



Waste Management
and
Minimisation Plan
2017 – 2023

December 2017

Contents

EXECUTIVE SUMMARY.....	3
1. INTRODUCTION	7
2 CONTEXT AND LEGISLATION	8
3 VISION, STRATEGIES, METHODS AND TARGETS	12
4 ASSESSMENT OF WASTE IN THE TARARUA DISTRICT.....	15
5 CURRENT WASTE MANAGEMENT ISSUES, INFRASTRUCTURE ANDSERVICES.....	24
6 ACTION PLANS.....	28
7 FUNDING PROVISIONS.....	36
8 MONITORING, REPORTING AND REVIEW	38
9 GLOSSARY	40

Executive Summary

This Waste Management and Minimisation Plan (WMMP) is Tararua District Council's second iteration. The first WMMP was adopted by Council in December 2011. The review of the Plan is a requirement (every six years) under the Waste Minimisation Act 2008 that seeks 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.

The Waste Minimisation Act 2008 (WMA) requires councils to assess their waste services with the goal of minimising waste to landfill. Council has identified a range of issues and options around collection, recycling and disposal of waste for our district. This WMMP aims to ensure the Council's waste related activities are effective, efficient, affordable, reduce waste to landfill and are accessible to our communities. As required by the WMA, a Waste Assessment was carried out. This important background information has guided the development of this WMMP.

The Council funds and provides a number of transfer stations and recycling facilities in Eketahuna, Pahiatua and Dannevirke. In Woodville, a private transfer station operates on contract for Council. In smaller townships Council provides drop-off bins for recycling, including glass.

Vision for this Plan

The Tararua District will make effective progress towards reducing waste through addressing waste management needs in a sustainable, innovative and affordable manner

Council is committed to reducing waste disposal to landfill for both environmental and financial reasons. The Vision for 2023 has been changed from that adopted for the WMMP 2011, with the aspirational 'zero waste' goal replaced with the achievable 'reducing waste'.

Targets and Resources

Historical tonnages were estimates due to the lack of a weighbridge. Baseline data for recycling is difficult to establish prior to the opening of the Dannevirke Transfer Station in 2011.

As such it is not possible to determine progress on the WMMP 2011 targets. From available data, it appears that the targets for reduction in waste to landfill and increased recycling have not been met. From 2018 all refuse and recycling through transfer stations and kerbside collections will be weighed at Dannevirke or at the landfill in Waipukurau (except for a small volume of waste at Pongaroa Landfill).

New Targets for WMMP 2018

1. Reduce total waste tonnes being transported to landfill compared to 2016/17 measured on a per capita basis by 10% by 2023.
2. Increase the tonnage of recycled materials by 20% by 2023 from 2016/17 baseline levels.

The Council has made considerable progress since the adoption of the current WMMP in 2011. Council has driven major changes in the way solid waste is managed in the district over the last six years. Many of the goals of the current WMMP 2011 have been achieved, while significant reductions of waste to landfill have been achieved since Council closed the main landfills in Dannevirke and Pahiatua in 2009 - 2011. Key changes have been:

- Construction of a transfer station, weighbridge and recycling sorting centre in Dannevirke;
- New transfer station and separate recycling drop off facilities in Pahiatua;
- Separation and reuse of greenwaste and cleanfill that was previously being sent to landfill;
- Kerbside recycling of paper, cardboard, plastics and tins in all larger urban areas;
- Glass used as cover for Eketahuna landfill;
- In response to changing demands and several private sector alternatives, Council is exiting from the kerbside refuse collection service in 2016/17 and 2017/18.

Recycling tonnages are increasing steadily, but usage of kerbside recycling services has reduced significantly. Residents are increasingly using the recycling drop off facilities at transfer stations. Council is proposing to change the kerbside recycling collection period to fortnightly to reduce costs. Council has proposed not to upgrade this service to wheelie bins, or to go 'full service' and provide a glass kerbside urban collection. Council does not favour these options, due to the significant setup and operating cost implications. Given recycling volumes are rising, Council sees the additional cost as having a poor return compared to support for removing organic waste from household refuse and more education services.

Refuse tonnages to landfill have increased since 2013/14. This reflects increases in the estimated population and the economic activity in the District. After many years of decline the district has seen a return to moderate growth, including significant increases in net international migration, numbers of school aged children, and older people.

Council Controlled Waste Stream	Tonnes				
	2010/11	2013/14	2014/15	2015/16	2016/17
Recycling Kerbside			169	146	127
Recycling Drop off centres			361	396	424
Recycling Total			530	542	551
Glass drop off bins				573	623
Total Recycling				1,115	1,174
Dannevirke and Pahiatua Refuse to Waipukurau		2,313	3,542	3,783	4,363
Eketahuna Landfill refuse		1,777	689	542	270
Pongaroa Landfill refuse		37	39	21	21
Refuse to Landfill Total	4,921 (estimate)	4,241	4,292	4,440	4,653
Tonnes per resident	0.277	0.238	0.245	0.248	0.261

Further initiatives and changes are either underway or proposed:

- Planned closure of the Pongaroa landfill by August 2021 and building of small transfer station.
- Glass recycling (currently over 600 tonnes a year used as capping for Eketahuna Landfill) to be sorted in Dannevirke and made available to local business for re-use into another product, or transported to Auckland from 2018 for glass recycling into new bottles and jars.
- Expanded education programmes to reduce waste, and to encourage general reuse and recycling now that urban refuse collection is entirely carried out by the private sector.
- Provide fully subsidised composting bins / worm farms to households (households choice up to a set value), and associated education on how to use, to increase organic composting in urban areas (to reduce significant volumes of waste to landfill).
- Change existing urban kerbside recycling collection to fortnightly.

Proposed Initiative	Cost Implications (compared to 2016/17 budget)	Change in Annual Cost per ratepayer of initiative
Closure of Pongaroa Landfill and new small transfer station 2021/22	\$142,000 Capital	\$1.30
Glass sorting and supply to local business for re-use, or transport to Auckland for recycling into new glass bottles	\$120,000 capital set up costs \$10,000 annual costs Small reduction in overall operating costs	\$nil or minor saving Waste Minimisation Levy Funding
Expanded education programmes – business, households (urban and rural) with collaboration opportunities	Additional \$20,000 per year	Waste Minimisation Levy funded
Encourage removal of organic household waste from refuse from 2018 with 2,000 subsidised composting bins / worm farms	\$100,000 setup costs over 6 years \$5,000 a year promotion	Waste Minimisation Levy funded
Change kerbside recycling collection to fortnightly	Saving of \$30,000 a year	Saving of \$6.20
e-waste amnesty drop-off day each year	\$7,000 a year	Waste Minimisation Levy funded
Product stewardship advocacy	Nil	Nil

Overall Council expects to continue the level of rates funding at current levels, allowing for inflation. Additional costs from education programmes, e-waste amnesty days, household composting / worm farm initiatives and waste surveys will be met initially from waste levy funding (currently \$57,000 a year from Ministry for the Environment). Funding for glass recycling to local business / Auckland comes from the Levy (capital setup costs), modest revenue for the glass (for the Auckland recycling option) plus the existing operational rates funded budget for glass collection and reuse. Refuse dumping fees will reflect costs of transport and disposal.

The Plan reflects the Council's commitment to waste management and minimisation in the district that not only meets legislative requirements, but also the community's demand for services and infrastructure in an affordable way. Recycling services are expensive, and Tararua does not have the population size to offer full kerbside services without significant cost implications. Services have to be affordable and match the small scale and high community input common in coastal and rural villages.

1. Introduction

1.1 Purpose

The purpose of the Plan is to:

- Describe Council’s vision for solid waste management and minimisation for the District and how it will meet its long-term strategic goals for these;
- Identify objectives that will establish the strategies and policies to support the achievement of the goals as well as targets so that Council can measure how well it is progressing towards achieving its waste management and minimisation goals; and
- Provide information on how Council intends to fund the activities of this WMMP over the next 6 years to 2023.

1.2 Background

The preparation and development of this Plan is a requirement under section 43 of the Waste Minimisation Act 2008 (the WMA).

The Government considers that in spite of significant progress in areas of waste reduction and recycling in New Zealand, our waste problem in New Zealand remains. Further effort in minimising the amount of waste generated (and thereby minimising the economic, energy, social, and environmental costs associated with the wasteful consumption of resources) is needed.

Some waste, with careful management (e.g. through recycling or re-use) has economic value. The recovery of waste is a fundamental component of waste management. The costs and difficulties of doing this (e.g. variable quality, high collection and transportation costs, uncertain markets, and poor economic returns) mean that waste minimisation may offer the most direct and immediate economic and environmental benefits.

Finally, and often as a last resort, there is a need to ensure that waste can be safely disposed of. The Plan is intended to be the guiding document for the Tararua District Council when directing its efforts towards achieving effective and efficient waste management and minimisation within the district.

1.3 Scope of the Plan

The Plan has effect over the whole Tararua District. This does not mean the Council is going to have a direct involvement in the management of all waste – but there is a responsibility for Council to consider all waste in the area, and to identify and or advocate areas where other groups, such as businesses or householders, could take action themselves.

1.4 Status of the Plan

This document is the *Waste Management and Minimisation Plan 2017-23*, the second iteration of the WMMP for Tararua. This Plan is a six-year strategy and action plan. Council adopted the first WMMP on 14 December 2011. This Plan incorporates public feedback after consultation in October / November 2017. This WMMP will be reviewed at the latest after six years.

