waste minimisation reduction is achieved.

9.1.2 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 (or a revised version) to encourage waste minimisation and decrease waste disposal – with a specific duty for TAs to promote effective and efficient waste management and minimisation and to consider the waste hierarchy in formulating their WMMPs.
- Requirement in the New Zealand Waste Strategy 2010 to reduce harm from waste and increase the efficiency of resource use. (Again, central government are signalling a review)
- Increased cost of landfill. Landfill costs have risen in the past due to higher environmental standards under the RMA, introduction of the Waste Disposal Levy and the New Zealand Emissions Trading Scheme. These are now strong drivers which have seen disposal fees increase which in turn incentivises further diversion opportunities.
- 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.
- Kerbside collection standardisation review
- Funding opportunities and government waste reduction focus

9.1.3 Summary of options

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

Population and economic growth will drive increases in the waste generated however refuse collection truck numbers could easily be increased to cater for the greater volume and area serviced. Refuse transfer station disposal bins can be transported more regularly once full. Some minor adjustment to the timing of the creation of landfill disposal cells would need to be undertaken. If council does not have a landfill, then the frequency of truck movements hauling waste would need to increase.

It is envisaged that there would also be a corresponding increase in diverted material as communities become more aware of the need to live within a circular economy. Again, the current service levels for diverted material can easily be expanded as communities grow and demand changes.

9.2 Gap Analysis and Key Issues

The aim of waste planning at a territorial authority level is to achieve effective and efficient waste management and minimisation. Since the last WMMP the follow list of key issues and service options could be targeted to reduce waste to landfill:

- Landfill consenting and planning if a consent is not obtained
- Kerbside service delivery to reflect national standardised service and best practise
- Investigate construction and demolition at source (building sites)
- Investigate and support community Reuse and repair workshops and events
- Investigate and support community-based food rescue programs in the district
- Single use Coffee cups and other single use products
- Review Solid Waste Bylaw

9.2.1 Broadlands Road Landfill Consent

With an operating consent expiry date of 2027, it is timely that Council start consultation with the community regarding a consent renewal.

There has been landfilling at this site from 1975 to the present day, but as the landfill is situated next to Mount Tauhara it is important that Council considers cultural impacts of ongoing landfilling operations.

Due to the remaining consent life being short, the decision to install gas destruction infrastructure has been delayed until Council has more certainty regarding consent renewal. This is due to the ongoing costs of operating this infrastructure if a consent was not granted.

Council has three options to consider:

1. A new consent is obtained, a gas flare would be installed as part of the consent condition to reduce ETS exposure.
2. A consent is not obtained, then council would have to negotiate with the market to truck out of Broadlands Rd and dispose at an alternative site. This outcome would require council to upgrade the Broadlands transfer station to enable larger trucks as well as C&D waste diversion. There are now only two Class 1 landfills that would be viable options for Council to transport waste too if Council were unable to obtain a new consent for Broadlands Rd. One of these sites is in Marton and the other north of Hamilton, with the most likely site being the Hampton Downs Landfill north of Hamilton due to the good roading network. The Hampton Downs landfill receives waste from across the upper north Island currently. Having only one really viable option, for an alternative disposal site will mean that Council will be dealing with a situation that lacks competition, which could expose council to increased disposal costs.
3. Council considers an alternative landfill site in the district.

9.2.1.1 Alternative Disposal site in the district

The estimated cost of a new Landfill, located somewhere in the district would be upwards of $12-20 million. Any new site would need to be close to an urban area to minimise the cost of Leachate treatment and transport.

Landfills have notoriously suffered from “not in my back yard syndrome” which has seen local government across NZ looking to the commercial sector to provide long term disposal options.

Landfills operate in a competitive market for waste tonnages, so there is no guarantee that the investment in a new Landfill would attract enough tonnage to make it viable going forward, as seen recently in Taranaki with the Eltham Landfill. A large number of central North Island Councils currently send their waste to Hampton Downs, and this would be the least risk option for the Taupō district.

The current tonnage of waste disposed to landfill will require 3+ truck and trailer loads to be sent to north of Hamilton daily, with the resultant vehicle emissions and additional transport costs to Council and the community.

As council is looking to reduce the amount of construction and demolition waste going to landfill Council will look to apply to the waste minimisation fund to upgrade the current domestic tipping area at Broadlands Rd. This upgrade, if funding is successful would provide a covered space to enable the contactor to further sort tipped material prior to final disposal.

If Council is unable to obtain a new landfill operating consent, then any reduction in waste tonnages means less cost in transporting waste to an alternative disposal site.

9.2.1.2 Contract bundling

There are also efficiency gains to be made in operating the district waste facilities under one operational contract. Currently the Kinloch RTS and the landfill a run separately from the southern transfer station and the Mangakino transfer station is run in house by council staff.

One operational contract would enable the contractor to maximise benefits around waste and recyclables haulage to disposal and to market.

Facility operational contract timelines have been aligned to enable a district facility operational contract to start in July 2025.

The new kerbside collection contract could also be included the bundle of service provision as there will be some synergies to combine the two services, but this also may limit the number of tenderers due to the need for experience across the desired service range. A decision as to what to include can be made during the tender process.

9.2.1.3 Incineration

Incineration of domestic waste streams to date has not occurred in NZ, but with local Government looking to the commercial market to provide disposal options due to the cost of consenting a new landfill, incineration may be a long-term option.

Currently incineration is a solution for waste streams such as treated wood and tyres, so this solution is being used for those hard to deal with residual wastes.

Central Government are supporting a circular economy where materials are recycled and reused, whereas incineration is a linear process where things are made then burnt for energy which then requires more raw materials.

Once established, incineration plants are feedstock hungry and there is a risk that materials that could be recycled or reused end up being burnt for energy which would the undermine the current markets for these materials.

Currently there is not a consented plant able to take council's residual waste, so incineration of the districts waste is not an option at this time.

With government requiring a number of products to have mandated product stewardship schemes, Council will have to decide whether Council's transfer stations operate within and support these schemes. The decision to be part of the schemes will depend on the participation of the community and or industry to supply collection and processing facilities in each area.

9.2.2 Kerbside collections

Central government have recently consulted on the possibility of standardisation of kerbside refuse and recycling collections. The best practise methodology, supported by the desire to reduce methane production through providing a food waste collection is:

- Wheelie Bin for Waste, 140L
- Wheelie bin for recycling 240L (paper, card, tin and aluminium and plastic 1, 2 and 5)
- Glass Bin 45L
- Food Bin 23L caddie

The options to consider are the frequency of collections, with the suggested collection frequency for the Taupō district being fortnightly for recycling and refuse (alternate weeks), and weekly for the food collection due to possible odour. This service could be increased to weekly for all services over the busy period form mid-December to the end of Waitangi weekend.

The CBD areas would receive twice weekly collections as the currently do now.

These service provision options are the same as that taken to Council in August of 2021 with all services being rate funded.

A number of Councils have now implemented these services and they are set to be rolled out across the country.

This change in service will provide the following benefits:

- This service is seen as best practice in the industry
- Less litter from bags being tampered with and no recycling flying down the road on windy days.
- A reduction in Health and Safety incidences with no manual lifting of bags and no stick injuries from sharps.
- A defined quantum at the kerb, so better for resourcing
- Food waste collection will reduce methane production, with the possibility of diverting 1,000 tonnes annually
- A rate funded service would reduce the number of trucks on our streets collecting materials
- Council would be providing the same service level as other councils

Currently there is approximately 2,000 tonnes of food waste going to landfill per annum from the district. Conventional collection methodologies are expected to achieve around 50% capture, which would equate to 1,000 tonnes per annum. Conventional collection methodology is a small bin caddie to be placed at kerbside, collected weekly.

After collection, council has two processing options already operating close to the Taupō township. MyNoke is a worm farming operation already taking bio-solids from Council's wastewater plant. EcoGas is an aerobic digestion plant located in Reporoa. The ability to increase the diversion of food waste will be determined by the final gate charge at the processing site, and the collection cost to collect material and the viability of end markets.

Council will look to the commercial market to provide additional benefits such as partial collection fleet electrification and additional collection services over and above those provided by Council.

The current bag system operates in the commercial market so is prone to competition and loss of market share. Financial modelling suggests that by having one rate funded service, this service can be offered cheaper to the community than a mix of Council and commercial services.

Bin size and service provision will drive recycling, with the fortnightly collection and smaller refuse bin.

Wheelie bin services have shown marked reduction in health and safety related issues, but recycling contamination rates are higher than the kerbside sort option.

Council will have to actively work with the community on recycling contamination and consider carrot and stick options for poor and good recyclers. Most councils have employed an educator who lifts bin lids to determine contamination levels.

Some councils have been using a three-strike process where after three contamination issues the recycling bin is removed for a short period. Provisions to enable this would need to be included in the Solid Waste Bylaw review.

To enable the portion of the community that would struggle with a wheelie bin, some councils have provided a door service, with this additional service requiring a medical certificate.

If TDC were to move to a comingled collection using wheelie bins, then the current sort line operated by EnviroWaste would not be suitable, and material would have to be transported out of our district for sorting or more investment into the current sorting system would need to be made. Both options would have some impact on local employment. The final decision to use the current sorting facility will be made at the time of tender negotiations.

A wheelie bin service will reduce the health and safety risk for collectors of lifting bags and avoiding sharps.

9.2.3 Construction and Demolition (C&D) Waste

Construction and demolition waste is going to be a major focus of council's ongoing minimisation efforts as it makes a large % of waste landfill. To enable further reduction of this material Council should look to cover the public tipping area at Broadlands and further sort this material as opposed to allowing trucks to go straight to the tip head.

Council can look to central government funding to support the revamping of the transfer station to enable this outcome. MfE are currently looking to fund infrastructure to enable diversion of this material, but they will require that Council has an established market for the recovered material before they provide funding. Market stability will be one of the main factors influencing the success of any diversion solution. At this time there is only one market for a mix of treated and non-treated wood, and this is the Golden Bay Cement facility at Wiri. This facility has recently been upgraded to receive TDF (tyre derived fuel) and has the ability to take wood as a feed stock also.

9.2.4 Kerbside collection option for green waste (organic waste)

Some councils have included a green waste collection option as one of their kerbside collection services, however this places additional rate cost burden on the community when most of this material is transported to council's facilities now by property owners at no cost.

Statistics also show that if a service is provided which includes food waste the percentage of food waste collection goes down compared to a food only collection.

Central government is investigating landfill bans on some products with organic waste high on the agenda but have yet to implement any regulations.

Food rescue

Some communities have food rescue programs working in their district with community solutions for food waste often associated with broader benefits such as community building and resilience, sustainability education, intergenerational knowledge exchange, physical and mental wellbeing.

Council should look to investigate and support community led food rescue programs in the district.

9.2.5 Reuse and repair

Council supports initiatives which encourage reuse and repair of items to prevent them from going to landfill. This may include Repair Cafés and Co-ops, which are free meeting places where staff or volunteers with specialist repair skills can assist or teach visitors with broken items. This creates opportunities for people from different cultures and generations to meet, learn, share skills and build relationships, as well as keeping products in use longer before disposal at a landfill.

9.2.6 Coffee Cups and single-use takeaway packaging

Single use coffee cups and other single-use takeaway packaging make up a large portion of the contamination in our street recycling bins and also a large proportion of the waste volume in our street litter bins. Single use coffee cups are designed to be used only once and then landfilled. Some coffee cup producers suggest that their cups are compostable, but currently the ability to process them is very limited. Coffee cups have a plastic sleeve under the cardboard outer shell which makes composting difficult.

There are a number of successful reusable coffee cup programs operating throughout NZ and council should and investigate and support the local industry to implement a program in our district.

9.2.7 Review of Solid Waste Bylaw

Council could include in the Solid waste Bylaw, after consultation with industry, provisions that support construction waste diversion at source (on the construction site). A number of councils have successfully implemented these provisions with industry support. Central government is also looking to regulate building sites to enforce waste diversion and waste minimisation.

Council should initiate discussions with the local building industry so that they are prepared to implement the plans and then await central government to enact the regulations. If central government do not enact the regulations the Council should look to include these requirements in the Solid Waste Bylaw following consultation.

The current bylaw also provides requirements for events to have wate minimisation plans and this requirement should continue.

Waste operators are also licenced under the Bylaw with this provision requiring licence holders to report waste tonnages as well as adhere to regulations that set days and areas of collection, to avoid multiple trucks on different days of the week.

The bylaw currently regulates the types and sizes of bins that can be used for domestic collections. This part of the regulation will need to be reviewed to enable any new kerbside collection service.

10 Initial Review of the 2018 Waste Management and Minimisation Plan

The 2018 – 2024 WMMP had a target and a number of actions required to achieve the target.

Council's waste reduction Target for the 2018 waste plan was:

"By 2028, increase the quantity of material (tonnes) diverted from landfill from 46% to 51%"

The production of waste is directly linked to GDP so Council has limited control over waste to landfill tonnages. A large percentage of the current waste to landfill is controlled by the commercial market service provision. Council should however look to increase the original waste diversion target of 51% relative to the tonnes disposed to landfill.

The overall tonnage of material processed combines 21/22 waste to landfill of 26,983 and the diverted material tonnage of 26,301 for a total tonnage of 53,284, and a waste diversion rate of 49%. If Council was to include a food collection service and look to divert construction and demolition waste, then the target could move to 60% by 2030.

10.1 Key Issues

The Key issues in the last Waste Management and Minimisation Plan were:

- Collection of 1-7 Plastic codes
- Removal of 240L wheelie Bins from domestic household use for refuse
- Expansion of the street recycling bin program
- E-Waste recycling service provision
- Subsidising Home Composting Units and education program
- Advocacy for Product stewardship

Council has actioned and achieved the desired service change for all of the key issues identified apart from the ability to collect plastics 1-7, due to the markets for plastics other than 1, 2 and 5 being unviable.

10.2 Other Issues Addressed

Council has been able to divert 2,000 tonnes per annum of Biosolids out of the Broadlands Rd Landfill. At the time of the development of the last plan in 2018, Biosolids were being disposed to the landfill. Council now disposes the Biosolids to a worm farming operation that is set up on TDC land.

Council has continued to lobby central government to provide more product stewardship programs, and five mandated programs have been initiated.

Council is now supporting district businesses with a waste minimisation support program.

Council is now also supporting the recycling of small batteries and car seats.

11 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 (Section 9.2). 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.

