



Matamata-Piako District Council

Waste Assessment

February 2021

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Executive Summary

Territorial authorities are legally required to conduct a Waste Assessment and have regard to it in the review and preparation of their waste Management and Minimisation Plans (WMMP). Previously the Eastern Waikato Councils – Matamata-Piako District Council (MPDC), Thames Coromandel District Council (TCDC) and Hauraki District Council (HDC) prepared a joint waste assessment and WMMP (2017) as prescribed in s51 of the Waste Minimisation Act 2008.

A Section 17A review was completed in May 2020 which recommended that each Council take responsibility for strategy and policy development for solid waste services. A shared services contract and procurement approach was recommended. As a result, each of the Eastern Waikato Councils will prepare an individual Waste Assessment and WMMP.

This Waste Assessment will inform the drafting of the MPDC WMMP. It compiles and analyses information on diverted and waste materials produced in the Matamata-Piako district. It forecasts future growth and demand for services to provide a forward planning framework that considers public health projection issues, alongside Council's legal requirements to promote effective and efficient waste minimisation. This assessment also provides a summary review of the reasonably practicable options available in terms of how to meet future demand for services and achieve waste management and minimisation objectives.

This document was prepared in November 2020 using information gathered from a variety of sources including data managed by Council, and the report "Matamata-Piako District Solid Waste Surveys, Waste Not Consulting, August 2020". Although every effort has been made to provide a complete and accurate assessment, in some cases data has been estimated or there are data gaps. (which are noted where applicable).

This Waste Assessment has been reviewed by the Waikato Medical Officer of Health to ensure that public health is adequately protected into the future. Their feedback is included in Appendix A.

For the purposes of forecasting future waste tonnes, this Waste Assessment has adopted a medium growth to reflect MPDC's adopted population and GDP projections. However, it is noted that a short-term decline in volumes as a result of the Covid-19 economic downturn is anticipated.

As well as predicting the future waste infrastructure requirements, this assessment has taken into consideration diverted materials' infrastructure requirements. Central Government has signalled change over the next 3 – 5 years with an increase in both the Waste Disposal Levy and Emissions Trading Scheme costs, and possible introduction of standardised kerbside collections nationally. The increase in the Waste Disposal Levy presents an opportunity for regional investment in infrastructure to support the diversion of waste from landfill.

The demand for infrastructure to divert waste from landfill is anticipated to increase over the next 10 years. Short-term the existing diverted materials infrastructure is expected to meet the forecast demand, however in the medium to long term MPDC needs to ensure infrastructure is in place either in the district or in neighbouring districts to meet increasing demand.

District Specific Issues

Having reviewed progress against the previous WMMP actions (combined WMMP with neighbouring Councils) and considering the change in waste quantities since the last WMMP, MPDC have identified the following MPDC specific issues that need to be addressed in the next WMMP:

- Increasing waste to landfill
- Decline in diverted material
- High volume of divertible material disposed through RTS
- High volume of organic waste going to landfill
- Cost and volume uncertainty due to legislation change

Options Assessment

MPDC has considered options for addressing the district-specific issues and assessed these in terms of diversion potential, cost and ease of implementation. The options are grouped into the following categories:

- Influence - change behaviour through waste minimisation programmes and advocate for national change
- Regulate - enforce diversion and behaviour change; and
- Service – provide facilities and services to increase diversion.

The preferred option over the short term due to affordability concerns and national legislative changes is to focus on influencing behaviour. Matamata-Piako will look to extend waste minimisation programmes to businesses and support local circular economy initiatives. Any change in service delivery or additional investment would be focused on reducing the impact of expected increased disposal cost. The current waste service contract expires in 2023 and this presents the best timing for any change in kerbside collection services or significant change to Refuse Transfer Station (RTS) operations. Work is currently underway to review the existing bylaw and to identify any areas where it could be better enforced, strengthened or amended to align with legislative change and practical considerations for least cost.

Kerbside options

- Provide a MPDC kerbside rates funded refuse bin service to restrict disposal volume (size and/or frequency).
- Extend MPDC's kerbside collection service to more rural households and to businesses.
- Provide a separate organic collection service, for green waste, kitchen waste or both to urban households.

RTS options

- Provide additional education and staff at RTS.
- Upgrade existing RTS to resource recovery centres with more diversion options offered, adjust layout and charging to promote diversion over disposal.