2 Context and Legislation

2.1 Waste Minimisation Act 2008 (WMA)

The 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.

A key aspect of the Act was the establishment of a \$10 per tonne levy on all waste disposed of in landfills. This levy is used to help fund waste minimisation initiatives while also creating a financial disincentive for waste disposal.

Under section 42 of the Act a territorial authority must promote effective and efficient waste management and minimisation within its district. To give effect to this responsibility, section 43 requires the Council to prepare a waste minimisation and management plan.

Under the WMA, the Medical Officer of Health and Health Protection Officer are responsible and have statutory powers for managing public health risks around waste and have a mandate to protect public health. Accordingly, as part of this plan's Waste Assessment, the Council has consulted with the Medical Officer of Health.

2.2 The 2017-2023 WMMP

This WMMP contains a summary of objectives, strategies and methods for achieving efficient and effective waste minimisation and management. Methods must provide for waste reduction, collection, recovery, recycling, treatment and disposal services, the provision of waste minimisation and management facilities, and any other waste minimisation and management activities provided by the Council.

The Plan also identifies how it is to be funded and the framework for the Council to make grants or advances of money in accordance with section 47 of the Act.

In preparing, amending or revoking this Plan, the Council must, amongst other things, consider the following methods of waste management and minimisation (which are listed in descending order of importance):

1. Reduction
2. Reuse
3. Recycling
4. Recovery
5. Treatment
6. Disposal

2.3 Other Strategies and Plans

2.3.1 New Zealand Waste Strategy

In October 2010, the Ministry for the Environment released a revised New Zealand Waste Strategy entitled *New Zealand Waste Strategy – Reducing Harm, Improving Efficiency* (NZWS).

The revised NZWS has two core goals:

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

Council WMMP needs to have regard to the NZWS, with a focus on reducing waste and the reuse and recycling of waste resources.

2.3.2 Waste Assessments

Under section 51 of the Act, the Council must undertake a waste assessment that:

- Describes collection, recycling, recovery, treatment and disposal services provided by the Council;
- Contains a forecast of future demand on these services;
- Contains a statement of the options available to meet the forecast demands, with an assessment of the suitability of each option;
- Contains statements of the Council's intended role plus proposals for meeting forecast demands, including proposals for new or replacement infrastructure;
- Contains a statement to the extent to which proposals will ensure public health is adequately protected and promote effective and efficient waste management and minimisation.

2.3.3 Other Relevant Legislation or Policies

Resource Management Act 1991

The Resource Management Act 1991 places obligations on local authorities to promote sustainable use of resources, as well as the sustainable disposal of residual waste.

Council holds resource consents for closed and open landfills, and transfer stations. These resource consents are issued by Horizons regional council.

Health Act 1956

The Health Act 1956 places a duty on local authorities to promote and conserve public health, including providing for solid waste collection and disposal.

The Health Act specifically identifies certain waste management practices as nuisances (section 29 of that Act) and offensive trades (third schedule of that Act). The Medical Officer of Health has statutory powers for managing public health risks around waste and can impose conditions on offensive trades.

Climate Change Response Act 2002

The Climate Change Response Act 2002 (including various amendments in 2006, 2008 & 2009), amongst other things, sets out the framework for the New Zealand Emissions Trading Scheme.

Council also has two small landfills still operating. Under current government regulations these are exempt from gas emission reporting requirements. Council is closing Eketahuna Landfill and plans to close the Pongaroa landfill. As such, apart from closed landfill monitoring and reporting requirements under the RMA, Council does not have any liabilities under this legislation.

Local Government Act 2002

Under the Local Government Act 2002, regional and district councils must prepare a Long Term Plan (LTP) once every three years. These plans describe:

- What and how the council is to deliver activities;
- How these will help to meet the community outcomes set by the Council;
- The level of rates expected for the 10 years of the Plan; and
- Strategies and policies so the community can understand the decisions made by the Council.

The Local Government Act requires summary information on this Plan to be included in the district's LTP. Not only does this Plan influence and 'inform' the content of the LTP, but any changes to waste activity resulting from a significant change in the LTP may result in a requirement to amend this Plan, and *vice versa*.

Community Outcomes

The LGA also requires all local authorities to have council outcomes for the 10 year period of the LTP. The purpose of this process is to enable the council to be clear as to what it is trying to achieve, and allow the community as a whole to decide what is important to it.

At the time of adopting this Plan the Council had yet to adopt final council outcomes for 2018. A vision and strategies for the District has been worked on and growing businesses, increased wealth and a stable to increasing population has been added to the existing Council strategic direction. Any final council outcomes are likely to focus on these concepts. The existing community outcomes for the Tararua District prepared under the previous LGA were first adopted in 2005.

District community outcomes that relate to waste management include:

- **Connected** – a district that delivers accessible and integrated infrastructure, transport and communications systems which meet the needs of residents, business and visitors.
- **Prosperous** – a district that boasts a sustainable, resilient and innovative economy that prospers within the natural and social environment.
- **Secure and healthy** – a district that provides a safe, healthy and friendly place to live, work or visit.
- **Sustainable** – a district that appreciates its natural environment and its physical and human resources in planning, delivery and protection.

Solid Waste Asset Management Plan

The existing Solid Waste AMP contains much of the data used for the waste assessment carried out as part of this Plan. The current Solid Waste AMP is a draft prepared in 2017 and is consistent with this WMMP.

Council Bylaws

The current Bylaw, (Chapter 6): Solid Waste ensures refuse is collected and disposed of in the interests of public health in an efficient and cost effective manner and at the same time ensuring that any obstruction of streets is kept to a minimum.

3 Vision, Strategies, Methods and Targets

3.1 Vision for the Future

The vision for waste management in the Tararua District is based on Community Outcomes contained in the 2015 LTP and draft 2018 LTP. It also is consistent with the current New Zealand Waste Strategy (2010). Council proposes to change from the vision adopted for the WMMP 2011, with the aspirational 'zero waste' goal replaced with the achievable 'reducing waste'. After closing the main landfills and investing in transfer station and recycling infrastructure, Council considers that considerable gains can still be made with education and diversion schemes. The vision for 2017-2023 is:

The Tararua District will make effective progress towards reducing waste through addressing waste management needs in a sustainable, innovative and affordable manner.

The Council role –

1. The Council will identify, educate and promote methods for reducing waste and improving resource efficiency.
2. To facilitate local solutions to local waste management issues.
3. To ensure that waste management practices do not adversely affect human health, animal and plant health, amenity values and cultural values.

The following principles have been developed to provide a framework for this Plan.

1. Act in the long term interests of the community
2. Exercise leadership to achieve our vision
3. Current generations have a responsibility to maintain the life sustaining capacity of the environment for present and future generations.
4. The principle of stewardship - acknowledges the responsibility we each have in managing the environment for the good of all.
5. Collaborate with all those who want to work in the best interests of the community
6. View the waste stream as a resource
7. Continue with the principle "polluters pay"
8. Communicate to the community so that the strategies, aims, objectives and actions are transparent, understood and accepted
9. Favour local utilisation of materials to support the local economy

10. Implement systems that are:
 - a. User friendly
 - b. Affordable
 - c. Cost effective
 - d. Fair
 - e. Resilient

3.2 Strategies

Strategies to implement the objectives are as follows:

Waste Minimisation

1. Encourage minimisation of waste at source through reduction and the separation of recyclable, recoverable and reusable material from waste.
2. Encourage waste minimisation through a system of user charges and education.
3. Encourage waste minimisation by (in descending order of importance):
 - Reduction;
 - Reuse;
 - Recycling;
 - Recovery;
 - Treatment; and
 - Disposal.

Waste Disposal Services and Facilities

4. Provide for the collection, transport and disposal of waste in a manner that:
 - Meets current and future management and minimisation needs of the district;
 - Affordable to residents but reflects the true cost of waste management; and
 - Does not, or is not likely to, cause adverse environmental effects, including nuisance.

Integrated Waste Management

5. As appropriate, enter partnership arrangements with the private sector and / or other local government organisations to ensure the most effective management of waste issues.

3.3 Methods of Implementation

The Council will use the following methods to implement the objectives and policies and thereby achieving efficient and effective waste minimisation and management.

1. Provide facilities to collect, recover, recycle and dispose (Pongaroa only until 2021) of waste. Almost all Council controlled waste will be disposed of outside the District.
2. Provide education to reduce the waste to landfill and encourage recycling.

3. Apply economic instruments that create incentives or disincentives to advance waste minimisation. Will include the use of national waste levy funding for Council grants to promote or support waste minimisation activities.
4. **Collaborate** with local organisations to gain employment and value from the waste stream.
5. **Advocate** to relevant agencies on waste reduction policies, strategies or programmes.
6. **Manage and maintain** infrastructural assets through asset management planning to drive optimal operational efficiencies.
7. Assess rates **affordability** when considering the services provided.
8. Liaise, as appropriate, with Central Hawkes Bay District Council other local government organisations to support **integrated planning** and management for waste management issues.
9. **Monitor** and gather information.

Specific activities and actions, including indicative timeframe for implementation and funding source, are set out in section 6 of this Plan.