Below are listed the possible new actions to be included into the WMMP

11.1 Regulation

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Council's Role
R1	Review existing Solid Waste Bylaw to ensure that it is effective and enforceable	• To make sure that the Bylaw is consistent with the new WMMP • Supports event waste diversion • Supports diversion of building waste • Sets operating parameters for waste companies • Aligns with Council services • Supports council to achieve its waste minimisation goals	**Social / Cultural**: Positive outcome as Bylaw would be aligned with WMMP. **Environmental**: that private service providers do not negatively impact the environment **Economic**: That community outcomes are considered when pricing service delivery council is not left to clean up after commercial operators	Sets a series of operating standards for operators to ensure costs are not transferred to ratepayers and that WMMP outcomes are being achieved. This will support waste reduction aspirations.	Conduct review if changes to WMMP required

11.2 Measuring and Monitoring

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Council's Role
M1	Investigate construction and demolition waste and work with commercial operators to increase diversion	C&D waste makes up a significant portion of waste going to landfill	**Social / Cultural**: increase the awareness around diverting construction and demolition materials **Environmental:** increased diversion of C&D waste to landfill **Economic:** reduced disposal costs as waste diverted	C&D waste is a large component of the waste currently going to landfill	Facilitate diversion opportunities through bylaw provisions and upgrade waste facilities to enable further sorting and diversion

M2	Investigate and implement options for disposable coffee cups and other single-use takeaway packaging	Contamination in street recycling bins and litter	**Social / Cultural**: increase the awareness around disposable coffee cups and takeaway packaging **Environmental: I**ncreased diversion of waste to landfill **Economic:** Reduced disposal costs as waste diverted	Coffee cups and other single-use packaging are a hard-to-recycle product and often contaminate public recycling bins, thus reducing the quality of material diverted. Supporting a reusable program would address this as well as reduce overall waste to landfill.	Facilitate reusable opportunities

11.3 Education and Engagement

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Council's Role
EE1	Investigate reuse and repair workshops and events for the community	Reduce amount of waste going to landfill	**Social / Cultural**: Would encourage reuse and repair of broken of damaged items Would allow council to strengthen relationships with the community **Environmental:** Would lessen the amount of waste to landfill **Economic:** Will reduce the cost of waste disposal for families	Reduction of waste to landfill	Funding and support and the provision of workshops and events
EE2	Investigate and support community-based food rescue programs in the district	Reduction in food waste to landfill Support of community-based waste programs	**Social / Cultural**: Community building and resilience, sustainability education, intergenerational knowledge exchange **Environmental:** reduction in food wastage **Economic:** supports lower socio-economic sectors of the community	Reduction of food waste to landfill Reduction of methane production	Funding support for food waste app Education support

11.4 Collection & Services

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Council's Role

CS1	Introduce a wheelie bin system for refuse and recycling collections including food waste	Provide best practise service delivery for the district for kerbside collections Reduce the amount of litter from kerbside recycling collection Improve health and safety outcomes for kerbside collection workers Easier for contractors to operate as resource volumes set by bin sizes Reduce the amount of organic waste going to landfill Reduce methane production in landfill	**Social / Cultural**: Would enable the community to have a convenient food waste disposal option Would align with kerbside standardisation direction and be best practice Ease of use for holidaymakers as this would follow national standardisation recommendations **Environmental:** Reduction of windblown litter on collection days A reduction of number of collection vehicles on the streets **Economic**: Requires investment into new trucks and bins	Will set a minimum service level, with properties needing additional services will go the commercial market as they do currently	Design and implementation of program

11.5 Infrastructure

Ref	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Council's Role
IN1	Broadlands Road Landfill consenting or preparing for a new site if not consented further	Improved facilities required for maximum diversion of recyclable materials and construction & demolition waste. If no consent, then will need to bulk haul waste out of district for final disposal.	**Social / Cultural**: will allow the community the ability to maximise waste diversion **Environmental:** increased waste diversion and less waste to landfill **Economic**: Maximising diversion will mean less disposal/haulage costs for the community	Will provide more opportunity for the community reduce, reuse and recycle	Provision of facility improvements as when required

11.6 Status Quo Services and Programs

Below are the current services and programs already operating in the district, which are recommended to continue.

Status Quo	Option	Issues Addressed	Strategic Assessment	Impact on Current/Future Demand	Council's Role
Broadlands Rd Landfill and district Transfer stations	Status quo for transfer station operation with a possible change to the Landfill operation dependant on Consent renewal Possible bundling of contracts to achieve operational efficiencies	Provide disposal and waste diversion opportunities throughout the district	**Social / Cultural**: The community needs convenient facilities to dispose of waste and divertible materials **Environmental:** facilities provide for the appropriate disposal of wastes and facilitate recycling and diversion **Economic**: council owned facilities allow fees to be set to maximise waste diversion	Facilities are capable of coping with peak demands	Investigate and implement best practise service arrangements

Current mix of education programs (Paper for Trees, Kate Meads, Love Food Hate Waste, composting workshops, sanitary waste) and waste diversion programs – e-waste, car seats, light bulbs and batteries	Status quo	Provide targeted education programs for specific waste diversion opportunities	**Social / Cultural**: The community will have the ability to learn about difficult waste issues and diversion opportunities **Environmental: I**ncrease the knowledge of the community regarding waste and divert these materials from going to landfill **Economic**: Current targeted programs reduce community waste disposal costs	The current mix of education programs and diversion options are consistent nationally	Maintain existing service arrangements
Continue to price incentivise waste diversion activities	Status quo	Maximise the opportunities to divert materials	**Social / Cultural**: Effective method to change behaviour around waste **Environmental: P**rovides high quality end products and incentivises waste diversion **Economic**: The use of a mix of user charges and rates enables Council to use service pricing to drive waste diversion	Further waste diversion opportunities will develop as waste costs increase and recovered material markets develop	Continue to analyse waste streams to determine opportunities
Lobby central government on Product stewardship	Status quo	Shift the burden of waste diversion to the producer and consumer and provide a circular economy	**Social / Cultural**: Will provide a circular economy where end of life products are reused **Environmental:** Will increase the ability to divert waste from landfill **Economic**: The cost of recovery of materials will be included in the purchase price	Product stewardship policy will have major impacts on the amount of waste sent to landfill and will reduce the cost of collection of waste on the ratepayer	Work nationally, regionally, and locally to lobby government
Street litter and recycling bin service/ in house litter collection	Status quo Work with local groups to maximise community support	Provide for refuse and recycling collection for the community and visitors when they are out and about	**Social / Cultural**: Provides the ability for the community and visitors to disposal and recycle wastes when out **Environmental: L**essens the impact of waste on the environment **Economic**: Avoids the cost of clean-up of litter	Continue to cater for peak demand	Maintain existing service arrangements and continue the Big Belly Bin and recycling bin roll out as required.

Understand the generation of farm waste and waste management in rural areas	Continue to support the rural sector with waste issues	Rural waste disposal and waste diversion	**Social / Cultural**: Could raise awareness of waste management in areas which currently very little is known **Environmental: I**f data highlights areas where additional services could be provided, or certain waste diversion facilitated then a reduction of waste to landfill could be achieved **Economic:** There may be costs for new programs	Analysis of available data shows that there are gaps in knowledge and understanding of rural waste needs in the district. Availability of more data and tailoring of services accordingly could increase the demand for recycling services and reduce waste to landfill.	Council to initiate and oversee research studies and audits and feed results into future iterations of WMMP and action plans.
Work with local schools to increase organics diversion through education and the home composting subsidy program	Status quo	Increase the participation in the home composting program	**Social / Cultural**: will increase the awareness around composting and worm farming **Environmental:** will reduce the amount of food waste going to landfill from the district schools **Economic:** will reduce the waste disposal costs for Marae	less organic waste to landfill reduction of methane production	Funding and support
Support local events to minimise event waste	Work with event organisers to facilitate maximum waste diversion for events held around the district	Provide additional support to local event organisers to increase their waste diversion	**Social / Cultural**: will support the districts clean green image **Environmental:** will reduce the amount of event waste going to landfill **Economic:** Post event clean-up costs will be minimised	Increased waste diversion from events Funding and support and the provision of an events guideline and education program	Provide direction and support through the Solid Waste Bylaw
Provide a community waste minimisation fund ($10K per annum from waste levy funds)	Status quo	To support community waste minimisation activities	**Social / Cultural**: will provide the community with funding momentum to participate in waste diversion **Environmental:** will enable small scale waste diversion opportunities to be developed by the community to proceed with the resulting environmental benefits **Economic**: small cost compared to building community relationships	Will depend on what the community initiative is but fund will focus on reduction of waste to landfill Funding and support, funding provided by waste minimisation fund	Funding and support

12 Statement of Council's Intended Role

12.1 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).[3]
- 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, non-complying and prohibited activities and their controls are specified within district planning documents, thereby defining further land-use-related resource consent requirements for waste-related facilities.
- Under the Litter Act 1979 TAs have powers to make bylaws, issue infringement notices, and require the clean-up of litter from land.
- The Health Act 1956. Health Act provisions for the removal of refuse by local authorities have been repealed by local government legislation. The Public Health Bill is currently progressing through Parliament. It is a major legislative reform reviewing and updating the Health Act 1956, but it contains similar provisions for sanitary services to those currently contained in the Health Act 1956.
- The Hazardous Substances and New Organisms Act 1996 (the HSNO Act). The HSNO Act provides minimum national standards that may apply to the disposal of a hazardous substance. However, under the RMA a regional council or TA may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances.
- Under current legislation and the new Health and Safety at Work Act the Council has a duty to ensure that its contractors are operating in a safe manner.

[3] The development of a WMMP in the WMA is a requirement modified from Part 31 of the LGA 1974, but with even greater emphasis on waste minimisation.

The Taupō District Council, in determining its role, needs to ensure that their statutory obligations, including those noted above, are met. This Waste Assessment identifies that Council is meeting these obligations.

12.2 Overall Strategic Direction and Role

The strategic direction for Council is to ensure that public health is protected by the provision of infrastructure and services within the district. This direction is support by the Waste Minimisation Act 2008 where local government must promote effective and efficient waste management and minimisation within its district.

Council's intended roles is to provide these services and infrastructure where it supports Council's waste minimisation goals and targets and where these services are required to protect public health.

13 Statement of Proposals

Based on the options identified in this Waste Assessment and TDC'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 TDC'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.

13.1 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.

13.1.1 Protection of Public Health

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

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 are regulated through the Solid Waste Bylaw.

Uncontrolled disposal of waste, for example in rural areas, 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.

13.1.2 Effective and Efficient Waste Management and Minimisation

This 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.

Appendices

A.1.0 Medical Officer of Health Statement

TOI TE ORA
PUBLIC HEALTH
Bay of Plenty + Lakes Districts

Te Whatu Ora
Health New Zealand
Lakes

Toi Te Ora Public Health
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5 July 2023

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Tēnā koe Brent

Medical Officer of Health Review of Taupo District Council Waste Assessment 2023

I appreciate this opportunity to provide comment on the August 2023 draft waste assessment.

As you know 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. My comments seek to assist Council in promoting a healthy and safe environment for their community now and into the future.

Waste management is important for the health of the public. If not disposed of properly, waste can present a health hazard through physical injury, chemical poisoning, exposure to infectious material and encouraging pests such as vermin, flies, and mosquitoes. Waste can also block stormwater systems, contaminate land, and water, and create odours.

Waste services and infrastructure should be provided in ways which do not increase the risk to health, are affordable, and are accessible to everyone. Services that provide the least complex system, and that are most accessible and affordable are encouraged. This is because it is these that enable the highest level of participation and achieve the highest compliance.

In this context I make the following comments;

Once again, the draft waste assessment is comprehensive, and I am pleased to see public health protection at the centre of why waste needs to be managed properly and reduced safely.

I am supportive of the options table addressing the key issues identified in the waste assessment and make the following comments for consideration when developing the Waste Management and Minimisation Plan (WMMP).

Decisions that reduce environmental contamination, reduce resource use and the impacts of climate change are supported because these will contribute to safeguarding the health of current and future populations.

Targets

Although Council did not meet their waste reduction target, I recall the target set in 2017 for the next six years as being bold and ambitious at the time, and acknowledge the 49% diversion rate that was achieved. I support food and building material diversion implementation and encourage Council to extend the target to 60% by 2030. I suggest including behaviour targets as well as weight targets for example, Council could measure improvements in street litter and recycling bin contamination as well as percentage of businesses and properties participating in reduction activities.

Broadlands Landfill and Gas Capture

The delivery of sanitary refuse collection and disposal services requires plenty of time to plan to ensure services are continuous and health always protected.

Noting the current consent ends in a few years, engaging with tangata whenua and the wider community as early as possible is necessary. Early engagement will also enable Council to understand early on whether gas capture will be required and implemented without waiting until being legally required to do so.

When considering future waste disposal options, I encourage an assessment of the options for how well they contribute to mitigating the impacts of climate change. Public health impacts of climate change are serious, Council has an opportunity through its role to provide sanitary works[1] to reduce global greenhouse gas emissions and reduce climate change harm.

Servicing Non-Urban Areas

Whareroa transfer station is rate funded which I am supportive of. I am also supportive of the approach that recycling services are rate funded to maximise diversion by the community.

[1] Section 25, Health Act 1956

In my previous feedback I expressed concern that not all households were provided with rate funded council kerbside recycling collection services. Relying on the commercial sector to provide services in locations that council does not could present a risk to public health.

Kerbside Collection

The assessment indicates that Council is looking to alter its kerbside collection services. The outcome and whether Council will progress with the suggested changes following the presentation of the service provision options and funding to Council in August 2021 is unclear.

I note the composting education and subsidy program Council employs to reduce organic food waste going to landfill. However, I am supportive of all changes discussed in Section 9.2.2, particularly collection and frequency of food waste for the reasons given in the assessment. Organic waste is odorous by nature and more likely to be offensive. Measures needed to manage the risk to public health are essential to prevent nuisance situations arising. Weekly food collection and lidded receptacles that prevent vermin and other pests gaining access are measures that I support.

I am also supportive of Council moving away from the user pay system particularly when the incomes in Taupō are lower compared to the rest of the country. User pay systems may increase inequities by increasing the financial burden on low socioeconomic households and tenanted properties who are less able to pay. As I mentioned in my feedback into the previous waste assessment in 2017, to take a community wide funding approach, to waste and recycling collection services will benefit everyone. Taking a community wide approach to funding can be justified since appropriate and effective waste management is a common good for public health.