1 Introduction

Territorial authorities are legally required to conduct a Waste Assessment and have regard to it in the review and preparation of their Waste Management and Minimisation Plans (WMMP). The Waste Management Act (WMA) (s44) also requires that a Waste Assessment be notified with the draft WMMP for public consultation. This process is required at intervals of no less than every six years.

In December 2013 the Eastern Waikato Councils, being Matamata-Piako District Council (MPDC), Thames-Coromandel District Council (TCDC) and Hauraki District Council (HDC), agreed to cooperate on waste management and minimisation matters as they had a shared services waste contract. In June 2017 they adopted a joint WMMP – *Eastern Waikato Waste Management and Minimisation Plan*. In 2017 MPDC also adopted a Solid Waste Bylaw to support this activity.

In July 2020, a joint Section 17A review of waste services was completed for the Eastern Waikato Councils. Subsequently, each council decided to complete individual WMMPs in 2020. Accordingly, Matamata-Piako District Council is currently preparing a new WMMP to concentrate on its own districts' needs.

Matamata-Piako District Council has prepared this Waste Assessment as prescribed in the WMA s51. The Waste Assessment provides details of the following:

- existing waste services provided in the district (MPDC and non-council)
- waste quantities, composition and flows
- identification of issues
- future demand for services
- vision, goals, objectives and targets for waste management and minimisation
- guiding principles to direct how to get to where MPDC want to be
- an options assessment/statement of proposals for waste services and identified district issues

1.1 Documentation and accuracy

This document was prepared in November 2020 using information gathered from a variety of sources including data managed by MPDC and non-commercially sensitive data from the Solid Waste Surveys report prepared for MPDC in August 2020 by Waste Not Consulting.

Although every effort has been made to provide a complete and accurate assessment, in some cases data has been estimated or there are data gaps. Details regarding any limiting factors in preparing the Waste Assessment that are deemed to have materially impacted on the completeness or accuracy of the data, forecasts, estimates or options assessment have been noted where appropriate.

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

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

1.2 Key terms and acronyms

| Key Term/Acronym | Definition |
|--------------------------|---|
| Cleanfill | A cleanfill is any facility that accepts only cleanfill material which is described as material that when buried will have no adverse effect on people or the environment |
| C&D Waste | Construction and demolition waste |
| Diverted Material | Discarded materials such as materials collected for recycling, composting or other recovered or treated materials that are diverted from landfill |
| Domestic waste | Solid waste from households |
| ETS | Emissions Trading Scheme |
| Landfill | A disposal facility as defined in s7 of the Waste Minimisation Act 2008, excluding incineration. |
| LGA | Local Government Act |
| LTP | Long Term Plan |
| MfE | The Ministry for the Environment |
| MRF | Material Recovery Facility |
| NES | National Environmental Standards |
| NZWS | New Zealand Waste Strategy |
| Organics | Organic wastes that include kitchen, food and green wastes |
| RMA | Resource Management Act |
| RRC | Resource Recovery Centre |
| RTS | Refuse Transfer Station |
| SWAP | Solid Waste Analysis Protocol (SWAP) Ministry for the Environment-led baseline programme to provide solid waste composition information |
| TA | Territorial Authorities. The second tier of local government in New Zealand, below regional councils. |
| Tirohia | Tirohia Landfill in Hauraki District |
| Waste | Waste means waste disposed of to landfill and includes a type of waste that is defined by its composition or source (for example, organic waste, electronic waste, or construction and demolition waste) ; and to avoid doubt, includes any component or element of diverted material, if the component or element is disposed of to landfill |
| Waste Assessment | As defined by s51 of the Waste Minimisation Act 2008. |
| Eastern Waikato Councils | The Matamata-Piako District Council (MPDC), Thames-Coromandel District Council (TCDC) and Hauraki District Council (HDC) are the Eastern Waikato Councils. |
| WMA | Waste Minimisation Act 2008 |
| WMMP | A Waste Management and Minimisation Plan as defined in s43 of the Waste Minimisation Act 2008 |

2 Legislative and Strategic Context

This chapter contains a brief summary of the national policy context and key legislation that councils must consider in the development of their Waste Assessment and WMMP. These include:

- Waste Minimisation Act 2008
- Local Government Act 2002
- Hazardous Substances and New Organisms Act 1996
- Climate Change Response Act 2002
- Resource Management Act 1991 (as well as District and Regional Plans and consents)
- Health Act 1956
- Litter Act 1979
- Health and Safety at Work Act 2015
- New Zealand Waste Strategy 2010
- New Zealand Emissions Trading Scheme (under the Climate Change Response (Zero Carbon) Amendment Act 2019)

2.1 Key legislation

Waste management and minimisation in New Zealand is underpinned by the Government’s core policy “The New Zealand Waste Strategy (NZWS) – reducing the harmful effects of waste, improving the efficiency of resource use”.