3.4 Targets

The targets for waste reduction set in WMMP 2011 were either tonnes or volume based. The lack of weighbridges at the time meant that all tonnages were estimates. Accurate data for waste to landfills from the southern area (Pahiatua, Woodville and Eketahuna) is unavailable as there is no weighbridge at the Eketahuna landfill. Baseline data for recycling is difficult to establish prior to the opening of the Dannevirke Transfer Station in 2011.

As such it is not possible to determine accurate progress on the WMMP 2011 targets. From available data, it appears that the targets for reduction in waste to landfill and increased recycling have not been met. From 2018 all refuse and recycling through transfer stations and kerbside collections will be weighed at Dannevirke or the Waipukurau landfill (except a small volume of waste at Pongaroa Landfill).

Through the implementation of the objectives, strategies and methods listed above, the Council anticipates meeting the following targets over the life of the Plan:

Proposed New Targets for WMMP 2018

1. Reduce total waste tonnes being transported to landfill compared to 2016/17 measured on a per capita basis by 10% by 2023;
2. Increase the tonnage of recycled materials by 20% by 2023 from 2016/17 baseline levels.

3.5 Public Health Protection

The wide range of waste services available to Tararua District, provided by Council or by private enterprise, will ensure future adequate protection of public health. Although there will be no public landfill disposal facilities in the District after 2021, Tararua will continue to have access to local authority owned (Central Hawkes Bay District Council) or privately owned sanitary landfills that meet legislative requirements. Services for achieving waste minimisation will continue where proved economically viable. Council will also continue to promote access to hazardous waste disposal services and continue to manage illegal dumping (fly-tipping).

4 Assessment of Waste in the Tararua District

Tararua District Council completed a Waste Assessment in August 2017. The assessment is a stock-take of waste and diverted material services provided throughout the district. This includes an estimate of demand for future services, and includes proposed new initiatives for increasing diversion from landfill, reduced household refuse volumes and facilitation of off farm disposal of waste.

It must be noted that Council does not transport all of Tararua's waste to landfill. An unknown portion of the waste and diverted materials is currently recycled or disposed to landfill by private sector companies. These businesses make economic decisions as to whether their waste is dropped off at Council transfer stations. Council role is to provide education and recycling services so that all residents and businesses can reduce waste if they choose.

Data sourced from Council only provided and funded transfer stations, landfills and the recycling services are shown below. This information is collated from data provided by Council's contractors operating the collection services and transfer station facilities.

4.1 The Waste Stream in Tararua

For most people, the term 'waste' describes materials or substances that are no longer needed or useable, or have lost their economic value and therefore require disposal. Waste however can be much more than useless items that are discarded. Some waste represents a resource that, with careful management (e.g. recycling), may have economic value and can contribute to the sustainable management of our environment.

As the Council is now transporting the majority of the Council collected waste to Waipukurau, there is considerable economic incentive for the whole community to reduce the refuse to landfill. Working with all households and businesses in waste minimisation, reuse and recycling could reduce the waste stream handled by private companies. This will reduce costs to all residents in the District as well as work on reducing the wider adverse impacts on the environment.

Council has driven major changes in the way solid waste is managed in the district over the last six years. Many of the goals of the current WMMP 2011 have been achieved, while significant reductions of waste to landfill have been achieved since Council closed the main landfills in Dannevirke and Pahiatua. Key changes have been:

- Construction of a major transfer station, weighbridge and recycling sorting centre in Dannevirke;
- New transfer station and separate recycling drop off facilities in Pahiatua;
- Separation and reuse of greenwaste and cleanfill that was previously being sent to landfill;
- Kerbside recycling of paper, cardboard, plastics and tins in all urban areas;
- In response to changing demands and several private sector alternatives, Council is exiting from the kerbside refuse collection service in 2016/17 and 2017/18.

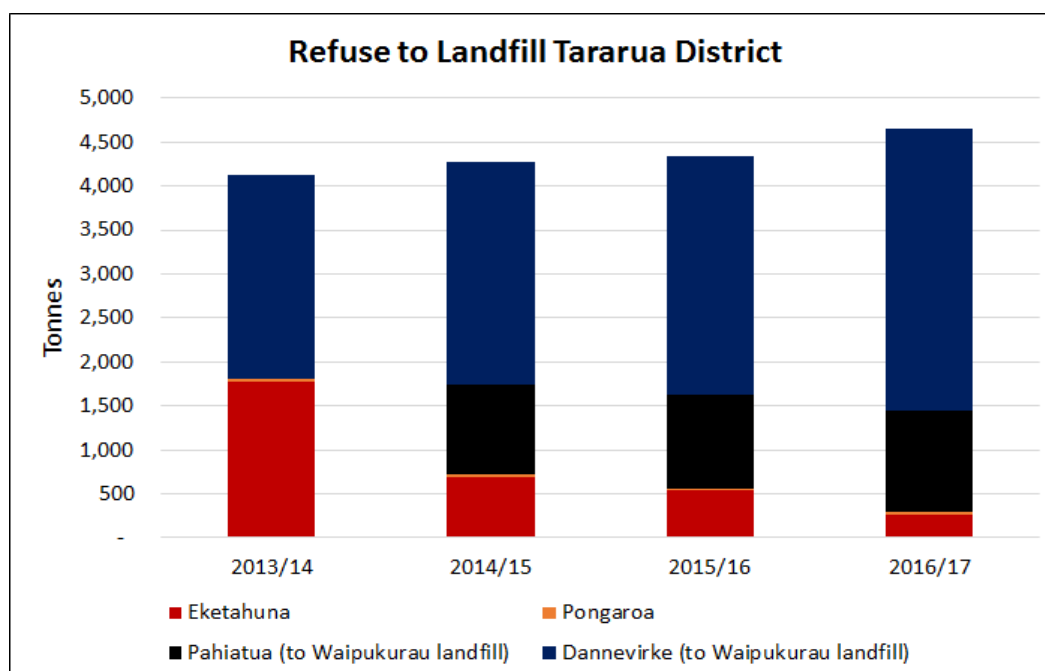
Recycling tonnages are increasing steadily, but usage of kerbside recycling services has reduced significantly. Residents are increasingly using the recycling drop off facilities at transfer stations. Council is proposing to change the collection period to fortnightly to reduce costs.

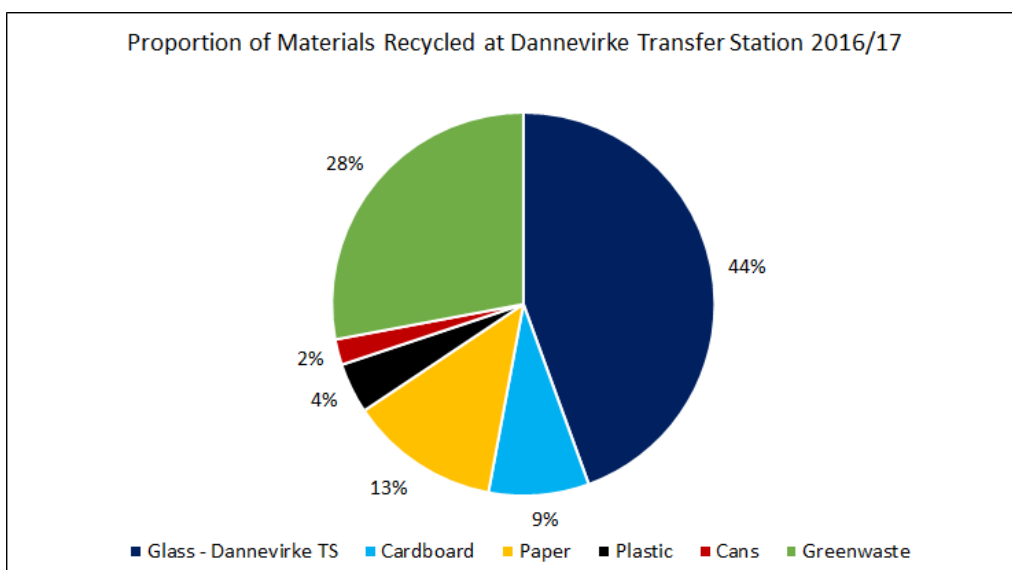
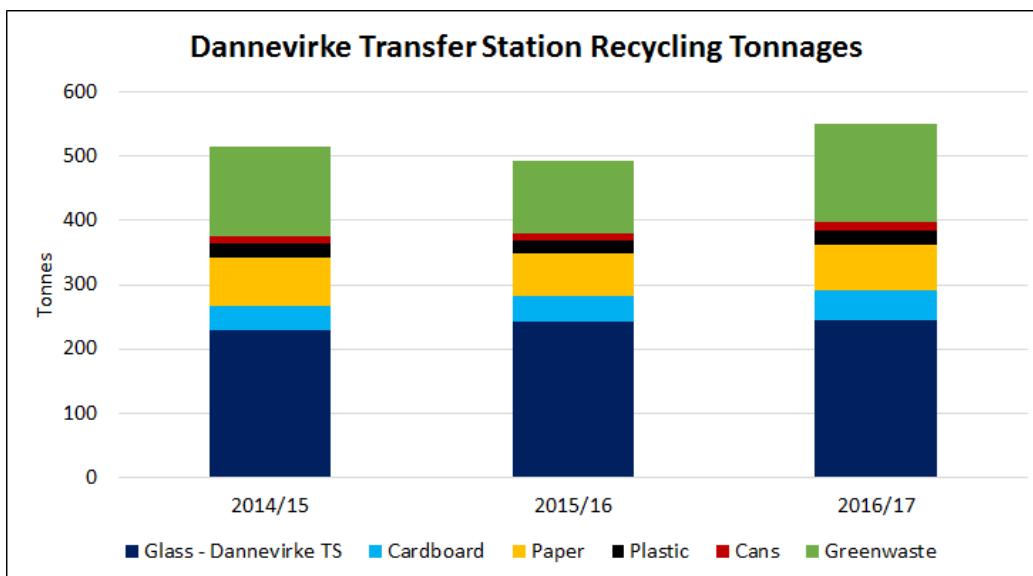
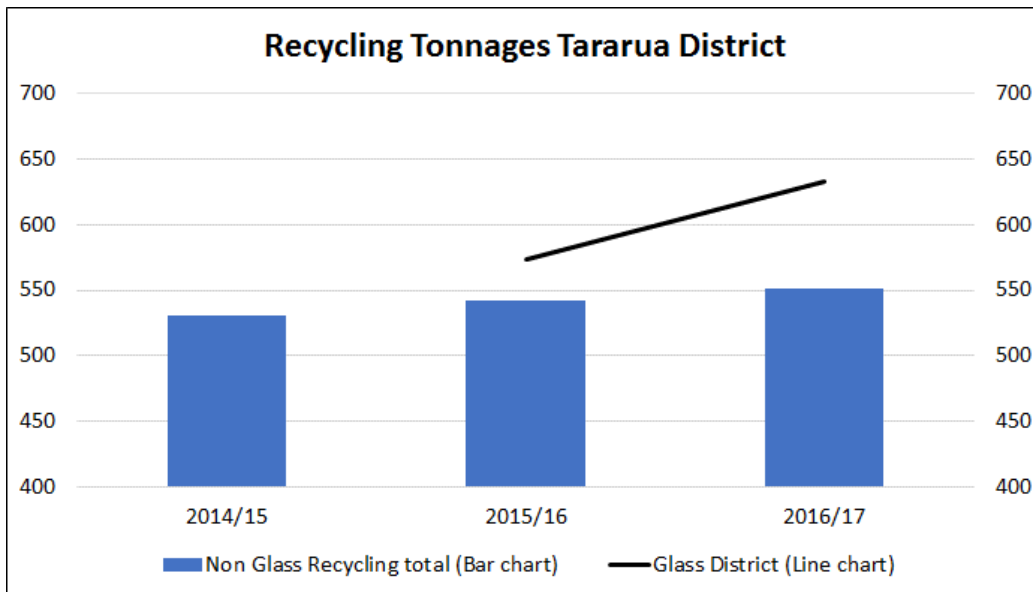
Options not proposed are to upgrade this service to wheelie bins, or to go 'full service' and provide a glass kerbside urban collection. Council does not favour these options due to the significant setup and operating cost implications. Given recycling volumes are rising Council sees the additional cost as having a poor return compared to support for household composting / worm farms and more education services.