I am aware that Taupō has more people over the age of 65 than other areas, therefore I am pleased to see the assessment consider how council will manage waste from households with people who are older or have disabilities. I recommend these proposed changes to services and funding be included in the WMMP and implemented at the earliest opportunity.

It would be useful for the assessment to include a percentage breakdown of the waste streams collected from the kerbside. To have this information will enable Council to identify waste streams for future service delivery planning.

I am aware that in other districts where residences have access to continually improved collection services that they use them. Therefore, I encourage Council to review and make improvements to waste collection streams, particularly those provided at the kerbside throughout the life of the WMMP. Those services which provide the least complexity, increase accessibility, and respond to societal trends and behaviours should increase the level of community buy-in and compliance, raise participation and result in the least waste going to landfill.

Kerbside Services

It would be helpful for the assessment to include the percentage of households not receiving council collection services. The provision of waste collection services for all rural areas and any new household should be the default position of Council. I would like to see council services provided to every property because services that are accessible to everyone and enable everyone to do the right thing will be more protective of health.

I would like to see the assessment discuss whether the options presented include kerbside recycling and waste collection to all households as this will maximise diversion and provide the best choice for public health to be the easy choice. Council needs to support kerbside collection with household waste disposal providing sustainable community services that promote good practice and minimise improper disposal.

Noting the approaches mentioned in the assessment and that of other councils to reduce contamination of diverted materials, I would not be in favour of Council removing recycling bins for short periods after three contamination issues. This is likely to only harm relationships Council has with their community and reduce ongoing participation and community buy-in. An encouraging and proactive education approach is more likely to have the best outcomes for everyone.

Hazardous Substances and Materials

The assessment includes a range of services free of charge and I am particularly pleased to see household chemicals and rural agrichemical waste included. I would like to see an assessment whether only the Broadlands Road Landfill is adequate, and its location is suitable to provide convenient and accessible waste and waste diversion services to the whole rural community.

As I mentioned earlier, I am pleased Council provides residents with an opportunity to discard household chemicals. The assessment mentions that waste acceptance criteria is detailed in the Broadlands Road Landfill Site Management Plan of what can be disposed at the site with different materials having different levels of contamination permissible. The criteria should be clearly communicated to the community.

Soft Plastics

I noted that industry is currently providing a soft plastic recycling program through one supermarket chain and am supportive of Council's intention to work with industry to extend this program. The assessment does not include how Council currently supports the existing program or how it could in the future by, for example, using council recycling locations to collect soft plastics. An action in the WMMP to explore current and future opportunities is suggested.

Rural Waste Assessment

I agree with the assessment that more work on farm related waste needs to be undertaken to understand the implications of new regulations and waste volumes going forward. I expect to see an action for Council to work with their rural communities to gain information which will assist council plan and implement their services during the next WMMP.

Iwi Engagement in Waste Planning

Involvement of Iwi in the development of this waste assessment is unclear. While existing Iwi and Council partnership forums may provide an opportunity for Iwi to provide an iwi view on waste management and minimisation, I would like to see the assessment include how Council intends to proactively engage with local Iwi on waste management and minimisation in the urban and rural environs.

Building and Construction Waste

It is useful that Council has completed a recent review of the composition of waste to landfill. I note that building and construction waste, particularly timber is the largest waste stream. I am therefore pleased to see that Council is looking at ways to reduce this waste stream by upgrading the current domestic tipping area and increase oversight of truck loads at Broadlands Road. I would like to see these activities transpire to the WMMP as well as other reduction and diversion actions for this significant waste stream.

The assessment discusses government mandated product stewardship schemes and whether Council opts to support these or not. I would like to see the assessment include a review of current and future schemes to identify how Council will support these schemes. Council is encouraged to take every opportunity to increase waste diverted to landfill including stewardship schemes. I suggest that the WMMP include an action to encourage community participation and support industry collection locally through existing community waste transfer and diversion sites.

Solid Waste Bylaw

The assessment mentions information gaps around waste managed by non-council waste management facilities. I support a bylaw review with the intention to address these gaps and include the points raised in the assessment. Councils require the necessary tools to effectively manage waste in their district and the solid waste bylaw is a means to achieve this.

Toi Te Ora Public Health Population Survey and Te Whatu Ora Lakes Position Statement

As the WMMP review progresses Council should have regard to Toi Te Ora Public Health, Issues of Health and Wellbeing Population Survey 2020. Particularly when developing the actions in the WMMP. This survey reflects the Bay of Plenty and Lakes community views, including Taupo across a range of public health topics. People were asked for example about their overall level of concern about environmental issues affecting their health and wellbeing. Nearly half said it was high or very high (44%). Of relevance to waste management and minimisation is the level of satisfaction with rubbish disposal systems and recycling systems and their importance. For people in the Lakes (Rotorua and Taupo) health district this was 79% and 64% respectively. The survey is available on the Toi Te Ora website.[2]

Section 1.4.4.1 lists the aspects of waste management that are likely to impact public health and Section 1.4.4.2 discusses how these issues maybe managed. While access to facilities and services is mentioned, a key aspect to include is affordability. A policy environment which enables individuals and communities to make the right choice the easy choice will safeguard the environment and attain health protection from the outset.

Event Waste Reduction

Decisions and actions that reduce environmental contamination, reduce resource use and the impacts of climate change will safeguard the health of existing and future populations. I support and would like to see the assessment and subsequent WMMP include activities to reduce waste generated from emergency events and also prepare Council to safely manage waste from these events.

As the WMMP is developed I encourage Council to have regard to Te Whatu Ora Lakes District, previously Lakes District Health Board, Waste Management and Minimisation Position Statement.

If you wish to discuss this feedback please contact Annaka Davis, Health Protection Officer in the first instance.

Yours sincerely,

James Miller.

Dr James Miller
Medical Officer of Health

[2] https://toiteora.govt.nz/assets/Toi-Te-Ora-Public-Health/Publications-and-Resources/Population-Surveys/2020_Population_Survey_Low_Res_FINAL.pdf

Page | 6

A.2.0 Glossary of Terms

Class 1-4 Landfills	Classification system for facilities where disposal to land takes place.
Cleanfill	A Cleanfill (properly referred to as a Class 4 landfill) is any disposal facility that accepts only cleanfill material. This is defined as material that, when buried, will have no adverse environmental effect on people or the environment.
C&D Waste	Waste generated from the construction or demolition of a building including the preparation and/or clearance of the property or site. This excludes materials such as clay, soil and rock when those materials are associated with infrastructure such as road construction and maintenance but includes building-related infrastructure.
Diverted Material	Anything that is no longer required for its original purpose and, but for commercial or other waste minimisation activities, would be disposed of or discarded.
Domestic Waste	Waste from domestic activity in households.
ETS	Emissions Trading Scheme
ICI	Industrial, Commercial, Institutional
Incineration	Where waste is burnt at high temperature to create energy
Landfill	A disposal facility as defined in S.7 of the Waste Minimisation Act 2008, excluding incineration. Includes, by definition in the WMA, only those facilities that accept 'household waste'. Properly referred to as a Class 1 landfill.
LGA	Local Government Act 2002
Managed Fill	A disposal site requiring a resource consent to accept well-defined types of non-household waste, e.g. low-level contaminated soils or industrial by-products, such as sewage by-products. Properly referred to as a Class 3 landfill.
MfE	Ministry for the Environment
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
NZ	New Zealand

NZWS	New Zealand Waste Strategy
Putrescible, garden, green waste	Plant based material and other bio-degradable material that can be recovered through composting, digestion or other similar processes.
RRP	Resource Recovery Park
RTS	Refuse Transfer Station
Service Delivery Review	As defined by s17A of the LGA 2002. Councils are required to review the cost-effectiveness of current arrangements for meeting the needs of communities within its district or region for good-quality local infrastructure, local public services, and performance of regulatory functions. A review under subsection (1) must consider options for the governance, funding, and delivery of infrastructure, services, and regulatory functions.
TA	Territorial Authority (a city or district council)
TDC	Taupō District Council
Waste	Means, according to the WMA: a) Anything disposed of or discarded, and b) Includes a type of waste that is defined by its composition or source (for example, organic waste, electronic waste, or construction and demolition waste); and c) To avoid doubt, includes any component or element of diverted material, if the component or element is disposed or or discarded.
WA	Waste Assessment as defined by s51 of the Waste Minimisation Act 2008. A Waste Assessment must be completed whenever a WMMP is reviewed
WMA	Waste Minimisation Act 2008
WMMP	A Waste Management and Minimisation Plan as defined by s43 of the Waste Minimisation Act 2008
WWTP	Wastewater treatment plant

The New Zealand Waste Strategy 2010

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

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

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

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

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

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

www.mfe.government.nz/publications/waste/new-zealand-waste-strategy-reducing-harm-improving-efficiency.

Note: at the time of writing central Government have signalled a review of the 2010 Strategy but to date this review has not been completed.

A.3.1 Waste Minimisation Act 2008

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

The WMA introduced tools, including:

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

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

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

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

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

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

The Waste Minimisation Act 2008 (WMA) provides a regulatory framework for waste minimisation that had previously been based on largely voluntary initiatives and the involvement of territorial authorities under previous legislation, including Local Government Act 1974, Local Government Amendment Act (No 4) 1996, and Local Government Act 2002. The purpose of the WMA is to encourage a reduction in the amount of waste disposed of in New Zealand.

In summary, the WMA:

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

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

A.3.2 Waste Levy

From 1st July 2009 the Waste Levy came into 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 $30/tonne and applies to wastes deposited in landfills accepting household waste. The MfE published a waste disposal levy review with the levy set to rise to $60 per tonne in 2024.

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

A.3.3 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.[4]Five Priority Products have been declared as of 2022.

The following voluntary product stewardship schemes have been accredited by the Minister for the Environment:[5]

- 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

[4] Waste Management Act 2008 2(8)
[5] http://www.mfe.government.nz/waste/product-stewardship/accredited-voluntary-schemes

- RE:MOBILE
- Resene PaintWise
- The Glass Packaging Forum

The following schemes have now been mandated:

- Tyres
- Agri chemicals and their containers
- Refrigerant gases
- E-waste
- Plastic packaging

MfE have in 2022 consulted on a CRS (Container Return Scheme) which would cover drink containers up to 3L in size. Milk containers have at this stage been suggested to be outside of the scheme due to the issue of raising the cost of a food staple.

A.3.4 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.

A.3.5 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.government.nz/better-local-government.

A.3.5.1 Section 17 A 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:

a) in-house delivery
b) delivery by a CCO, whether wholly owned by the local authority, or a CCO where the local authority is a part owner
c) another local authority
d) 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.

A.3.6 Resource Management Act 1991

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

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

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

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

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

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

These prohibitions aim to protect air quality.

A.3.7 New Zealand Emissions Trading Scheme

The Climate Change Response Act 2002 and associated regulations is the Government's principal response to manage climate change. A key mechanism for this is the New Zealand Emissions Trading Scheme (NZ ETS) The NZ ETS puts a price on greenhouse gas emissions, providing an incentive for people to reduce emissions and plant forests to absorb carbon dioxide. Certain sectors are required to acquire and surrender emission units to account for their direct greenhouse gas emissions or the emissions associated with their products. Landfills that are subject to the waste disposal levy are required to surrender emission units to cover methane emissions generated from landfill. These disposal facilities are required to report the tonnages landfilled annually to calculate emissions.

The NZ ETS was introduced in 2010 and, from 2013, landfills have been required to surrender New Zealand Emissions Units for each tonne of 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 (currently sitting at around $86 per tonne[6]) .
- 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 CO_2) 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.

[6] https://carbonmatch.co.nz/ accessed 25 October 2016

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[7]. 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).

A.3.8 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.

[7] http://morganfoundation.org.nz/wp-content/uploads/2016/04/ClimateCheat_Report9.pdf

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.

A.3.9 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.[8]

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

A.3.10 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

[8] From: MfE 2009: Waste Management and Minimisation Planning, Guidance for Territorial Authorities.

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.[9]

A.3.11 Health and Safety at Work Act 2015[10]

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.

[9] From: MfE 2009: Waste Management and Minimisation Planning, Guidance for Territorial Authorities.
[10] http://www.legislation.government.nz/act/public/2015/0070/latest/DLM5976660.html#DLM6564701

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.

A.3.12 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.government.nz.

A.3.13 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.government.nz/more/international-environmental-agreements.

TOI TE ORA
PUBLIC HEALTH
Bay of Plenty + Lakes Districts

Te Whatu Ora
Health New Zealand
Lakes

Toi Te Ora Public Health
PO Box 2120
TAURANGA 3140

5 July 2023

Brent Atiken
Taupō District Council
Private Bag 2005
TAUPO 3352
batiken@taupo.govt.nz

Tēnā koe Brent

Medical Officer of Health Review of Taupo District Council Waste Assessment 2023

I appreciate this opportunity to provide comment on the August 2023 draft waste assessment.

As you know 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. My comments seek to assist Council in promoting a healthy and safe environment for their community now and into the future.

Waste management is important for the health of the public. If not disposed of properly, waste can present a health hazard through physical injury, chemical poisoning, exposure to infectious material and encouraging pests such as vermin, flies, and mosquitoes. Waste can also block stormwater systems, contaminate land, and water, and create odours.

Waste services and infrastructure should be provided in ways which do not increase the risk to health, are affordable, and are accessible to everyone. Services that provide the least complex system, and that are most accessible and affordable are encouraged. This is because it is these that enable the highest level of participation and achieve the highest compliance.

In this context I make the following comments;

Once again, the draft waste assessment is comprehensive, and I am pleased to see public health protection at the centre of why waste needs to be managed properly and reduced safely.

I am supportive of the options table addressing the key issues identified in the waste assessment and make the following comments for consideration when developing the Waste Management and Minimisation Plan (WMMP).

Decisions that reduce environmental contamination, reduce resource use and the impacts of climate change are supported because these will contribute to safeguarding the health of current and future populations.

Targets

Although Council did not meet their waste reduction target, I recall the target set in 2017 for the next six years as being bold and ambitious at the time, and acknowledge the 49% diversion rate that was achieved. I support food and building material diversion implementation and encourage Council to extend the target to 60% by 2030. I suggest including behaviour targets as well as weight targets for example, Council could measure improvements in street litter and recycling bin contamination as well as percentage of businesses and properties participating in reduction activities.