Refuse tonnages to landfill have increased since 2013/14. This reflects increases in the estimated population and the economic activity in the District. After many years of decline the district has seen a return to moderate growth, including significant increases in net international migration, numbers of school aged children, and older people.

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Tonnes per resident	0.277	0.238	0.245	0.248	0.261

Council has had difficulty in comparing tonnages to earlier years as the only weighbridge is at Dannevirke, and this was only built in 2011. Some comparisons are made to the data used for the 2011 WMMP, but these were generally estimates only.



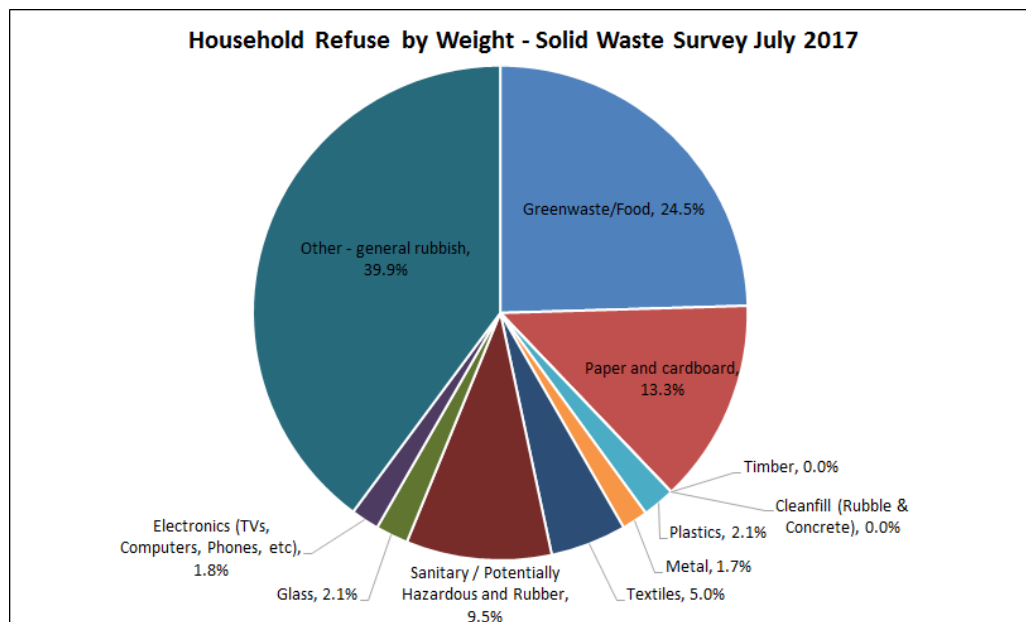


4.2 Solid Waste Analysis Protocol (SWAP) Audit

The composition of the Council managed kerbside refuse collection in Dannevirke and Pahiatua was measured using an industry based Solid Waste Analysis Protocol (SWAP) audit in July and August 2017. This was made up of different sources of waste and was surveyed at the Dannevirke and Pahiatua transfer stations:

- Council managed kerbside bag refuse collection in Dannevirke and Pahiatua
- Refuse dropped directly to the transfer station
- From private vehicles (household)
- From commercial operators

The surveyed volumes were small, but give a good reflection of the makeup of the waste stream. The chart below shows Tararua District's waste composition (SWAP) results for 2017.



General rubbish makes up the largest portion (39.9%) of waste in our household refuse. This is followed by greenwaste / food at 24.5%, and paper and cardboard at 13.3% of waste in our household refuse. The results indicate that considerable gains can be made in diverting waste to landfill with initiatives aimed at:

- Education and support for composting / worm farm for households food waste;
- Further efforts to separate paper and cardboard for recycling.

It is good to see the small proportions of plastics and glass in the surveyed waste. The proportions from the 2017 audit compare favourably with the last national indicator sites survey data provided by MfE in 2007/08. In that data organics was 28%, plastics 8%, paper 7% and glass 4%.

Compared to the 2009/10 survey of household waste, Council and the community has diverted significant proportions of greenwaste, cleanfill and plastics / paper / glass away from landfill. In 2009 Greenwaste / food made up 44% by weight of refuse to landfill, with 38% recyclables (glass, paper and plastics). Gains have been made with a network of modern transfer stations, kerbside recycling services and efforts to separate greenwaste and cleanfill.

For 2016/17 Council controlled refuse disposal to landfill (refuse received at transfer stations and landfills) totaled 261 kg per resident. In addition, there is an unknown amount that could have been transported privately out of the district. This number has increased since 2013/14 when it was 238kg per resident. This reflects an increase in economic activity in the district, with more construction, alterations of houses and purchases of appliances etc.

Waste streams with the most potential for diversion and reduction in tonnage to landfill from this analysis included:

- Compostable material (24.5% of household refuse), most of which is green (plant) waste.
- Recyclable material (17.5% of household refuse), mostly paper and cardboard.

The Council is proposing the following key actions to achieve the vision:

1. Undertake annual public education programmes with schools, households and commercial businesses which focuses on waste minimisation, removing organic waste from refuse and recycling;
2. Reduce operational costs for urban kerbside recycling by moving to a fortnightly collection;
3. Establish a central glass collection sorting facility to process glass dropped off at transfer stations / recycling points for re-use with local business, or transport to Auckland for recycling into new glass bottles;
4. Support reducing home organic refuse by providing subsidised composting bins / worm farms and education of their use;
5. Collaborate with local organisations where additional value can be gained from the waste stream;
6. 3-yearly survey of waste stream materials at Dannevirke and Pahiatua transfer stations;
7. Investigate ownership options for Woodville transfer station;
8. Support drop-off amnesty day service for e-waste;
9. Advocate for Product Stewardship to reduce waste at source.

4.3 Forecast of Future Demand for Waste Services

4.3.1 Current Trends

A continued awareness by local residents of the need to reduce the volume of waste, along with rising prices to dispose of waste, has resulted in reductions in the volume of waste being disposed over time. The price impact appears to be reducing as people become used to the cost of disposal. A move to more private wheelie bins for urban refuse has resulted in a higher potential volume of refuse for each household. The importance of education and awareness is increasing as many people are prepared to pay for the convenience of a wheelie bin service.

In the past, the Council has been faced with conflicting objectives of trying to maximise user pays revenue to the landfills against increasing recycling and reducing waste volumes. Increasing the former resulted in increased costs and less revenue. With the closure of the

Dannevirke and Pahiatua Landfills Council has been more focused on minimising waste to landfill. Council is closing the Eketahuna Landfill this year, and expects to close the Pongaroa Landfill by August 2021. Reducing volumes of waste to be disposed now results in directly reduced transport and landfill costs (at Waipukurau).

With population growing modestly and limited property developments the volume of waste is now increasing after a number of years of reduction. Many of the easy options to reduce waste have been done - transfer stations now have areas to separate green waste and cleanfill. This alone was instrumental in reducing volumes being disposed of by up to a half of 2009 volumes when the old landfills were operating.

Recycling volumes have been steady for a few years. From recent surveys 52% of households use the recycling services every fortnight, with another 27% using the services monthly. Council is proposing to reflect this usage pattern and reduce operating costs by shifting the recycling kerbside service to a fortnightly pickup.

On current policies and services, it is likely that future waste flows will contain more e-waste and less mixed green waste. General household waste is forecast to gradually decline with recycled volumes continuing to rise and more organic waste is removed. This trend will reduce in impact over the next six years as households will have separated out these materials. In the medium to long term it will become increasingly expensive to increase recycling as this will involve less valuable materials or materials that are expensive to recycle.

The private sector will continue to collect the majority of District waste, with an increasing percentage being disposed of through Council transfer stations or Council partners co-located with the transfer stations. With intense competition, particularly in the wheelie bin refuse and bag services, Council has decided not to be involved in this type of service.

Overall there is pressure on the Council to ensure that e-waste disposal services are affordable. This is a New Zealand wide problem as it costs Council to dispose of each item. Council will run an annual e-waste free amnesty day if costs can be kept to an acceptable level.

Overall the forecast (on current service levels) is for a modest increase in volumes of general household and commercial waste and an increase in the volume of recycled materials. Additional Council initiatives will focus on reducing this waste by 10% over the next six years.

4.3.2 Changes in Future Demand through Council Actions or Policies

In order to achieve the goal of a 10% reduction in the tonnage of waste being disposed of through transfer stations, Council will need to provide additional services. Currently little education of waste issues is carried out directly by Council, with no education programmes in the rural areas.

Increasing these education programmes through schools and households will aim to:

- Increase the amount of greenwaste and organic waste separated from general waste;
- Promote the use of glass collection services;
- Encourage the removal from home refuse of food and other biodegradable materials;
- Encourage residents to increase paper recycling and educate them on the costs of disposing paper to landfills;
- Educate on what to do with hazardous materials.

Commercial businesses will be encouraged to:

- Reduce packaging by sourcing products that has minimised packaging;
- Dispose of hazardous materials safely.

Households will be encouraged to:

- Compost and separate food waste from refuse;
- Separate paper and cardboard from refuse disposal;
- Recycle e-waste through subsidised drop off days.

Government policy and regulations are expected to continue to increase the costs of waste disposal. Council is expecting an increase in the waste minimization levy in the future (currently \$10 a tonne on waste disposed to landfill). This may result in additional funds available to Council for waste reduction initiatives. Changes to the ETS and increased taxes on fuel could result in higher costs to operate landfills, as well as increase transport costs.

Overall policy and regulation changes are expected to decrease general waste through higher costs and more education, and increase the volume and scope of recycling.

4.3.3 Economic and Population Growth

Projections of future demand for waste are based on the following economic and population forecasts prepared in March 2017 for the 2018 Long Term Plan process. Waste tonnages can be expected to increase as economic activity and population increases, unless offset by waste reduction measures. Overall the forecast is for modest increases in population and households that will have a minor impact on waste volumes (assuming increased education services).

Assumptions

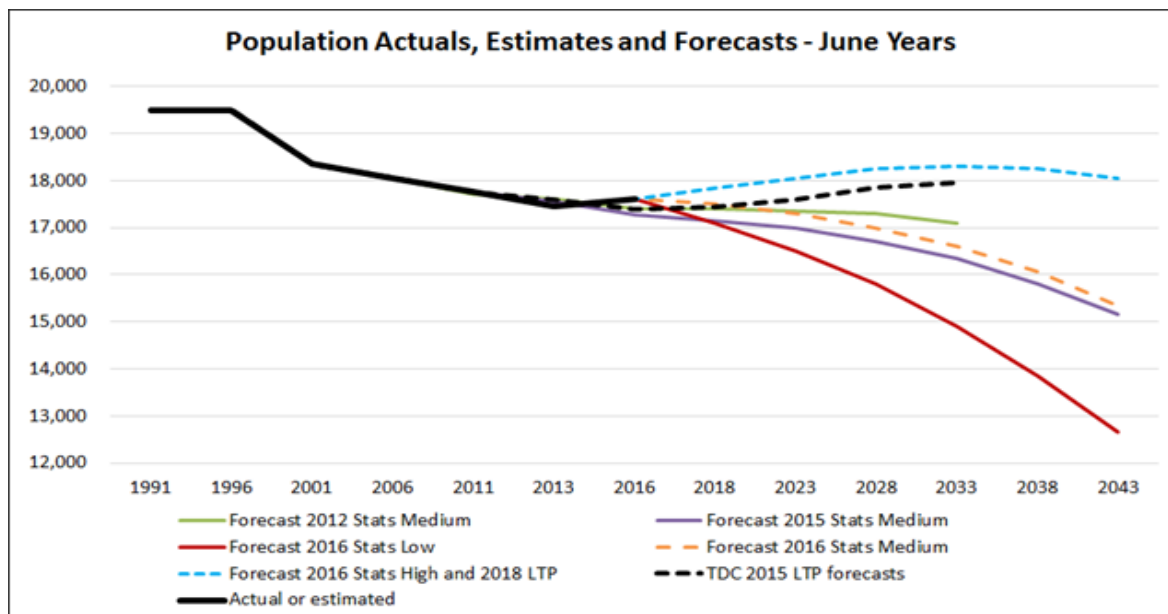
- Population growth scenario high growth scenarios as per Statistics NZ by Area Unit
- NZ to have average to above average economic growth
- Continued strong net NZ migration patterns until 2020, then continued net gains higher than previous trends
 - NZ continues to be seen as safe and stable location
- Tararua net migration over long term significantly higher than historical average (less departures the major driver)
 - This reduces the impact of an ageing population
- Continued strong growth in international and domestic visitors
- No large manufacturing closures and continued growth in local businesses and local spending
- Moderate Palmerston North City and Manawatu growth
- Modest population growth in Central Hawkes Bay and Masterton District
- Relative strength of NZ economy relative to Australia
- Moderate commodity price levels (dairy, wool, beef and lamb).

Population to 2043

The population of the Tararua District declined over the last 12 years at around 0.5% a year. The decline was bigger from 2006 to 2013, although Council has a view that most of this decline was in the 2006 to 2011 period. This decline is estimated to have reversed with modest growth from 2015, with continued modest growth forecast over the next 20 years to 2038 as a result of:

- A reversal of outward net migration as less residents leave to seek employment in Australia and more people choose to live in the Tararua;
- Solid commodity prices result in increased disposable incomes in the rural sector (once debt levels are reduced) flowing through to increased retail and servicing profitability;
- Countered by an ageing population and a continuing shift of services to the regional centres;
- Improved infrastructure (including water, wastewater and broadband fibre) and recreational facilities;
- Employment growth in manufacturing and food retailing builds on the positive initiatives currently underway, new windfarm and oil exploration investments and more promotion by the Council.

Population change is the result of natural increase (births less deaths), plus or minus the results of residents moving between different areas (in and out movements to / from New Zealand and overseas). Tararua has a net gain from natural increase, and until 2013/14 had a significant loss from long term immigration and a domestic drift to Palmerston North, Manawatu, Hastings and other NZ areas. With migration numbers improving the natural increase will start to have a positive impact.



The major change in the makeup of the 2013 Census and forecast population is the decline in younger people and the increase in older people. While the increase in the aging population is forecast to occur across the country the decline in younger people is not. The median age of residents in the Tararua District is forecast to increase from 41 years old in 2013 to 45 years old in 2028 and 48 years old in 2043 (high growth Statistics NZ series). Under the Medium series these ages are even higher.

This is a major shift towards older people that may have impacts on the solid waste services demanded from Council, and the ability to pay for those services. Increasing numbers of older people that have no access to transport to the transfer stations will result in increasing demand for kerbside services such as glass recycling.

Modest growth in the last two years that has been higher than previously forecast will hopefully result in an increase in the numbers of working people with families. This appears to be the case based on international migration data.

Population growth from 2018 is forecast to be concentrated in rural areas near urban towns.

5 Current Waste Management Issues, Infrastructure and Services

This section summaries current services and waste management issues in the Tararua District.

5.1 Waste Management Infrastructure and Services

The Tararua District, given its small urban centres, is very well serviced for transfer stations, landfills and access to recycling facilities and services.