Broadlands Landfill and Gas Capture

The delivery of sanitary refuse collection and disposal services requires plenty of time to plan to ensure services are continuous and health always protected.

Noting the current consent ends in a few years, engaging with tangata whenua and the wider community as early as possible is necessary. Early engagement will also enable Council to understand early on whether gas capture will be required and implemented without waiting until being legally required to do so.

When considering future waste disposal options, I encourage an assessment of the options for how well they contribute to mitigating the impacts of climate change. Public health impacts of climate change are serious, Council has an opportunity through its role to provide sanitary works[1] to reduce global greenhouse gas emissions and reduce climate change harm.

Servicing Non-Urban Areas

Whareroa transfer station is rate funded which I am supportive of. I am also supportive of the approach that recycling services are rate funded to maximise diversion by the community.

[1] Section 25, Health Act 1956

In my previous feedback I expressed concern that not all households were provided with rate funded council kerbside recycling collection services. Relying on the commercial sector to provide services in locations that council does not could present a risk to public health.

Kerbside Collection

The assessment indicates that Council is looking to alter its kerbside collection services. The outcome and whether Council will progress with the suggested changes following the presentation of the service provision options and funding to Council in August 2021 is unclear.

I note the composting education and subsidy program Council employs to reduce organic food waste going to landfill. However, I am supportive of all changes discussed in Section 9.2.2, particularly collection and frequency of food waste for the reasons given in the assessment. Organic waste is odorous by nature and more likely to be offensive. Measures needed to manage the risk to public health are essential to prevent nuisance situations arising. Weekly food collection and lidded receptacles that prevent vermin and other pests gaining access are measures that I support.

I am also supportive of Council moving away from the user pay system particularly when the incomes in Taupō are lower compared to the rest of the country. User pay systems may increase inequities by increasing the financial burden on low socioeconomic households and tenanted properties who are less able to pay. As I mentioned in my feedback into the previous waste assessment in 2017, to take a community wide funding approach, to waste and recycling collection services will benefit everyone. Taking a community wide approach to funding can be justified since appropriate and effective waste management is a common good for public health.

I am aware that Taupō has more people over the age of 65 than other areas, therefore I am pleased to see the assessment consider how council will manage waste from households with people who are older or have disabilities. I recommend these proposed changes to services and funding be included in the WMMP and implemented at the earliest opportunity.

It would be useful for the assessment to include a percentage breakdown of the waste streams collected from the kerbside. To have this information will enable Council to identify waste streams for future service delivery planning.

I am aware that in other districts where residences have access to continually improved collection services that they use them. Therefore, I encourage Council to review and make improvements to waste collection streams, particularly those provided at the kerbside throughout the life of the WMMP. Those services which provide the least complexity, increase accessibility, and respond to societal trends and behaviours should increase the level of community buy-in and compliance, raise participation and result in the least waste going to landfill.

Kerbside Services

It would be helpful for the assessment to include the percentage of households not receiving council collection services. The provision of waste collection services for all rural areas and any new household should be the default position of Council. I would like to see council services provided to every property because services that are accessible to everyone and enable everyone to do the right thing will be more protective of health.

I would like to see the assessment discuss whether the options presented include kerbside recycling and waste collection to all households as this will maximise diversion and provide the best choice for public health to be the easy choice. Council needs to support kerbside collection with household waste disposal providing sustainable community services that promote good practice and minimise improper disposal.

Noting the approaches mentioned in the assessment and that of other councils to reduce contamination of diverted materials, I would not be in favour of Council removing recycling bins for short periods after three contamination issues. This is likely to only harm relationships Council has with their community and reduce ongoing participation and community buy-in. An encouraging and proactive education approach is more likely to have the best outcomes for everyone.

Hazardous Substances and Materials

The assessment includes a range of services free of charge and I am particularly pleased to see household chemicals and rural agrichemical waste included. I would like to see an assessment whether only the Broadlands Road Landfill is adequate, and its location is suitable to provide convenient and accessible waste and waste diversion services to the whole rural community.

As I mentioned earlier, I am pleased Council provides residents with an opportunity to discard household chemicals. The assessment mentions that waste acceptance criteria is detailed in the Broadlands Road Landfill Site Management Plan of what can be disposed at the site with different materials having different levels of contamination permissible. The criteria should be clearly communicated to the community.

Soft Plastics

I noted that industry is currently providing a soft plastic recycling program through one supermarket chain and am supportive of Council's intention to work with industry to extend this program. The assessment does not include how Council currently supports the existing program or how it could in the future by, for example, using council recycling locations to collect soft plastics. An action in the WMMP to explore current and future opportunities is suggested.

Rural Waste Assessment

I agree with the assessment that more work on farm related waste needs to be undertaken to understand the implications of new regulations and waste volumes going forward. I expect to see an action for Council to work with their rural communities to gain information which will assist council plan and implement their services during the next WMMP.

Iwi Engagement in Waste Planning

Involvement of Iwi in the development of this waste assessment is unclear. While existing Iwi and Council partnership forums may provide an opportunity for Iwi to provide an iwi view on waste management and minimisation, I would like to see the assessment include how Council intends to proactively engage with local Iwi on waste management and minimisation in the urban and rural environs.

Building and Construction Waste

It is useful that Council has completed a recent review of the composition of waste to landfill. I note that building and construction waste, particularly timber is the largest waste stream. I am therefore pleased to see that Council is looking at ways to reduce this waste stream by upgrading the current domestic tipping area and increase oversight of truck loads at Broadlands Road. I would like to see these activities transpire to the WMMP as well as other reduction and diversion actions for this significant waste stream.

The assessment discusses government mandated product stewardship schemes and whether Council opts to support these or not. I would like to see the assessment include a review of current and future schemes to identify how Council will support these schemes. Council is encouraged to take every opportunity to increase waste diverted to landfill including stewardship schemes. I suggest that the WMMP include an action to encourage community participation and support industry collection locally through existing community waste transfer and diversion sites.

Solid Waste Bylaw

The assessment mentions information gaps around waste managed by non-council waste management facilities. I support a bylaw review with the intention to address these gaps and include the points raised in the assessment. Councils require the necessary tools to effectively manage waste in their district and the solid waste bylaw is a means to achieve this.

Toi Te Ora Public Health Population Survey and Te Whatu Ora Lakes Position Statement

As the WMMP review progresses Council should have regard to Toi Te Ora Public Health, Issues of Health and Wellbeing Population Survey 2020. Particularly when developing the actions in the WMMP. This survey reflects the Bay of Plenty and Lakes community views, including Taupo across a range of public health topics. People were asked for example about their overall level of concern about environmental issues affecting their health and wellbeing. Nearly half said it was high or very high (44%). Of relevance to waste management and minimisation is the level of satisfaction with rubbish disposal systems and recycling systems and their importance. For people in the Lakes (Rotorua and Taupo) health district this was 79% and 64% respectively. The survey is available on the Toi Te Ora website.[2]

Section 1.4.4.1 lists the aspects of waste management that are likely to impact public health and Section 1.4.4.2 discusses how these issues maybe managed. While access to facilities and services is mentioned, a key aspect to include is affordability. A policy environment which enables individuals and communities to make the right choice the easy choice will safeguard the environment and attain health protection from the outset.

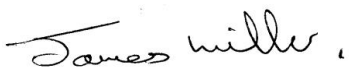
Event Waste Reduction

Decisions and actions that reduce environmental contamination, reduce resource use and the impacts of climate change will safeguard the health of existing and future populations. I support and would like to see the assessment and subsequent WMMP include activities to reduce waste generated from emergency events and also prepare Council to safely manage waste from these events.

As the WMMP is developed I encourage Council to have regard to Te Whatu Ora Lakes District, previously Lakes District Health Board, Waste Management and Minimisation Position Statement.

If you wish to discuss this feedback please contact Annaka Davis, Health Protection Officer in the first instance.

Yours sincerely,



Dr James Miller
Medical Officer of Health

[2] https://toiteora.govt.nz/assets/Toi-Te-Ora-Public-Health/Publications-and-Resources/Population-Surveys/2020_Population_Survey_Low_Res_FINAL.pdf

Officer Response to Medical Officer of Health Comments on the Waste Assessment

Medical Officer of Health Comment	Officer response.
Once again, the draft waste assessment is comprehensive, and I am pleased to see public health protection at the centre of why waste needs to be managed properly and reduced safely	We thank you for your support.
I suggest including behaviour targets as well as weight targets for example. Council could measure improvements in street litter and recycling bin contamination as well as percentage of businesses and properties participating in reduction activities.	The draft waste diversion target in the WMMP is 60% by 2034. Officers will monitor businesses regarding participation with new services and provide education to enable participation support achievement in councils waste reduction initiatives and targets.
When considering future waste disposal options, I encourage an assessment of the options for how well they contribute to mitigating the impacts of climate change. Public health impacts of climate change are serious, Council has an opportunity through its role to provide sanitary works1 to reduce global greenhouse gas emissions and reduce climate change harm.	Greenhouse gas emissions are a focus and if a new consent to operate the Broadlands Road Landfill is obtained then council will look to gas flare emissions. If a consent is unable to be obtained then council will focus further on waste diversion to reduce transport emission when waste is taken to an alternative disposal facility.
Whareroa transfer station is rate funded which I am supportive of. I am also supportive of the approach that recycling services are rate funded to maximise diversion by the community. In my previous feedback I expressed concern that not all households were provided with rate funded council kerbside recycling collection services. Relying on the commercial sector to provide services in locations that council does not could present a risk to public health.	Recycling is rate funded to the community in the form of kerbside collection for urban properties and at our six district facilities for rural properties. The cost to provide kerbside recycling rural collections is considered not cost effective at this time.
Weekly food collection and lidded receptacles that prevent vermin and other pests gaining access are measures that I support.	Thank you for your support. The food waste collection will be weekly in a plastic lidded caddy to prevent vermin and other pests.
I am also supportive of Council moving away from the user pay system particularly when the incomes in Taupo are lower compared to the rest of the country.	Thank you for the support.
I am aware that Taupo has more people over the age of 65 than other areas, therefore I am pleased to see the assessment consider how council will manage waste from households with people who are older or have disabilities. I recommend these proposed changes to services and funding be included in the	Thank you for your support.

Officer Response to Medical Officer of Health Comments on the Waste Assessment

Medical Officer of Health Comment	Officer response.
WMMP and implemented at the earliest opportunity.	
It would be useful for the assessment to include a percentage breakdown of the waste streams collected from the kerbside. To have this information will enable Council to identify waste streams for future service delivery planning.	Council will look to undertake kerbside audits with any new service provision going forward.
Therefore, I encourage Council to review and make improvements to waste collection streams, particularly those provided at the kerbside throughout the life of the WMMP. Those services which provide the least complexity, increase accessibility, and respond to societal trends and behaviours should increase the level of community buy-in and compliance, raise participation and result in the least waste to landfill.	Council will look to continually improve the kerbside services to enable our district to achieve and surpass our diversion target
The provision of waste collection services for all rural areas and any new household should be the default position of Council. I would like to see council services provided to every property because services that are accessible to everyone and enable everyone to do the right thing will be more protective of health.	The cost to provide kerbside rural collections is considered not cost effective at this time, when district facilities provide this service.
Noting the approaches mentioned in the assessment and that of other councils to reduce contamination of diverted materials, I would not be in favour of Council removing recycling bins for short periods after three contamination issues. This is likely to only harm relationships Council has with their community and reduce ongoing participation and community buy-in. An encouraging and proactive education approach is more likely to have the best outcomes for everyone.	Council will focus on proactive education to make sure that the service operates efficiently but will need a back up service based on the three strikes program initiated across NZ for those that abuse the system.
As I mentioned earlier, I am pleased Council provides residents with an opportunity to discard household chemicals. The assessment mentions that waste acceptance criteria is detailed in the Broadlands Road Landfill Site Management Plan of what can be disposed at the site with different materials having different levels of contamination permissible. The	Hazardous materials and chemicals are dealt with on a case-by-case basis regarding acceptance, as there will be some chemicals council cannot accept. Council will look to provide additional education material on its web site regarding household chemicals acceptance

Officer Response to Medical Officer of Health Comments on the Waste Assessment

Medical Officer of Health Comment	Officer response.
criteria should be clearly communicated to the community.	
I noted that industry is currently providing a soft plastic recycling program through one supermarket chain and am supportive of Council's intention to work with industry to extend this program. The assessment does not include how it currently supports the existing program or how it could in the future by, for example using council recycling locations to collect soft plastics. An action in the WMMP to explore current and future opportunities is suggested.	Council currently supports soft plastics by providing information about where this can be done. The cost of soft plastic recycling is expensive and this cost should be borne by the packaging industry not by ratepayers going forward. If council was to fund this programme then this would remove the incentive to reduce packaging by those currently paying the cost.
I agree with the assessment that more work on farm related waste needs to be undertaken to understand the implications of new regulations and waste volumes going forward. I expect to see an action for council to work with their rural communities to gain information which will assist council plan and implement 'their services during the next WMMP.	The support for rural waste minimisation is an ongoing requirement. Council advocates at a national level for policy support in this space which has resulted in a number of product stewardship schemes being developed for the rural community.
Involvement of Iwi in the development of this waste assessment is unclear. While existing Iwi and Council partnership forums may provide an opportunity for Iwi to provide an iwi view on waste management' and minimisation, I would like to see the assessment include how Council intends to proactively engage with local Iwi on waste management and minimisation in the urban and rural environs.	Council will look to continue its work with Iwi relating to waste minimisation.
I suggest that the WMMP include an action to encourage community participation and support industry collection locally through existing community waste transfer and diversion sites	Council will look to support product stewardship programs when appropriate.
Section 1.4. 4. 1 lists the aspects of waste management that are likely to impact public health and Section 1 4 4 2 discusses how these issues maybe managed. While access to facilities and services is mentioned, a key aspect to include is affordability. A policy environment which enables individuals and communities to make the right choice the easy choice will safeguard the environment and attain health protection from the outset.	Council has considered these aspects when compiling the WMMP.

Officer Response to Medical Officer of Health Comments on the Waste Assessment

Medical Officer of Health Comment	**Officer response.**
As the WMMP is developed I encourage Council to have regard to Te Whatu Ora Lakes District, previously Lakes District Health Board, Waste Management and Minimisation Position Statement.	Officers have had regard to The Position Statement when preparing the WMMP.