Locality	Landfills (operating)	Transfer Stations	Greenwaste and Cleanfill Facilities	Kerbside Waste Collection	Kerbside Recycling Collection (not glass)	Recycling at Landfill, or Public Bin	Glass Service (Container)
Dannevirke		√	√	Council decided to exit service in 2015 LTP with final service in 2017	√	√	√
Pahiatua		√	√		√	√	√
Woodville		√ (on contract)			√	√	√
Eketahuna	√	planned			√	√	√
Ormondville		√			√		√
Norsewood					√	√	√
Pongaroa	√	Planned				√	√
Herbertville						√ (summer)	√
Akitio						√	√
Weber						√	√
Makuri	Bagged refuse transfer facility only						
Alfredton	Bagged refuse transfer facility only						

All services are delivered through contracts, while Council owns and maintains the transfer stations, open and closed landfills, and bins / containers for glass and other recyclables. Contractors provide labour, collection, transport and sorting services.

Dannevirke acts as a hub for the smaller areas such as Ormondville, Makuri, Akitio and Herbertville. Recycling and transfer station materials are picked up and transported to Dannevirke as required. Waste for disposal is consolidated before being transported to Waipukurau from Dannevirke and Pahiatua. Recycling (excluding glass and greenwaste) is processed by Solid Waste Services, a private company operating at the Dannevirke transfer station.

Green waste is stockpiled at Pahiatua and Dannevirke. Every few months (as required) a private contractor shreds the material and transports it to Palmerston North City Awapuni Landfill to be processed and used as compost.

Glass is currently transported to the Eketahuna Landfill and used as cover. With the closure of the landfill in 2017/18 Council will need to find a new use for glass recycling. Options are being considered, including

1. Sort the glass at the drop off sites using new container type bins (by residents) and consolidate glass at Dannevirke before transporting to Auckland for recycling by O-I NZ into new bottles.
2. Consolidate glass at Dannevirke to be crushed and used by local business in a product for sale.

These options will provide a suitable solution to glass recycling with operating costs expected to be lower than current costs. The Council favours option 2 for economic development and sustainability reasons (less transport).

5.2 Tararua District Current Waste Infrastructure and Services

Infrastructure and services		Scale of services available public and private
Reduction	Community and industry education programmes	Limited. Through EERST (Environmental for Education Resource Sustainability Trust), Council sponsors the Paper4trees programme. Advice as requested by commercial / schools.
	Internet services	Information on facilities and hours of operation.
Reuse	Second hand trading	second hand traders (books, clothing, furniture)
	Kerbside collection	Weekly collection of recyclable material (plastics 1, 2 and 3, paper, cardboard, aluminium and steel cans) in plastic shopping bags from Dannevirke, Pahiatua, Woodville, Eketahuna Norsewood, Ormondville, Pongaroa. Collection of 127 tonnes of recycling (2016/2017).
Recycle	Transfer stations	Woodville (privately owned), Dannevirke, Ormondville. Pahiatua. Eketahuna to be built 2017/18. Dannevirke is a full service facility.
	Resource recovery centres	No resource recovery centres.
	Private collectors	At least 5 private collectors of general waste (2 based in the District); 3 scrap metal dealers (source: yellow pages). Paper4trees programme for local schools co-sponsored by Council.
	Special wastes	Drop off option (charges apply) at transfer stations.
	Green waste collection	Drop-off service at Dannevirke and Pahiatua transfer stations.
Recover	Composting Facilities	None.
	Biosolids	None – to Palmerston North.
Treatment	Trade waste (solids waste only)	7 private collectors of trade waste; one private waste dewatering facility.
	Hazardous waste	None – to Waipukurau.
	Landfill	Two small landfills at Eketahuna (Resource consent expires June 2018 – Council to close 2017/18) and Pongaroa (Resource consent expires August 2021 - estimated capacity 10 years) for local waste only.
Disposal	Transfer stations	4 currently - Woodville (privately owned), Dannevirke, Ormondville. Pahiatua. Dannevirke and Pahiatua are full service transfer stations.
	Cleanfills	Storage areas at Dannevirke and Pahiatua transfer stations, and Eketahuna landfill.
	Kerbside collection	Weekly pick up of labelled plastic bags from households in Dannevirke, Pahiatua, Woodville, Eketahuna, Norsewood, Ormondville.

5.3 Issues and Challenges

A number of other issues and challenges face the Community in waste management. These issues and challenges have been identified by Council staff through preparing the Waste Assessment, dealing with legislation changes and the impacts of closing Dannevirke and Pahiatua landfills. The assessment has identified the following waste management and minimisation issues in the Tararua District:

- A need to review the contracts to manage refuse transfer stations in the southern areas in order to increase efficiency;
- The need to change the levels of service for the urban Kerbside recycling collection in order to reflect current kerbside recycling usage and control costs;
- The phasing out of plastic bags by New World may force Council to change the kerbside recycling pickup method. This requires a report on options in the next year.
- Find lower cost ways to reuse green waste in order to reduce the impact on rates and increase tonnages diverted;
- Find an affordable solution to the recycling of glass;
- Further expansion of an environmental waste minimisation education programme to include households, businesses and rural areas, and removal of organic waste from household refuse in urban areas;
- Rationalise arrangements and location of the transfer station at Woodville;
- The limited amount of data on waste volumes particularly from private industry as Council withdraws from kerbside refuse collection;
- Establishing small transfer stations at Eketahuna and Pongaroa as the landfills are closed.

5.4 Customer Satisfaction

Council measures customer satisfaction for Solid Waste services as part of the overall Council resident satisfaction survey. This is now an annual survey carried out by Key Research. The 2016/17 survey provided some interesting responses that have influenced this

Service – September 2016	Satisfied	Dissatisfied
Landfills and transfer stations	85%	15%
Recycling Services	86%	14%

Residents were also asked how often they used the recycling services. This can mean kerbside or transfer stations. While usage is high on a monthly basis only 27% use services weekly.

Frequency	Percentage	Count
Weekly	27%	181
Fortnightly	25%	172
Monthly	27%	180
1-6 months	8%	52
Yearly	2%	13
Never	12%	79

Another question asked highlighted the volume of refuse still being disposed of on-site in the rural area.

Disposal of non-recyclable waste: Method used (1)(2)



5.5 Shared Responsibility for Waste/ Product Stewardship

The Waste Minimisation Act 2008 places the greatest responsibility for minimising and managing waste on to local councils. However, councils only control a small part of the waste stream and in order to achieve significant waste minimisation other parties, particularly the producers and retailers that put products into the market need to share the responsibility.

In particular:

- Manufacturers and distributors of products have the ability to control end-of-life waste at the design and manufacturing stages of the product life-cycle.
- Organisations responsible for service provision need to plan for the associated waste requirements when establishing the service.
- Regional Council and Central Government have the ability to enforce regulations around appropriate storage and disposal of key materials e.g. tyres.
- Central Government has the ability to implement regulatory mechanisms to control key waste streams at a national level e.g. product stewardship schemes for waste tyres, agricultural chemicals, e-waste; or other regulation such as container deposit schemes for packaging.

Councils will have greater influence on achieving shared waste responsibility, regulation or product stewardship by presenting a unified voice and working with other responsible organisations including Central Government, Ministries, Regional Councils, Local Authority Shared Services (MWLASS), Regional Special Interest Groups (SIG's), industry groups, DHB's and the community. There are also benefits to working with national and local advocacy groups, such as the NZ Product Stewardship Council, Community Recycling Network, Zero Waste in New Zealand and Pare Kore who are working towards the implementation of effective product stewardship in New Zealand.

6 Action Plans

This section identifies the specific actions or programmes proposed by the Council to achieve Plan strategies. For each strategy, the action plan outlines:

- Specific actions to achieve the strategy, including whether it is a new or existing action;
- An indicative timeframe for implementation of that action;

These actions are derived from priority options identified in the Waste Assessment and current issues summarised in sections 4 and 5.

6.1 Action Plan for Waste Management

The Council will focus on providing efficient and affordable disposal facilities for waste disposal that encourages waste reduction, recycling and re-use. The following are a summary of the proposed new initiatives. These are in addition to the existing services provided by Council.

Proposed Initiative	Cost Implications (compared to 2016/17 budget)	Change in Annual Cost per ratepayer of initiative
Closure of Pongaroa Landfill and new small transfer station 2021/22	\$142,000 Capital	\$1.30
Glass sorting and supply to local business for re-use, or transport to Auckland for recycling into new glass bottles	\$120,000 capital set up costs. \$10,000 annual costs Small reduction in overall operating costs	\$nil or minor saving Waste Minimisation Levy Funding
Expanded education programmes – business, households (urban and rural) with collaboration opportunities	Additional \$20,000 per year	Waste minimisation levy funded
Encourage removal of organic household waste from refuse from 2018 with 2,000 subsidised composting bins / worm farms	\$100,000 setup costs over 6 years. \$5,000 a year promotion	Waste minimisation levy funded
Change kerbside recycling collection to fortnightly	Saving of \$30,000 a year	Saving of \$6.20
e-waste amnesty drop-off day each year	\$7,000 a year	Waste minimisation levy funded
Product stewardship advocacy	Nil	Nil

Existing services will be maintained or enhanced ensuring public health is maintained. Private sector options are available in all four major urban areas if additional services are desired by individuals. Increasing education programmes, encouraging removal of household organic waste from refuse, providing a more focused recycling service with glass being reused / recycled, and having regular data surveys, will promote effective and efficient waste management and minimisation. Investigation of an annual e-waste amnesty day recognises this increasing issue.

Demand for the collection and disposal of waste is forecast to decrease over time with more education and targeted waste reduction projects. Recycling volumes are expected to increase with more education, targeting paper, cardboard and glass.

6.2 What We Propose To Do

The Council considered a number of options to meet the vision and proposed targets. Shaded options in the tables are the preferred options by Council.

Strategy 1 - Waste Minimisation Options – Reduction, Re-use and Recycle

Method	Options	Economic, Environmental, Social and Cultural Costs and Benefits	Does this Contribute to the Goals of NZWS	Council Outcomes Supported	Impact on Future refuse to landfill	Councils Role
Education	School programmes expanded to fund additional existing material	Change behaviour in future adults and introduce new ideas to families. Reduced environmental impact and reduces costs of disposing waste.	Yes	2, 5, 6	Minor reduction in short term	Funding and managing contracts. Partnerships with Schools
	Expanded household and business education programmes also covering rural areas. Some advertising.	Expand changes throughout the community including commercial operations. Still have relatively low costs as tapping into existing programmes.	Yes	2, 4, 5, 6	Moderate reduction	Funding and managing contracts. Partnerships with Schools and business groups
	Programmes plus Advertising through media	Expanded benefits but significant costs. Education material can largely be distributed through existing channels.	Yes	2, 4, 5, 6	Moderate reduction	As above
Subsidise and promote	Household Composting / worm farm project to reduce organic refuse	Change refuse practices by providing simple and subsidised products that encourage households to compost / reuse food and greenwaste	Yes	2, 4, 5, 6	Substantial reduction	Subsidy for composting bins / worm farms, providing information and advice
Recycling services	Plastic Wheelie bins for urban kerbside recycling (not glass) Fortnightly collection	Social benefits from a cleaner and tidier community. Environmental gains through increased recycling as higher profile and greater volume. Setup costs high (\$300,000) partly funded through waste levy fund and loans. Residents still need to take glass to transfer stations.	Yes	2, 4, 5, 6	Possible reduction in waste to landfill Unknown increase in recycling volumes	Owner of recycling facility (building) Provider of bins and funding collection by contract. Contract for private processor.

Method	Options	Economic, Environmental, Social and Cultural Costs and Benefits	Does this Contribute to the Goals of NZWS	Council Outcomes Supported	Impact on Future refuse to landfill	Councils Role
	Investigate the introduction of urban glass kerbside recycling services.	Builds resource and promotes more recycling. Costs are significant (at least \$100,000 a year) as bins and separate pickup is required. Sorting costs are also higher.	Yes	2, 5	small reduction	Provider of bins and funding collection
	Continue existing 'drop-off' type glass services at villages and towns	Gives people the option to recycle based in all urban areas. Costs are relatively high for the volume.	Yes (compared to no service)	2, 5, 6	Stable	Funding collection and bins, plus transport to Dannevirke
	Ensure the residents of major urban areas have access to cost effective co-mingle recycling services through kerbside collections (but shift to fortnightly service), drop off points and other facilities	Gives people the option to recycle based in all urban areas. Reduces costs for the same service. Allows more community input. Shifting to fortnightly co-mingle plastic bag kerbside collection will save \$30,000. Usage has dropped significantly with access to new transfer stations. Phasing out of supermarket plastic bags requires Council to consider alternative options in 2018/19.	Yes	2, 5	Reduction	Funding collection service.
Recovery Centres	Prepare a business case for a resource recovery facility at Dannevirke	Residents have more access to re-use of products. Less dumping in environment. Items from Pahiatua etc could be left at transfer stations. Costs and possible income unknown at this stage. But expect high net cost for small population.	Yes	2, 4, 5	Reduction	Either funder to outside organisation or owner
	Prepare a business case for resource recovery facilities at Dannevirke and Pahiatua	Residents have more access to re-use of products. Less dumping in environment. High costs of operation for small population.	Yes	2, 4, 5	Reduction	Either funder to outside organisation or owner

Method	Options	Economic, Environmental, Social and Cultural Costs and Benefits	Does this Contribute to the Goals of NZWS	Council Outcomes Supported	Impact on Future refuse to landfill	Councils Role
	Status Quo no service	Resources are not fully utilised, but costs are lower as well. Residents have less access to re-use of products.	No	5	Stable	No impact
Pricing of landfills and transfer stations	Higher prices to dispose waste	Pricing too high will result in more fly-tipping and environmental damage. Less volume at transfer station results in less revenue	Yes (mostly)	5	Reduction	Rating policy and user charges
	Status quo strategy – lower than competitors but still increasing	Prices too low will result in out of District waste being disposed through transfer stations and significantly increase costs. Prices need to be balanced between affordability, price levels in other nearby areas and the rising cost of disposal.	Yes	1, 5	Reduction	Rating policy and user charges
	Ensure cost of greenwaste is low	Pricing greenwaste at a significantly lower level than general waste encourages its separation at collection and the transfer station. This reduces waste volumes to be transported and results in a useable resource.	Yes	2, 4, 5, 6	Reduction	User charges
	Annual pickup, investigate with recovery park	Provides convenient service and avoids furniture / appliances being disposed to landfills. Can result in people dumping waste on kerbside. Demand not proven. May encourage more waste. Consider at next WMMP.	Partially	2, 5	Probably increase	Funder through higher rates

Method	Options	Economic, Environmental, Social and Cultural Costs and Benefits	Does this Contribute to the Goals of NZWS	Council Outcomes Supported	Impact on Future refuse to landfill	Councils Role
Bulky inorganic kerbside collection	Status Quo no service	Not identified as an issue and would keep costs affordable. These items can still be taken to transfer stations but at a cost to individuals.	Yes	2, 5	stable	No impact
Waste Monitoring	3-yearly survey of waste stream materials	Important to understand the waste flow so tailored programmes can be developed. This should be done prior to each LTP process.	Yes	5	None	Funder
E-waste	Provide for an annual subsidised e-waste drop-off day	Rapidly increasing volumes of e-waste (TVs, phones, computers etc) is an identified problem across New Zealand, but it is expensive for Council to recycling these items. Funding would come from the waste minimization levy	Yes	2, 4, 5	reduction	Coordination and funding
Product stewardship advocacy	Support the sector and other organisations who advocate for a container deposit scheme and product stewardship for key waste streams such as agricultural waste, tyres, e-waste and packaging.	Council should support waste reduction at source and costs borne by those creating the cost of collection, recycling and disposal.	Yes	3, 5	Reduction	Advocacy

Strategy 2 - Waste Disposal Services and Facilities – Disposal of Residual Waste

Method	Options	Economic, environmental, social and cultural costs and benefits	Does this contribute to the Goals of NZWS	Impact on Council Outcomes	Impact on Future demand	Councils Role
Collection	Exit refuse kerbside collections	There are many private options for this service. Demand has shifted to favour wheelie bin collections. Competition has resulted in the private sector being able to offer these services cheaper than Council.	Yes	2, 5, 6	Possible increase	Council resolved to exit these services as part of the 2015 LTP process. Council refuse bag collection service ceases September 2017.
Disposal	Provide options for waste disposal across the district by having transfer stations at the major urban towns.	Social and economic benefits from access to alternative disposal facilities. Greater control over levels of service.	Yes	2, 5, 6	Reduction	Owner or contract manager
Re-use of cleanfill and greenwaste	Set up local greenwaste processing facility and sell compost	Currently contracted out. Mulched Greenwaste is trucked to Palmerston North for further processing and sale. These facilities are expensive to establish and require high volumes to cover costs.	Yes	4, 5, 6	Reduction	Owner of resource.
e-waste	Investigate options for the siting of an e-waste disposal centre in the Tararua District	Rapidly increasing volumes of e-waste (TVs, phones, computers etc) is an identified problem by the government.	Yes	2, 5	Reduction	Coordination, funding and landowner
Landfill disposal	Close Eketahuna in 2017/18, and plan to close Pongaroa landfill in 2020/21	These two small landfills provide a convenient and cost effective waste disposal solution for Eketahuna and Pongaroa under the existing consents. The cost of renewing resource consents is prohibitive and the volumes of local waste very small.	Yes	2, 4, 5	Stable or reduction	Landowner and funder

Method	Options	Economic, environmental, social and cultural costs and benefits	Does this contribute to the Goals of NZWS	Impact on Council Outcomes	Impact on Future demand	Councils Role
Central glass sorting and transport facility	Build large sorting bins for all recycled glass and loading facilities to transport glass to Auckland, or supply to local business.	Council has new opportunities to send sorted glass to the OI glass factory in Auckland, or to supply local business for recycling into new glass products. Revenue will help to reduce costs, while overall the costs of transport and sorting are the same or slightly less than current costs.	Yes	1, 5, 6	Reduce	Owner and commercial contract

Strategy 3 - Integrated Waste Management

Method	Options	Economic, environmental, social and cultural costs and benefits	Does this contribute to the Goals of NZWS	Impact on Council Outcomes	Impact on Future demand	Councils Role
Regional cooperation, collaboration	Investigate the value of aligning the timing of solid waste contracts with other Councils in order to minimise costs through joint tenders.	Sharing resources and economies of scale may reduce costs as well as make resource levels reach economic levels.	Yes	2, 4, 5, 6	Significant	Funding and managing contracts

7 Funding Provisions

This section sets out the indicative costs of the Plan and how its implementation will be funded, along with information on any grants made and expenditure of levy funds.