Waste Management and Minimisation Plan

Prepared by Taupō District Council

February 2024

Prepared by:

Brent Aitken

Environmental Impacts Manager

Approved by:

Tony Hale

Acting General Manager Operations & Delivery

Contents

Summary

As required by the Waste Minimisation Act 2008, this Waste Management and Minimisation Plan (WMMP) has been developed to protect our district from harm and to provide environmental, social, economic, and cultural benefits as it moves to supporting a circular economy.

Aspects of a circular economy include (source: New Zealand Waste Strategy):

- Taking responsibility for how we make, use manage and dispose of things.
- Applying the waste hierarchy preferences to how we mange materials
- Protecting and regenerating the natural environment and its systems
- Delivering equitable and inclusive outcomes for the community
- Ensuring our systems for using, managing, and disposing of materials are financially sustainable
- Thinking across systems, places, and generations
- Improving the efficiency of resource use

In summary, the purpose of this plan is to:

- Present Taupō District Council's goal of managing and minimising waste in the district.
- Set objectives and policies to achieve the goal.
- Provide information on how Council intends to fund the activities of the WMMP over the next six years.

In preparing this plan, a Waste Assessment was carried out. This work identified the key waste issues and challenges facing the district.

Our WMMP Goal is to:

"*To protect public health and safeguard the Taupō District environment by ensuring waste and diverted material is managed in a safe and sustainable manner that maintains natural and aesthetic values"*

A key part of working towards this goal is considering the role of waste in the wider economy, including issues of resource efficiency, and viewing waste as a resource, rather than as an issue to be managed. Taupō District Council proposes to continue to provide a range of waste management and minimisation services similar to those currently in place. In addition, Council supports the community to achieve further waste diversion through education and supporting local waste minimisation initiatives.

To achieve this goal, Council has set the following objectives:

- That waste is disposed of appropriately and public health is protected.
- Increase the total quantity of material diverted from Landfill.
- Increase the quantity of diverted material through reduction, reuse, recycling, and recovery.

Specific actions have been identified in the Action Plan included in this document to help Council address the above objectives. This plan reflects Council's commitment to waste management and minimisation to not only meet legislative requirements, but to respond to the community's demand for services.

Part A: The Strategy

1 Part A: Introduction

This statement of proposal has been prepared to fulfil the requirements of Section 83 of the Local Government Act 2002 (LGA) and Section 43 of the Waste Minimisation Act 2008 (WMA).

This Waste Management and Minimisation Plan (WMMP) sets out Taupō District Council's plans for how waste in our community will be managed.

1.1 What happens with our waste?

The Taupō District sent 29,405 tonnes of waste to the Broadlands Road landfill in the 2022/23 year. Over the same period, we diverted 25,844 tonnes from landfill which is a diversion rate of 47 percent.

1.2 What is waste and why is it a problem?

Most of the things we do, buy, and consume, generates some form of waste. In addition to disposal costs, if it is not managed properly, it can cause problems with the environment and with people's health.

The Waste Minimisation Act (the Act) defines waste as:

"Material that has no further use and is disposed of or discarded."

The Act also describes waste minimisation as, "reducing waste and increasing the reuse, recycling, and recovery of waste and diverted material". Diverted material is defined as "anything that is no longer required for its original purpose, but still has value through reuse or recycling".

For example, your empty aluminium drink can is waste to you, but is worth money to metal recycling companies and so becomes diverted material if it is recycled.

Our WMMP covers all solid waste and diverted material in the Taupō District, whether it is managed by Council or not. Liquid and gaseous wastes are not included except where they interact with solid waste systems. This includes hazardous wastes like chemicals and the outputs from wastewater treatment plants. This does not mean Council is going to have direct involvement in the management of all waste, however, there is a responsibility for Council to consider all waste in our district and to suggest areas where other groups, including businesses or householders, could take action themselves.

1.3 Why do we need a plan?

Managing waste and ensuring good outcomes for the community can be a complex task. We need to look after the environment, take care of people's health and make sure that this is done at an

acceptable cost to the community. To achieve this, all parts of the community need to work together.

City and district councils have a statutory role in managing waste. Councils are required under the Waste Minimisation Act 2008 (WMA) to promote effective and efficient waste management and minimisation within their area. A key part of doing this is to adopt a Waste Management and Minimisation Plan (WMMP). Councils have obligations under the Health Act 1956 to ensure that our waste management systems protect public health.

This WMMP sets the priorities and strategic framework for managing waste in our district. Once the plan is adopted, the actions will be carried forward into our long term and annual plans to ensure resourcing is available to deliver the plan's goals and objectives.

In-line with Section 50 of the WMA, our WMMP needs to be reviewed at least every six years after its adoption.

The date for the next review of this plan will be 2030.

1.4 Waste disposal in the Taupo District

Refer to the waste assessment for map of council waste facilities. This can be found at www.taupo.govt.nz.

2 Review of the 2018 Waste Management and Minimisation Plan

Council last adopted a WMMP in 2018. The 2018 – WMMP had a target and a number of actions required to achieve it.

Council's waste reduction target for the 2018 waste plan was: By 2028, increase the amount of material (tonnes) diverted from Landfill to 51 percent

In the 2022/23 year Council achieved a 47 percent diversion rate so is on track to achieve the target of 51 percent diversion by 2028.

Council has been successful in implementing several waste minimisation initiatives identified in the 2018 plan including:

- E-waste recycling
- Supporting district marae and iwi groups with a targeted waste minimisation education programme
- Waste minimisation grants
- Working with local schools to increase organics diversion through education and home composting subsidy programme
- Supporting local events to minimise waste
- Continuing to advocate product stewardship
- Supporting and facilitating the reduction of single use bags
- Providing household battery recycling
- Providing car seat recycling

All of the above programmes will continue under this plan.

2.1 What does the plan have to contain?

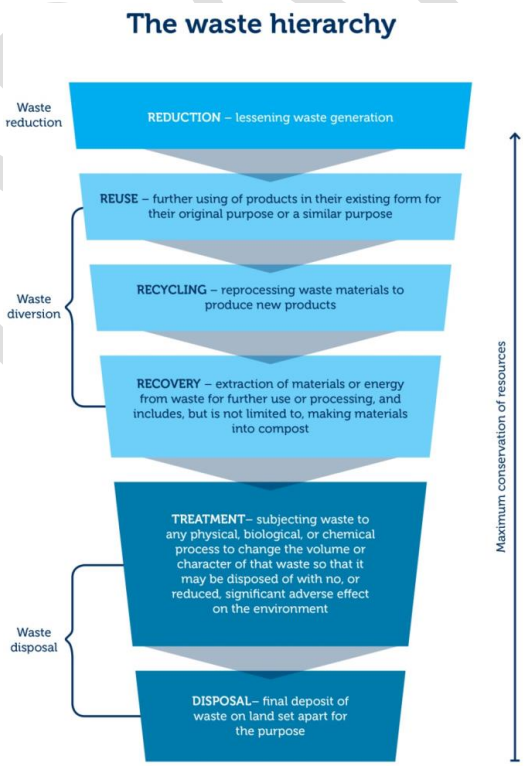
The plan must meet requirements set out in the Waste Minimisation Act, including:

- Consider the 'Waste Hierarchy' which sets priorities for how we should manage waste (Figure 1);
- Ensure waste does not create a 'nuisance';
- Align to the New Zealand Waste Strategy and other key government policies, which emphasise reducing harm and improving the efficiency of resource use and moving to a circular economy;
- Consider the outcomes of the Waste Assessment. This is a review of all information that we have about the current waste situation this year, including rubbish from households and businesses.

2.1.1 The waste hierarchy

The 'waste hierarchy' refers to the idea that reducing, reusing, recycling, and recovering waste is preferable to disposal, which in New Zealand generally means a landfill site. The waste hierarchy is shown below:

Figure 1: The Waste Hierarchy



Source: www.mfe.govt.nz

2.2 The structure of our plan

This plan is in three parts:

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

Part B: Action Plan. This outlines the proposed actions to achieve the goal, objectives, and targets in Part A and how we will monitor and report on our actions, including how they are funded.

Part C: Supporting Information. This is the background information that has formed the development of our WMMP.

3 Goal, objectives, policies, and targets

3.1 Our Goals

The Taupō district WMMP goal is:

- To protect public health and safeguard the Taupō district environment by ensuring waste and diverted material is managed in a safe and sustainable manner that maintains natural and aesthetic values.

This contributes to Council's vision *"We will be a district of connected communities who thrive and embrace opportunities."*

3.2 Working with iwi, hapū

Taupō District Council is committed to meeting its statutory Te Tiriti O Waitangi obligations and acknowledges partnership as the basis of Te Tiriti. This requires both parties to treat and work with each other in good faith and show good will to reflect the partnership relationship. We acknowledge these responsibilities are distinct from the Crown's Treaty obligations and lie within a Taupō District Council context.

Taupō District Council will give effect to the principles of partnership (the duty to act in good faith in the nature of a partnership), participation (of Māori in council processes), protection (the duty to actively protect the rights and interests of Māori) in our services, activities and planning work.

The relationship of Māori with their ancestral resources is a matter of national importance under the Resource Management Act. The management and disposal of waste is an important issue to iwi and hapū.

3.3 Moving towards a circular economy

Taking natural resources, making them into something, using it and then disposing of it is referred to as a "linear economy". A "circular economy" is a system where extracted materials are used and reused for as long as possible. The ideal scenario is that synthetic materials are reused forever, and organic materials are eventually returned to the soil to enrich it. In a true circular economy, there is no waste.

3.4 Enriched by Te Ao Māori

Circular economy thinking shares many values with Te Ao Māori. Both focus on not creating waste in the first place and cycles of continual regeneration. In tea o Māori, the concept of whakapapa adds further richness. Whakapapa is the kinship between all living things; it exists not just between people but between people and the planet. That kinship creates connection, respect, and responsibility. In this way, whakapapa gives rise to kaitiakitanga and our responsibility to actively care for our environment.

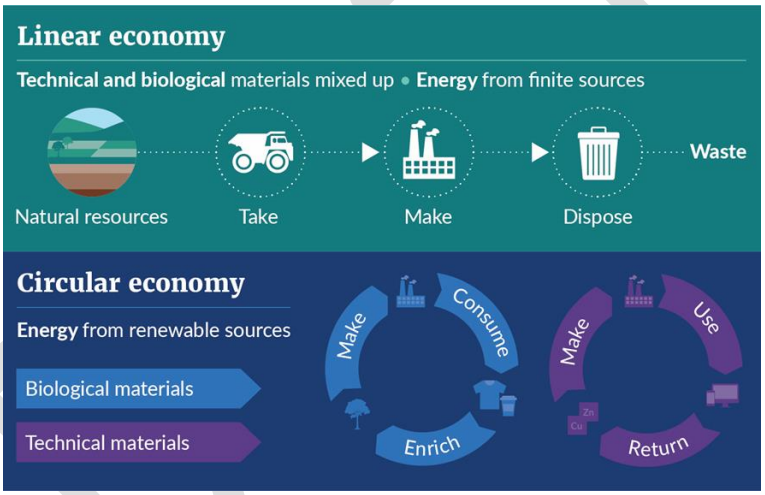


Figure 2 Linear vs circular economy (source: Helen McArthur Foundation)

3.5 Objectives, Policies and Targets

3.5.1 Objectives

The following objectives identify how our goals of effective and efficient waste management and minimisation will be achieved:

- That waste is disposed of appropriately and public health is protected.
- Emissions from waste are reducing
- The quantity of diverted material is increased through reduction, reuse, recycling, and recovery.

- Council advocates waste minimisation by producers and for increased or mandatory product stewardship.
- Waste minimisation initiatives within the community are supported by Council.
- Appropriate pricing methods are utilised to incentivise waste minimisation.

3.5.2 Policies

The following polices support the objectives:

Policy 1

Council will provide for the appropriate disposal of waste.

Supports Objective 1,

Policy 2

Council will provide, support and advocate for waste minimisation where appropriate.

Supports Objectives 3, 4, 5, 6

Policy 3

Council will continue to provide waste education to enable waste minimisation in the district and will endeavour to work with the regional councils and central government to maximise opportunities.

Supports Objectives 3, 4, 5

Policy 4

Council will lobby central government regarding waste management and minimisation issues.

Supports Objective 1, 2, 3, 4, 5, 6

Policy 5

Council will look to reduce emissions from waste

Supports Objective 2

Policy 6

Council advocates for waste minimisation by produces and for increased and/or mandatory product stewardship.

3.5.3 Targets

The production of waste has been directly linked to GDP, so Council has limited control over waste to landfill tonnages. A large percentage of the current waste to landfill is controlled by the commercial market service provision.

With the provision of additional waste diversion solutions Council will look to increase the current waste diversion target of 51 percent diversion to 60 percent diversion relative to the tonnes disposed to landfill by 2034.

"By 2034, increase the quantity of material (tonnes) diverted from landfill from 5 1 percent to 60 percent"

3.5.4 Considerations

In preparing this WMMP, Council has considered :

- Information on the waste we generate and manage in our district;
- The waste hierarchy;
- Public health;
- Projections of how our population and economy might change over time;
- Input from the commercial sector;
- Feedback from the health sector;
- The potential costs and benefits of different options to manage our waste.

The detail of the above information is contained in the Waste Assessment.

We have recognised plans, policies and legislative requirements, including:

- The Waste Minimisation Act (WMA) 2008;
- The Local Government Act (LGA) 2002;
- The Hazardous Substances and New Organisms (HSNO) Act 1996;
- The Resource Management Act (RMA) 1991;
- The Health Act 1956;
- The Health and Safety at Work Act 2015;
- Climate Change (Emission Trading) Amendment Act 2008;
- The New Zealand Waste Strategy (NZWS);
- Regional Policy Statement for the Waikato Region;
- Waikato Waste and Resource Efficiency Strategy (2016-18)
- The Taupō District Council Long Term Plan.

Further information on the reflection of these plans, policies and legislation within this plan is contained in the Waste Assessment.

4 The waste situation

Globally, there is increasing understanding of the need to improve resource efficiency and reduce waste. We live on one planet with finite resources and we cannot consume at the current levels without change in the way we use them. We could all benefit from improving our purchase and disposal habits, thereby reducing costs and waste. Progress is being made by individuals, communities and industries alike who are seeking to reduce waste in innovative ways.

We can't keep consuming resources at the same rate or keep looking for places to bury or burn the things we don't want anymore. As the waste hierarchy outlines it is better not to generate waste in the first place.