7.1 Plan Costs and Funding Sources

Overall this Plan will increase the resources available for recycling, greenwaste and food diversion, and waste reduction through education and monitoring. The majority of these resources will be funded through the waste levy revenue. The major costs are to operate and maintain the transfer stations and recycling services.

The total Council budgets to implement the WMMP are:

	2016/17 AP Budget	2017/18 AP Budget
Operational costs Landfill / transfer stations	\$983,000	\$871,000
Operational costs Recycling	\$758,000	\$759,000
Operational costs Refuse	\$185,000	\$185,000
Total operating Costs	\$1,932,000	\$1,821,000
Rates - targeted	\$900,000	\$899,000
Rates - general	\$529,000	\$532,000
Fees and Charges	\$541,000	\$460,000
Waste Management Levy	\$64,000	\$57,000
Total Operating Revenue	\$2,044,000	\$1,948,000
Waste Minimisation levy reserve (accumulated funds)		\$291,000

More details of the rates impact on residential, commercial and rural ratepayers can be found in the current Long Term Plan and the 2017/18 Annual Plan on the Council website.

The Council expects that the relative cost of waste management will be similar, or increase slightly for the duration of the Plan. The costs of waste disposal are likely to fall gradually, and the costs of monitoring, kerbside waste collection, recycling and transfer station operations will increase.

The impact on rates is driven by the costs of recycling and part of the transfer stations. Transfer station, collection and disposal costs are largely funded through fees and charges. If disposal volumes to landfills fall, fees and charges revenue may also fall (despite increasing fees and charges). The result is that while overall costs are likely to be fairly stable in real terms, the amount of rates needed to fund increasing volumes of recycled materials is likely to increase.

Additional costs from education programmes, e-waste, waste surveys and new encouragement of reducing household organic waste will be met from waste levy funding (currently \$57,000 a year). Additional funds for further projects would be reliant on additional funding from the Waste Minimisation Fund run by MfE.

The Eketahuna transfer station and closure of the landfill already has funding allocated in the 2017/18 budget. This includes the costs associated with the capping of the landfill. There is currently no funding for purchasing the privately owned Woodville transfer station. This will be the focus of an investigation over the 2017/18 year.

Detailed budgets for projects that require rates funding will be identified in the 2018 – 28 LTP. The cost of delivering waste management has stabilised since 2015/16 after years of significant cost increases.

7.2 Proposed Funding Sources

Funding sources are identified as:

- **Rates:** Funds collected by the Council from levies on properties in the District for services provided. Council will set the type of rates and the level of rates through the Long Term Plan and Annual Plan processes. Currently recycling services are partly funded through a District wide general rate based on land value.
- **User Fees:** Income to the Council through fees paid by those who use specific services provided by the Council. The term 'user fees' includes gate fees associated with council landfills, transfer stations and sticker sales for rubbish bags for collection.
- **Waste Levy:**¹ Money raised via this levy (\$10 per tonne of waste disposed to landfill) goes to a national waste account – half of which is distributed quarterly to territorial authorities on a population basis. Under the Act, waste levy funding received by the Council must be spent on waste minimisation activities and only in accordance with this Plan.
- **Waste Minimisation Fund:** This is a contestable fund administered by the Ministry for the Environment. Councils and others can apply for additional funds for waste minimisation activities on a case-by-case basis in accordance with nationally set criteria and priorities. This funding is sourced from half of the waste levy paid through landfill disposal.
- **Other:** As appropriate, other funding sources may be appropriate, including community and industry funding and other private or government sources (not part of the waste levy).

7.3 Waste Minimisation Levies

All waste levy funding received by the Council will be spent on waste minimisation activities in accordance with section 6 [Action plans] of this Plan. Section 4 explains how these funds are to be spent, including whether actions are an existing or new service, or a combination of both. Waste levy funding can also be used to provide grants, to support contract costs or as infrastructure capital.

The Council has flexibility in the timing and manner in which waste levy funds are utilised. Funds can be pooled with other councils, or pooled for several years to use for infrastructure development, as long as this use is provided for and explained in the Plan.

¹ A national waste levy is funded via the establishment of a \$10 per tonne levy on all waste disposed of in landfill. Half of the money raised is distributed quarterly to territorial authorities on a population basis for waste minimisation initiatives in their district. The remaining half is in a contestable fund.

8 Monitoring, Reporting and Review

This section outlines how the Plan will be monitored and progress reported.

8.1 Monitoring and Reporting

The Council will monitor implementation of the Plan, including the effectiveness of policies and targets set out in the Plan.

Monitoring of the Plan will include:

- Maintaining a monthly record of the weight of refuse being collected and disposed of at the landfills (including cleanfill and greenwaste material diverted);
- Maintaining a monthly record on volumes and weight of material recycled by type of material (recovered/recycled etc), at transfer stations and from kerbside collections;
- Reporting annually on meeting resource consent conditions at Pongaroa;
- In conjunction with the annual planning process, reporting on:
 - Other waste minimisation and management activities undertaken on a yearly basis,
 - The provision of recycling services, education programmes and other services,
 - The volumes of waste being disposed of to, or diverted from, landfills and or transfer stations,
 - Progress against plan targets.
- Reviewing the asset management plan (Solid Waste), resource consent conditions, as well as bylaws as required;
- Undertaking, every three years at least, a survey of the waste stream at transfer stations.

Monitoring required to report on the specific targets in the action plan include:

Target	2016/17 Baseline	Information Source
Waste Minimisation - General		
Reduce total waste volume being transported to landfill compared to 2016/17 measured on a per resident basis by 20%	261 kgs	Transfer station weighbridge data, returns to MfE and Invoices from CHB
Increase total tonnage of recycled materials by 20% compared to 2016/17	1,174 tonnes	Council contractors
By 2021 Council will repeat a landfill SWAP analysis (including a sort and weigh of domestic kerbside rubbish)	2017 survey	Survey
By 2024, overall customer satisfaction with Transfer station services increases to 90%	85% very to somewhat satisfied	Key Research survey
By 2024, customer satisfaction for recycling increases to 90%	86% very to somewhat satisfied	Key Research survey
Waste Services and Facilities		
Open and closed Landfills achieve 100% compliance with resource consents	100%	TDC annual reports

8.2 Review of the Plan

A full review of the Plan will be commenced by the Council at intervals of not more than 6 years after adopting the Plan or the last review.

Any review of the plan will be preceded by a waste assessment under section 51 of the Act. If, after the review, the Council considers that the Plan:

- (a) Should be amended or revoked and a new Plan substituted, it will act under section 44 [Requirements when preparing, amending or revoking plans] of the Act, which includes using the special consultative procedure set out in section 83 of the Local Government Act.
- (b) Should continue without amendment, it will use the special consultative procedure set out in section 83 of the Local Government Act and, in doing so, notify the assessment with the statement of proposal.

9 Glossary

Key Definitions

Recover - Process to produce new substances, products, or components that can be used.

Recycle - Process so the material can be used again in the same cycle, including composting.

Recyclables - Used to describe the inorganic materials that are commonly diverted from household refuse for recycling: paper, cardboard, glass, plastics 1-6, steel cans, aluminium cans, glass bottles and jars.

Recycling - Often used interchangeably with recyclables; also used to describe all inorganic materials being diverted and recycled, such as: scrap metal, white ware, tyres, e-waste, plastics, bottle glass, paint and organic material such as paper and cardboard.

Reduce - To use less material, use more efficiently, and use products that generate less waste.

Reuse - Further use of material in its existing form.

Dispose - The final (or more than short-term) deposit of waste into or onto land set apart for that purpose, or incineration of waste.

Diverted material - Any material that is reused, recycled or recovered, instead of disposed of or discarded. A term used to distinguish between diverted material and residual waste.

Treatment - Process to ensure no harm to environment.

Waste - Anything that has no further use and is disposed of or discarded. Types can be defined by composition or source e.g. organic waste, electronic waste, construction and demolition waste. Includes any component or element of diverted material that is disposed of or discarded.

Waste hierarchy - Internationally accepted waste reductions in descending order of importance.

Waste minimisation - Reduction of waste for disposal. Reuse, recycling and recovery of waste and diverted material. Waste minimisation activities may affect both the waste and diverted materials streams.

Other Definitions and Abbreviations

Landfill - Tip or dump.

LTP - Long Term Plan.

New Zealand Waste Strategy - A document produced by the Ministry for the Environment that sets out the Government's long term priorities for waste management and minimisation.

Organic waste - Waste largely from the garden - hedge clippings, tree/bush pruning, lawn clippings and/or food waste comprising of any food scraps - from preparing meals, leftovers, scraps, tea bags, coffee grounds.

Refuse - Waste or rubbish that currently has little other management options other than disposal to landfill.

Transfer Station - Where waste can be sorted for recycling or reprocessing, or is deposited and then put into vehicles for transportation to landfill.

Solid Waste Analysis Protocol (SWAP) - Audit of the composition and volume of waste and /or diverted materials.

Tonne - (metric) - one thousand kilograms.

Waste - Anything we no longer want - can be 'diverted material' through recycling or composting, or able to be reused by someone else, or is 'refuse'.

Waste Assessment - A document summarising the current situation of waste management in the Manawatu District, with facts and figures, as required under the Waste Minimisation Act 2008.

WMA - Waste Minimisation Act 2008.

WMMP - Waste Management and Minimisation Plan, also sometimes referred to as the "Plan."