New Zealanders create more waste than our counterparts. Aotearoa is among the highest generators of waste per capita in the developed world. In 2018, we sent 3.7 million tonnes of waste to municipal landfills (approximately 750 kilograms per person); this is 49 per cent higher than the Organisation for Economic Co-operation and Development (OECD) average of 538 kilograms per capita (source: Ministry for the Environment). Despite slight improvements in 2019 and 2020, our long-term trend suggests the amount of waste we are sending to landfill is increasing; between 2010 and 2019, total waste to municipal landfills increased by approximately 48 per cent. Much of what we send to landfills would be relatively easy to reuse or recycle as it still has value.

4.1 Global considerations

A large percentage of recovered material is sent to Asia, and in the past particularly China. But now China has imposed tougher regulations regarding the quality of imported recovered materials, this has resulted in over-supply of recovered material and a resulting reduction in the price paid. It's currently unknown how long these regulations will be in place for, but the reduction in value of recovered material will have ongoing impacts on costs of collection and processing contracts.

4.2 Our district

Based on the available data, per capita disposal of waste to Broadlands Road landfill has increased by 17 percent between 2013 and 2022, from 0.613 tonnes/capita/annum to 0.716 tonnes/capita/annum.

4.2.1 Climate Change

Council recognises that disposal of the district's waste has a significant impact on it's emissions. We are aiming to reduce our emissions by:

- Diverting food waste
- Diverting construction and demolition waste in addition to the existing suite of actions already being undertaken
- Installing a gas glare at the Broadlands Road Landfill once a resource consent is granted if the decision is made to renew the resource consent for this facility.

Council has adopted a Climate Change Strategy which sets the target of a 10 percent reduction of biogenic methane emissions from the baseline in 2018/19. If all of the actions mentioned above are achieved then we will meet this target.

Figure 2 – Gross emissions reduction targets for Taupo District, source www.taupo.govt.nz

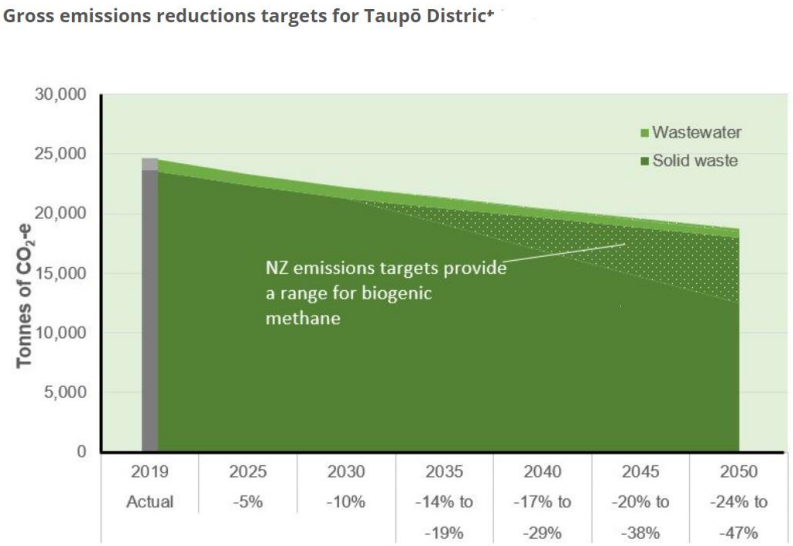


Figure 2 – Gross emissions reduction targets for Taupo District, source www.taupo.govt.nz

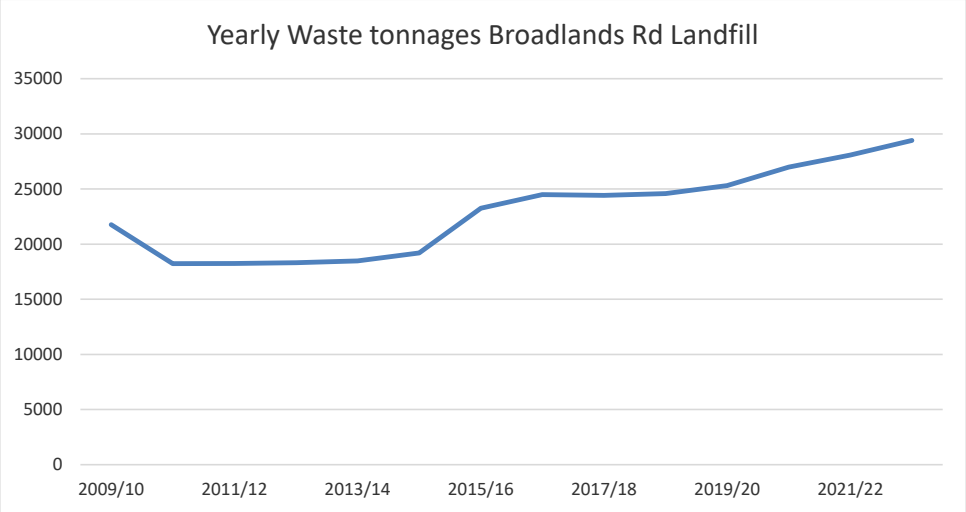


Figure 3 Yearly waste tonnages to Broadlands Road landfill

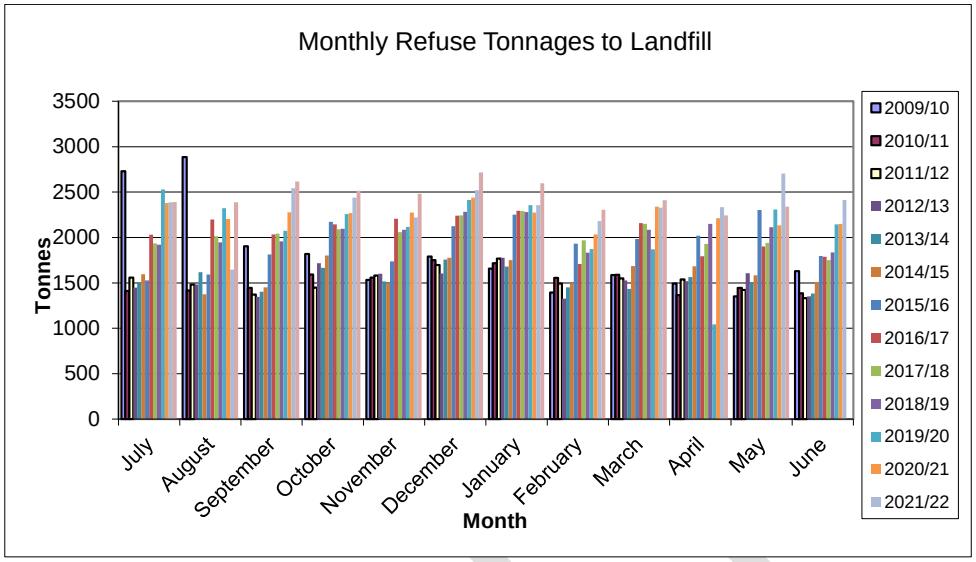


Figure 4 Monthly waste tonnages to Broadlands Road landfill

4.3 Where does it come from?

The activity source of the waste to landfill identifies how the waste was generated. The bulk of the general waste coming to the site is construction and demolition (C&D) waste, and from industrial, commercial and institutional sources (ICI). Kerbside refuse collected makes up the majority of the remaining tonnages.

Table 1 Activity sources of waste to Broadlands Road landfill - August/September 2022

Overall waste to Broadlands Road landfill - By activity source - August/September 2022	percent of total weight	Tonnes/week
Construction & demolition	27 percent	151 T/week
Industrial/commercial/institutional	32 percent	179 T/week
Landscaping	2 percent	14 T/week
Residential	7 percent	42 T/week
Subtotal general waste	**68 percent**	**385 T/week**
Cleanfill material to tip face	2 percent	10 T/week
All kerbside rubbish	22 percent	123 T/week
Rural transfer stations	8 percent	42 T/week
Special	0 percent	3 T/week
TOTAL	**100 percent**	**563 T/week**

4.4 Composition of waste to landfill

Organics was the largest primary category of waste disposed of at the transfer pit, comprising 24 percent of the total weight, followed by timber at 20 percent. Paper, plastics, and rubble cumulatively all comprised 33 percent of the total. Volumes will vary during the year with population and spring growth periods.

Data has been gathered by way of a Taupō District Council funded SWAP, which is a process of estimating waste volumes as waste is offloaded at the landfill.

Table 2 Primary composition of overall waste to landfill - Broadlands Road August-September 2022

Primary composition of overall waste to landfill - August/September 2022	percent of total weight	Tonnes per week	Tonnes per annum (indicative only)
Paper	7.5 percent	42 T/week	2,198 T/annum
Plastics	15.3 percent	86 T/week	4,494 T/annum
Organics	19.4 percent	109 T/week	5,705 T/annum
Ferrous metals	2.7 percent	15 T/week	781 T/annum
Non-ferrous metals	0.6 percent	3 T/week	162 T/annum
Glass	2.8 percent	16 T/week	822 T/annum
Textiles	6.1 percent	34 T/week	1,786 T/annum
Sanitary paper	4.0 percent	23 T/week	1,182 T/annum
Rubble & concrete	12.6 percent	71 T/week	3,706 T/annum
Timber	26.9 percent	151 T/week	7,883 T/annum
Rubber	1.1 percent	6 T/week	322 T/annum
Potentially hazardous	1.1 percent	6 T/week	311 T/annum
TOTAL	**100.0 percent**	**563 T/week**	**29,351 T/annum**

The tonnes per annum are indicative only as they are based on the survey data gathered over the survey period only.

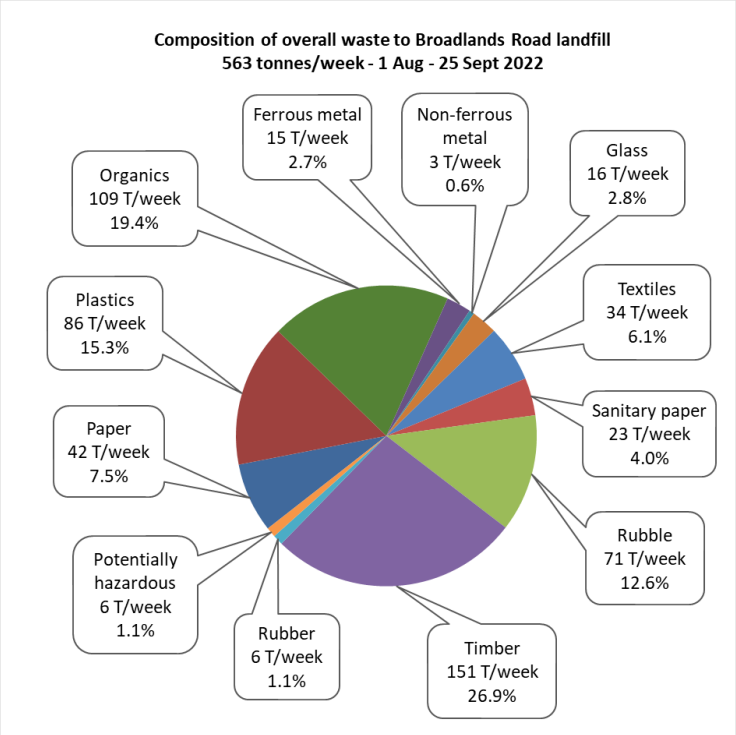


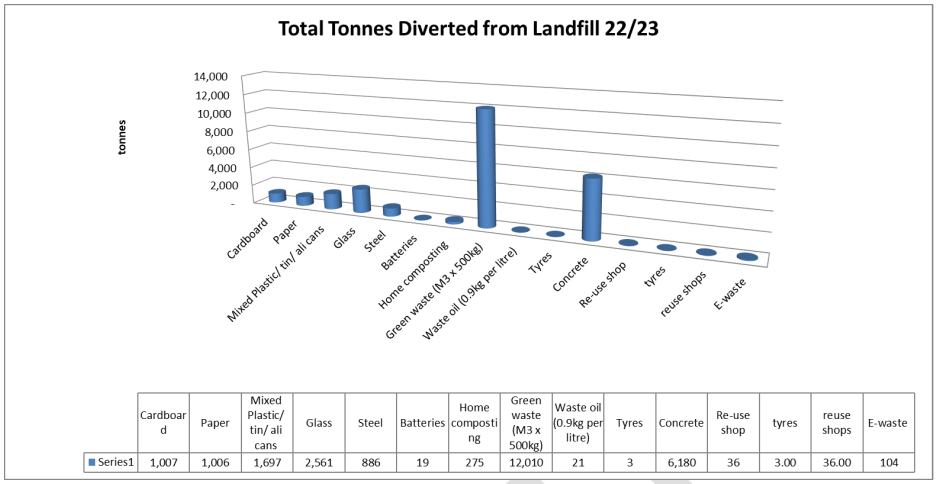
Figure 5 Composition of waste to landfill - Broadlands Road 2022

4.5 Material diverted from landfill

In the year 2022/23 25,844 tonnes of material were diverted from being disposed to the Broadlands Road Landfill. There was a total of 55,249 tonnes of material processed through our waste programme, which equates to a waste diversion rate of 47 percent.

The materials diverted in 2022/23 include:

- tin and aluminium and plastic results in 54 million containers
- 2,561 tonnes of glass, which is the equivalent of 13 million 330L bottles.



	Cardboard	Paper	Mixed Plastic/ tin/ ali cans	Glass	Steel	Batteries	Home composting	Green waste (M3 x 500kg)	Waste oil (0.9kg per litre)	Tyres	Concrete	Re-use shop	tyres	reuse shops	E-waste
Series1	1,007	1,006	1,697	2,561	886	19	275	12,010	21	3	6,180	36	3.00	36.00	104

Figure 6 Total tonnes of material diverted from Broadlands Road landfill 2022/23

4.5.1 Per capita disposal of waste - comparison

The per capita disposal of waste to landfill by residents of the Taupō District in 2022 is calculated in the below table and compared to the same figures from SWAP surveys by Waste Not Consulting in 2008, 2013, and 2017.

The 2022 population estimate for the Taupō District has been provided by Council. The annual tonnage of levied waste disposed of at Broadlands Road landfill has been extrapolated from weighbridge records for the eight-week period 1 August - 25 September 2022.

Table 3 Per capita disposal of waste to Broadlands Road landfill in years 2008, 2013, 2017 and 2022.

Taupōō District - Per capita disposal of waste to landfill	**2022**	**2017**	**2013**	**2008**
Usually resident population - Taupō District	41,000	37,000	34,300	32,148
Tonnes per annum to landfill	29,351	24,901	18,118	19,700
Disposal of waste to landfill - tonnes per capita per annum	**0.716**	**0.673**	**0.528**	**0.613**

Based on the available data, per capita disposal of waste to Broadlands Road landfill has increased by 17 percent between 2013 and 2022, from 0.613 tonnes/capita/annum to 0.716 tonnes/capita/annum.

4.5.2 Per capita disposal of waste; comparison with other areas

The Taupō District per capita figure for landfilled waste, including special wastes, is compared to disposal figures from other local authorities by Waste Not Consulting. The national average has been calculated using MfE's waste levy data and resident population estimates from Statistics NZ.

Table 4 Taupō District disposal rates compared to other areas

Overall waste to landfill including special wastes (excluding cover materials)	Tonnes per capita per annum
Waimakariri District 2017	0.325
Invercargill City 2018	0.528
Taupō District 2013	*0.528*
Palmerston North 2017	0.545
Kapiti Coast District 2017	0.546
Dunedin City 2018	0.554
Tauranga and WBOP District 2020	0.560
Napier/Hastings 2022	0.595
Wellington region 2016	0.608
Taupō District 2008	*0.613*
New Zealand (2021)	0.685
Taupō District 2017	*0.673*
Taupō District 2022	*0.716*
Hamilton City 2017	0.718
Queenstown Lakes District 2020	0.833
Auckland region 2016	1.053

The per capita disposal rate for the Taupō District in 2017 was marginally higher than the New Zealand average for 2021 but higher than most other provincial centres. Areas with high tourism activity, such as Taupō, Queenstown, and Rotorua, tend to have higher per capita disposal rates than areas with lower levels of tourism activity. Tourism activity generates waste but tourists are not counted as usually resident by the census.

Higher disposal rates are also associated with areas with significant numbers of holiday homes. This affects the per capita disposal rates, as non-permanent residents are not counted in the census as being usually resident. Approximately 30 percent of dwellings in the Taupō District are not permanently occupied. Users of holiday homes generate waste but the occupants are not included in the population statistics.

4.5.3 Per capita disposal of kerbside rubbish - Comparison with other areas

The annual disposal rate of kerbside rubbish calculated in Table 5 is compared to the disposal rates from other areas previously surveyed by Waste Not Consulting.

Table 5 Comparison of per capita disposal of kerbside rubbish with other areas

District and year of survey	Kg/capita/ annum	Comment
Christchurch City 2011	110	Rates-funded fortnightly 140-litre wheelie bins (with weekly organic)
Whangarei District 2017	153	User-pays rubbish bags + private wheelie bins
Auckland Council 2016	156	User-pays rubbish bags + rates-funded wheelie bin + private wheelie bins
Bay of Plenty Region 2020	160	Various
Taupō District 2022	*183*	*User-pays rubbish bags + private wheelie bins*
Dunedin City 2018	187	User-pays rubbish bags + private wheelie bins
Tauranga and WBOP District 2019	192	User-pays rubbish bags + private wheelie bins
Hastings District/Napier City 2022	197	Rates-funded 120-litre wheelie bins + private wheelie bins
Hamilton City 2017	197	Rates-funded bags (2 per h/h max)
Palmerston North 2017	201	User-pays rubbish bags + private wheelie bins
Wellington Region 2014/15	206	User-pays rubbish bags + private wheelie bins

The calculated per capita disposal rate of kerbside rubbish for Taupō District is similar to other areas with similar kerbside collection services.

A number of factors are related to the quantity of kerbside rubbish generated in any given area, particularly the proportion of households and businesses that use private wheelie bin rubbish collection services.

The disposal rate for the Taupō District has been calculated using tonnages of kerbside rubbish for August and September. These are months that are likely to be associated with large numbers of holiday homes not being occupied. The population estimate provided by Council takes this into account, as holiday homes were not included in the estimate.

4.6 Key issues

The aim of waste planning at a territorial authority level is to achieve effective and efficient waste management and minimisation. Priority waste streams and service options that need to be addressed to support a reduction of waste to landfill and continue to provide waste disposal and waste minimisation options include:

- **Future of the Broadlands Road Landfill:** Council will evaluate the future options available for the disposal of the district's waste. The resource consent for the Broadlands Road Landfill expires in 2027. Prior to the expiry, Council will need to decide whether or not to apply for a new resource consent to continue operation of the landfill.

- **Kerbside service delivery review:** Council's existing contract for kerbside rubbish and recycling collection is due to end. Because of this, it is timely to review how kerbside waste and recycling is collected from our urban areas to ensure that a best practice service is delivered. Food scraps collection is considered best practice and fits nicely with the direction from government for the standardisation for kerbside waste and recycling collection, so Council's review will likely consider the collection of food scraps.

- **Construction and demolition waste:** There is an opportunity for Council to work with the building, construction and demolition sector to further reduce this waste stream. Council will look to support diversion at the building sites as well as providing additional diversion options at our waste facilities.

- **Reduce, reuse and repair initiatives:** Council supports initiatives which encourages the reuse and repair of items to prevent them from going to landfill. This may include repair cafés and co-operatives, which are free meeting places where staff or volunteers with specialist repair skills can assist or teach visitors with broken items. This creates opportunities for people from different cultures and generations to meet, learn, share skills and build relationships, as well as keeping products in use longer before disposal at a landfill.

- **Investigate and support district food rescue programmes:** Some communities have food rescue programmes working in their district which take excess food in the community and distribute it to agencies and charities. These programmes may have broader benefits such as community building and resilience, sustainability education, intergenerational knowledge exchange and physical and mental wellbeing. Council will look to investigate and support community led food rescue programmes in the district.

- **Reduction of use of single use coffee cups and other items:** Single use coffee cups and other single-use takeaway packaging make up a large portion of the contamination in our street recycling bins and also a large proportion of the waste volume in our street litter bins. Council would like to support the reduction of single use items being landfilled.

- **Review the Solid Waste Bylaw to achieve alignment with services:** With a review of council's kerbside service delivery and the desire to divert more construction and demolition waste, Council is required to review its Solid Waste Bylaw to make sure that it aligns with the any new service provided.

Part B: Action plan

5 Introduction

The action plan outlines how Taupō District Council intends to work towards the goals and objectives, and address the issues outlined in Part A of the WMMP.

This aims to set out clear, practical initiatives that Council will implement. While the action plan forms part of the WMMP it is intended to be a series of useful 'living' documents that can be regularly updated to reflect current plans and progress. Under the WMA the plans can be updated without triggering the need for a formal review of the WMMP, as long as the changes are not significant and do not alter the direction and intent of the strategy as set out in the strategy.

5.1 Considerations

This is a strategic document of high-level intentions for actions to meet our obligations under the WMA. Further work will be required to determine the costs and feasibility of some projects which may affect how, when or if they are implemented.

In some instances, the delivery of the actions set out in this plan will depend on the development or amendment of contractual arrangements with providers. The nature of these arrangements cannot be pre-empted and may influence the nature, timing or cost of these projects or services.

5.2 Council's intended role

Council intends to oversee, facilitate, and manage a range of programmes and interventions to achieve effective and efficient waste management and minimisation within the district. Council will do this through internal structures responsible for waste management. We are responsible for a range of contracts, facilities, and programmes to provide waste management and minimisation services to the residents and ratepayers of the Taupō district.

5.3 Protecting Public Health

Both hazardous and putrescible (liable to decay) waste has the potential to be detrimental to our health. A key objective of any waste minimisation and management system is to protect public health. Any impact can be significantly reduced by avoiding, or carefully managing contact with waste. In practice, this means:

- Providing appropriate containers for storing waste prior to collection
- Providing dedicated public drop-off areas at transfer stations and landfills
- Regular collection and disposal
- Suitable collection and transport vehicles

- Disposal at a well-constructed and operated landfill including provision of appropriate barrier system such as base liner and adequate daily, immediate, and final cover.

6.0 Action Plan

Title	Issue addressed	New or existing action	Timeframe	Funding	objective	Contribution to target
The future of the disposal of the district's waste, including the future of the Broadlands Road landfill	The Broadlands Road resource consent expires in 2027. A decision must be made on how the district's waste should be disposed of in the future, and therefore what resource consents are required in the future.	New	The existing resource consent expires in December 2027. If a replacement consent is to be applied for, it must be applied for at least 6 months prior to the expiry date. A decision on the future of the Broadlands Road Landfill should be made in conjunction with the Long-term Plan 2024-34, so sufficient time and resource is allocated for future planning, including applications for resource consents.	Rates User Charges	1,2	Will provide for the future disposal of the district's waste.
Review the kerbside collection service inclusive of a food collection	Provide best practice kerbside collections to urban communities in the district	New	To be considered as part of the LTP 24-35	To be investigated and decided on as part of the Long-term Plan 2024-34 Rates funded Waste levy	1,2,3,5	Approximately 4,700 tonnes diverted per annum annually

Title	Issue addressed	New or existing action	Timeframe	Funding	objective	Contribution to target
Understand the generation of construction and demolition waste and work with commercial operators to try and increase diversion	Reduction of construction and demolition waste sent to landfill	New	Investigate options and support from 2024	Waste levy	2,3,4, 5,6,	Estimated 2,000 tonnes
Investigate and support reuse and repair of products in the district	Reuse of materials	New	Investigate options and support from 2024	Waste Levy	2,3,5,6	Unknown
Investigate and support food rescue in the district	Reduction in food waste going to landfill Support for the community	New	Investigate options and support from 2024	Waste levy	2,3,5	Unknown
Support the reduction of single use items including coffee cups	Reduction of single use items going to landfill	New	Investigate options and support	Waste Levy	2,3,4,5,6	Unknown
Subsidies for home composting bins and worm farms (with summer workshops)	Reduction of food waste being disposed to landfill	Existing	Ongoing	Waste Levy	2,3,4	Approximately 250 tonnes diverted per annum
E –Waste recycling	Reduce the amount of electronic waste going to landfill	Existing	Ongoing	Waste Levy	2,3,4,5,6	Approximately 30 tonnes per annum
Support district marae and iwi groups with targeted waste minimisation	Provide waste education to support Iwi to divert waste	Existing	Ongoing	Waste levy	1,2,3,5,	Approximately 20 tonnes per annum

Title	Issue addressed	New or existing action	Timeframe	Funding	objective	Contribution to target
education programme						
Provide waste minimisation grants for community-based waste minimisation projects	To support community waste minimisation activities	Existing	Ongoing	Waste levy	2,3,5	Unknown
Retain district transfer stations	Provide disposal and waste diversion opportunities throughout the district	Existing	Ongoing	Rates User charges	1,2,3,5,6,	Approximately 23,000 tonnes per annum diverted
Retain education programmes including: paper for trees, nappy lady, love food hate waste, composting workshops, business waste minimisation support	Provide disposal and waste diversion education opportunities throughout the district	Existing	Ongoing	Rates Waste Levy	1,2,3,5,6	Unknown
Advocate for product stewardship. (Tyres, drink containers, hazardous waste, E-waste etc.)	Shift the burden of waste diversion to the producer and consumer and provide a circular economy	Existing	Ongoing	Rates Waste Levy	1,2,3,4,5,6,7	Unknown, but could be significant

Title	Issue addressed	New or existing action	Timeframe	Funding	objective	Contribution to target
Continue to support car seat recycling and household battery recycling the in the district	Keeping batteries out of landfill	Existing	Ongoing	Waste Levy Rates	1,3,4,5,6	Approximately 19 tonne per annum
Divert concrete waste by crushing and reselling to the market	Diverting concrete from landfill	Existing	ongoing	Waste levy	3,5,6	Approximately 5000 tonne per annum
Work with local schools to increase organics diversion through education and the home composting subsidy programme	Increase the participation in the home composting programme	Existing	Ongoing	Waste Levy Rates	2,3,5,6	Unknown
Understand the generation of farm waste and waste management in rural areas and work with farming sector on waste reduction options	Further understand the needs of the rural sector and plan to support rural waste disposal and waste diversion	Existing	Investigate from 2018	Rates Waste Levy	1,2,3,4,5,6,	Unknown
Support local events to minimise event waste	Provide additional support to local event organisers to increase their waste diversion in the form of education	Existing	Ongoing	Waste Levy Rates	1,2,3,5,6	Unknown

6 Monitoring evaluating and reporting progress

6.1 Monitoring and Reporting

Progress on the target to increase the diversion of waste from landfill will be reported on annually through the annual report.

7 Funding the plan

The Waste Minimisation Act 2008 (s43) (WMA) requires that councils include information about how the implementation of this plan will be funded, as well as information about any grants made and expenditure of waste levy funds.

7.1 Funding local actions

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

- Uniform Annual General Charge (UAGC) - a charge that is paid by all ratepayers.
- User Charges - includes charges for user-pays collections as well as transfer station gate fees.
- Targeted rates - a charge applied to those properties receiving a particular council service.
- Waste levy funding - The Government redistributes funds from the waste levy to local authorities on a per capita basis. By law, 50 percent of the money collected through the levy must be returned to councils. This money must be applied to waste minimisation activities.
- Waste Minimisation Fund - Most of the remaining 50 percent of the levy money collected is redistributed to specific projects approved by the Ministry for the Environment. Anyone can apply to the WMF for funding for projects.
- Sale of recovered materials - The sale of recovered materials can be used to help offset the cost of some initiatives.
- Private sector funding - The private sector may undertake to fund/supply certain waste minimisation activities; for example, in order to generate income from the sale of recovered materials. Council may look to work with private sector service providers where this will assist in achieving the WMMP goals.

Funding considerations include:

- Prioritising harmful wastes
- Waste minimisation and reduction of residual waste to landfill
- Full-cost pricing, 'polluter pays'
- Public good vs. private good component of a particular service
- That the environmental effects of production, distribution, consumption and disposal of goods and services. These should be consistently costed, and charged as closely as possible to the point they occur to ensure that price incentives cover all costs
- Protection of public health
- Affordability

- Cost effectiveness

The potential sources of funding for each of the actions are noted in the tables in the action plan of the WMMP. Budgets to deliver the activities set out in this plan will be carefully developed through the annual plan and long-term plan processes. The approach is to implement as many activities as possible while controlling costs and taking advantage of cost savings and efficiencies. It is anticipated that by setting appropriate user charges, reducing costs through avoided disposal, more efficient service delivery from joint working, and targeted application of waste levy money, the increased levels of waste minimisation as set out in this WMMP will be able to be achieved at an acceptable cost to the community.

7.2 TA Waste levy funding

Council receives, based on population a share of national waste levy funds from the Ministry for the Environment. It is estimated that at $60 per tonne our council's total share of waste levy funding will be in the vicinity of $750,000 per annum, this sum is dependent on national tonnes to landfill and tonnes of diverted material.

The WMA requires that all waste levy funding received by local councils must be spent on matters to promote waste minimisation and in accordance with their WMMP.

Waste levy funds can be spent on ongoing waste minimisation services, new services, or an expansion of existing services. The funding can be used on education and communication, services, policy research and reporting, to provide grants, to support contract costs, or as infrastructure capital.

We intend to use our waste levy funds for a range of waste minimisation activities and services as set out in the action plan – including participating in regional, sub-regional and national activities.

In addition, we may make an application for contestable waste levy funds from the Waste Minimisation Fund, either separately, with other councils, or with another party. The Waste Minimisation Fund provides additional waste levy funds for minimisation activities.

7.3 Funding business and community actions

Councils have the ability under the WMA (s47) to provide grants and advances of money to any person, organisation or group for the purposes of promoting or achieving waste management and minimisation, as long as this is authorised by the WMMP.

We are currently running a grants program where businesses, community groups and other organisations can apply for funding from council for projects which align with and further the objectives of this WMMP.

Information of the fund, including the purpose and eligibility criteria can be found on our website: https://www.taupodc.govt.nz/property-and-rates/rubbish-and-recycling/waste-minimisation/waste-minimisation-fund

Part C: Supporting information

8 Glossary of terms

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

MRF	Materials Recovery Facility.
MSW	Municipal Solid Waste.
New Zealand Waste Strategy	A document produced by the Ministry for the Environment in 2010. Currently being reviewed.
NZWS	New Zealand Waste Strategy.
Putrescible, garden, green waste	Plant based material and other biodegradable material that can be recovered through composting, digestion or other similar processes.
Recovery	a) extraction of materials or energy from waste or diverted material for further use or processing; b) includes making waste or diverted material into compost
Recycling	The reprocessing of waste or diverted material to produce new materials.
Reduction	Lessening waste generation, including by using products more efficiently or by redesigning products;
b)	b) In relation to a product, lessening waste generation in relation to the product.
Reuse	The further use of waste or diverted material in its existing form for the original purpose of the materials or products that constitute the waste or diverted material, or for a similar purpose.
RTS	Refuse Transfer Station.
Rubbish	Waste that currently has little other management options other than disposal to landfill.
TA	Territorial Authority; a city or district council.
WA	Waste Assessment as defined by s51 of the Waste Minimisation Act 2008. A Waste Assessment must be completed whenever a WMMP is reviewed.
Waste Assessment	A document summarising the current situation of waste management in a locality, with data, as required under the Waste Minimisation Act.
Waste Hierarchy	A list of waste management options with decreasing priority – usually shown as ‘reduce, reuse, recycle, reprocess, treat, and dispose’.
WMA	Waste Minimisation Act (2008).
WMMP	A Waste Management and Minimisation Plan as defined by s43 of the Waste Minimisation Act (2008).

Waste Management and Minimisation Summary Document

What is a Waste Management and Minimisation Plan?

The purpose of the WMMP is to set out how Council will achieve effective and efficient waste management and minimisation within the district. We set a waste minimisation target and describe how we plan to achieve it. Council is required to prepare a Waste Management and Minimisation Plan (WMMP) every six years.

What are we proposing in the Waste Management and Minimisation Plan?

The target that we have set in the draft plan is:

Our goal is "By 2034, increase the quantity of material (tonnes) diverted from landfill from 51 percent to 60 percent"

The target in the 2018 WMMP was to achieve a 51 percent reduction by 2028. In the 2022-23 year, the quantity of tonnes that were diverted from landfill was 46.7 percent.

We have proposed five initiatives to help us achieve the increased diversion target:

- Review the kerbside collection service inclusive of a food collection. This is being consulted on as part of the Long-term Plan 2024-34 which can be found here (insert hyper link). If you would like to have your say on this, please put in a submission on the Long-term Plan.
- Understand the generation of construction and demolition waste and work with commercial operators to try and increase diversion.
- Reuse and repair of products in the district.
- The reduction of single use items including coffee cups.
- Supporting food rescue programmes.

How can you find out more?

You can visit our website at www.taupo.govt.nz to view the full Draft Waste Management and Minimisation Plan.

How can you have your say?

The submission period will be open between 4 June and close at 4pm on 5 July 2024. You can put in a submission via the online portal at www.taupo.govt.nz

Please note that all submissions will be made publicly available on our website, including your details. However, we will not release your contact details.

Hearings will be held in late July or early August. Please tell us if you would like to attend the hearing to speak to Council in support of your submission and include a telephone number and email address to ensure we can contact you to arrange a time for your presentation. Generally, we allocate five minutes speaking time for each submitter.

GREAT LAKE TAUPŌ
Taupō District Council

Project name

Waste Management and Minimisation Plan (WMMP) Counsultation

Purpose
- To encourage and promote informed participation during the consultation period.

Background
- The WMMP protects our district from harm and provides environmental, social, economic, and cultural benefits as it moves to supporting a circular economy. This must be reviewed every six years.

Communication objectives
- Encourage participation in engagement events and the consultation.
- Ensure those making submissions are well informed.
- Keep the community up to date with our goals in this space.

Approach

The role of communications is to make people aware of this consultation period, provide them with a summary of what is in the draft WMMP, make them aware of engagement events, and encourage them to make submissions on that draft.

What we'll say

- Our WMMP goal is to protect public health and safeguard the Taupō District environment by ensuring waste and diverted material is managed safely and sustainably and maintains natural and aesthetic values.
- Managing waste and ensuring good outcomes for the community can be a complex task. We need to look after the environment, take care of people's health and make sure that this is done at an acceptable cost to the community. To achieve this, all parts of the community need to work together.
- We have written a draft WMMP and now we need you, the community, to tell us what you think of it. Your feedback will be taken into account before a final version is adopted by council.

Who we'll talk to

- Waste management and minimisation affects everyone in the district so comms will be targeted at the whole community.
- We will also work closely with iwi and hapū.

When we'll say it

Counsultation aligns with LTP period → Spend next month reminding and providing information → Last calls for submissions prior to closing

Risks and mitigation

People may confuse this with the kerbside collection review – Comms will need to be really clear on the purpose of the WMMP and why we are reviewing it.

People not inspired to have their say – Comms will summarise and present the information in an informative and appealing way to encourage submissions.

Confusion between this consultation and the LTP – We will need to be really clear that while this is running at the same time, it is a seperate consultation.

A lack of buy-in from the community – We will endeavour to make comms inclusive and explain that waste management and minimisation takes a joint effort, we are all responsible.

How we'll measure success

- Attendance at engagament events
- Number of submissions
- A good understanding of the WMMP and the need for review throughout the district.

Channels we'll use

- Facebook, Antenno, newsletters, media releases, iwi contacts, emails to stakeholders, radio.

Key players

- Brent Aitken – Environmental impacts manager
- Tanya Wood – Senior policy advisor
- Gillian Smith – Community engagement advisor
- David Beck – Communications team lead

GREAT LAKE TAUPŌ
Taupō District Council

Project name
Waste Management and Minimisation Plan (WMMP) Counsultation

When	What	Who	Notes
To be completed at least one week prior to consultation opening	Prepare media release, FB posts, Antenno, and newsletter content.	David/Dervla/Darren	
One week prior to consultation opening	Consultation opens, send out communications.	David	
During consultation	Promote engagement events, share information and call for submissions.	David	
Last week of consultation	Last calls for submissions on social media and Antenno.	David/Dervla/Darren	
Post consultation	Communicate results and adoption of final version.	David	

Taupō District Council's Long-term Plan

Community Engagement Events 2024

GREAT LAKE TAUPŌ
Taupō District Council

Taupō District Council's Community Engagement Team are proud to present the following details for the Long-term Plan 2024-34 community engagement process.

Priority evening engagement events

We would like these priority evening engagement events to be supported by elected members and staff including executive team members, enterprise leadership team members and subject matter experts.

Wednesday 12 June	Thursday 13 June	Wednesday 26 June	Saturday 29 June
5.30pm - 7pm	5.30pm - 7pm	6pm - 7.30pm	5.30pm - 7pm
Tūrangi St John ambulance station	Kinloch Community Hall	Taupō Customer Service Centre, Tongariro Street	Ata's Cafe Mangakino (Matariki Light Festival)

Before or after representative group meetings:

The times below will be when we have the LTP engagement storyboard display, which will be either before or after the representative group meeting.

Tuesday 2 July	Wednesday 3 July	Wednesday 3July	Thursday 4 July	Thursday 4 July
11.30am - 12.30pm	12.30pm – 1.30pm	12.30pm - 1.30pm	12 noon - 1pm	July 2pm - 3pm
Mangakino-Pouakani	Tūrangi Co-governance	Tongariro	Taupō East Rural	Kinloch

Community pop-up events:

We are taking the LTP to our communities. We would appreciate some elected members and TDC staff members to support these events:

Thursday 6 June	Friday 7 June	Friday 7 June	Tuesday 11 June	Saturday 15 June
5.30pm - 7pm	9.30am – 11am	5.30pm - 7pm	5.30pm – 7pm	10am-12 noon
Tirohanga Hall	Greening Taupō Tauhara Road	Rangitaiki Hall	River Road Hall	Whareroa refuse station
Saturday 15 June	**Sunday 16 June**	**Sunday 16 June**	**Monday 17 June**	**Thursday 20 June**
1.30pm - 3.30pm	10am - 12 noon	1.30pm – 3.30pm	2pm – 3.30pm	12 noon - 2pm
Floating Rock Café, Kuratau	Motuoapa Yacht Club	Hatepe Marae	Marotiri School	Taupō saleyards
Saturday 22 June	**Saturday 22 June**	**Sunday 23 June**	**Sunday 23 June**	**Saturday 29 June**
9am – 12 noon	10am – 2pm	8am – 1pm	1pm - 3pm	2pm – 3.30pm
Tūrangi Market	Taupō Volunteer and Community expo (GLC)	Taupō Market	Kinloch Family Fun event	Wairakei Village Matariki event

Topic tours:

these tours will be co-ordinated by Taupō District staff subject matter experts.

Taupō Wastewater Treatment Plant tour:

If you've ever wondered how our drinking water gets treated, or what happens to your dirty water after taking a shower or flushing the loo? You might like to take a sneaky peek behind the scenes on this tour. Places on these tours must be pre-booked via Taupō District Council's website.

- Tuesday 11 June – Taupō Wastewater Treatment Plant tour: 7.30am – 8.30am
- Monday 17 June - Taupō Wastewater Treatment Plant tour: 2pm – 3pm

East Urban Lands tour:

Council owns a parcel of residentially-zoned land, known as the East Urban Lands (EUL), which sits between the East Taupō Arterial highway and Kokomea Village and Richmond Heights. Come along on a tour to learn more about how we aim to ease the housing shortage.
Places on these tours must be pre-booked via Taupō District Council's website.

- Monday 10th June – EUL tour on site: 11am – 12 noon
- Friday 14th June – EUL tour on site: 4pm – 5pm

Taupō District Council's Long-term Plan

Community Engagement Events 2024

GREAT LAKE TAUPŌ
Taupō District Council

DATE	VENUE	TIME
Thursday 6 June	Tirohanga Hall, Tirohanga Road, Tirohanga	5.30pm - 7pm
Friday 7 June	Greening Taupō planting day, Tauhara Road, Taupō	9.30am – 11am
	Rangitaiki Community Hall, Rangitaiki School Road, Rangitaiki	5.30pm - 7pm
Monday 10 June	East Urban lands tour	11am – 12 noon
Tuesday 11 June	River Road Community Hall, River Road.	5.30pm – 7pm
	Taupō Wastewater Treatment Plant tour	7.30am - 8.30am
Wednesday 12 June	Tūrangi evening engagement event, St John Hall,14 Ohuanga Road, Tūrangi	5.30pm – 7pm
Thursday 13 June	Kinloch evening engagement event, Kinloch Community Hall, Kinloch	5.30pm – 7pm
Friday 14 June	East Urban Lands tour	4pm – 5pm
Saturday 15 June	Whareroa refuse station, Whareroa Road.	10am – 12 noon
	Floating Rock Café, 30 Riverpark Drive, Kuratau	1.30pm – 3.30pm
Sunday 16 June	Motuoapa Yacht Club, 8 Arataha St, Motuoapa	10am – 12 noon
	Hatepe Marae, Rereahu Avenue, Hatepe	1.30pm – 3.30pm
Monday 17 June	Marotiri School, Tihoi Road, Marotiri	2pm - 3.30pm
	Taupō Wastewater Treatment Plant tour	2pm - 3pm
Thursday 20 June	Taupō cattle sales yard, Oruanui road, Taupō	12 noon – 2pm
Saturday 22 June	Tūrangi Market, town centre, Tūrangi	9am – 12 noon
Saturday 22 June	Taupō Volunteer and Community Expo (Great Lake Centre)	10am – 2pm
Sunday 23 June	Taupō Market, Northcroft Reserve, Taupō	8am - 1pm
	Kinloch family fun event, Kinloch	1pm - 3pm
Wednesday 26 June	Taupō evening engagement event - Taupō Customer Service Centre, Tongariro Street, Taupō	6pm - 7.30pm
Saturday 29 June	Wairakei Village Matariki event, Kauri Drive, Wairakei.	2pm – 3.30pm
	Mangakino evening engagement event- Ata's Café, Rangatira Drive, Mangakino (Matariki Light festival)	5.30pm - 7pm
Tuesday 2 July	Mangakino-Pouakani Representative group, Mangakino Sports Hub, Wairanga Road, Mangakino	11.30am – 12.30pm
Wednesday 3 July	Tūrangi Co-Governance group and Tongariro rep group , Te Mataapuna Sports Facility, Tūrangitukua Park, Tūrangi	12.30pm – 1.30pm
Thursday 4 July	Taupō East Rural Representative group (Venue TBC)	12 noon – 1pm
	Kinloch representative group, Kinloch Community Hall, Kinloch.	2pm – 3pm

The next step

Please confirm which events you would like to attend and support by letting Taupō District Council Senior Community Engagement Advisor Gillian Smith know before 6pm on Friday 24 May.

Gillian's contact details: engagement@taupo.govt.nz Ph. 027 267 5590