A number of Acts of Parliament provide the legal framework for waste management and minimisation in New Zealand, with the primary legislation driving waste management and minimisation planning being the Waste Minimisation Act 2008 (WMA), the Climate Change Response Act 2002 and subsequent amendments, such as the Climate Change Response (Zero Carbon) Amendment Act 2019, the Local Government Act 2002 (LGA), and the Resource Management Act 1991 (RMA).

Taken together these Acts provide the legislative imperative and tools to support progress toward the high-level direction outlined in the NZWS. Because the NZWS and legislation are cornerstones to waste management and minimisation, careful attention is given to these in developing the Waste Assessment.

Appendix B provides further information on the key legislation.

2.2 National factors

There have been several national and global changes over recent years that have impacted MPDC’s waste services:

- Early in 2018, China’s National Sword Policy imposed tighter restrictions on the import of certain recyclables, primarily mixed paper and mixed plastic. China was the largest importer of recyclables. This has impacted the commodity price for recyclables globally.
- Nationally, the consequences of China’s National Sword Policy have impacted recycling collection and processing contracts with significant cost escalations. Alternative markets are hard to find and are getting overwhelmed.
- Covid-19 has tested the resilience of the recycling systems nationally. All but two Material Recovery Facilities (MRF) have closed, and collections have changed to prevent contact with infectious

diseases.

- WasteMINZ (national industry organisation) and Ministry for the Environment (MfE) are leading the national response to China's National Sword Policy.
- The Government's response to date includes banning single use plastic bags, contributed funding towards local processing plants with new technology, and review of container deposit legislation.
- There is a drive to standardise collection methodologies and types of materials collected from kerbside across the country. MfE commissioned WasteMINZ to prepare a report on standardisation in May 2020.¹
- These global and national impacts may potentially result in an increase in the Government's waste disposal levy. This will impact landfill disposal costs, generating revenue for investment in the sector. The increased levy provides an opportunity for regional investment in waste diversion infrastructure with additional funds available from the levy.
- The Climate Change Response (Zero Carbon) Amendment Bill includes a target of reducing methane emissions by 24-74% below 2017 levels by 2050, and an interim target of 10% by 2030. It also has a target of reducing net emissions of all other greenhouse gases to zero by 2050. This will impact our asset portfolios including solid waste, particularly with increasing Emissions Trading Scheme costs (carbon tax) and transport used to collect and cart to landfills.
- There is a move towards councils providing organic collections as part of their waste minimisation programmes, particularly for the metropolitan councils. Due to high collect costs in rural areas, this is generally not appropriate in the rural sector. However, Government is investigating standardising kerbside collection services nationally which would impact local collection services.

2.3 MPDC Strategic Plans

The findings of this Waste Assessment will support the solid waste content in the new WMMP and Long Term Plan that will be consulted on in 2021. It will also feed into the Asset Management Plan. It considers the findings of the recent Section 17A review of the Eastern Waikato councils.

¹ <https://www.mfe.govt.nz/publications/waste/recommendations-standardisation-of-kerbside-collections-aotearoa>

3 Waste Data

This chapter contains a summary of the available information for waste collected, recycled, recovered, treated, or disposed of in the Matamata-Piako district. The information includes data about quantities, composition, source and final destination of materials, generated for the period July 2015 to June 2020 and during the Waste Not Consulting Solid Waste Survey 1 August 2019 to 31 July 2020.

The information in this chapter forms the basis for forecasting future demand (as set out in Chapter 5).

3.1 Matamata-Piako catchment

The Matamata-Piako district is in the Waikato region of New Zealand in the centre of the ‘golden triangle’ of Auckland, Hamilton and Tauranga. With its quality soils the district is a cornerstone of the dairy industry and other farming as well as horticulture and meat processing. Its land area is 1,755 square kilometres² and it consists of three main population centres, Matamata, Te Aroha, and Morrinsville, along with the three small rural settlements of Waitoa, Waihou and Waharoa. There is one Territorial Authority (TA) being MPDC and one Regional council - Waikato Regional Council.

The Matamata-Piako district resident population at the time of the 2018 census was 34,404, of which 7,806 reside in Matamata, 4,554 in Te Aroha and 7,761 in Morrinsville. Agriculture (dairy farming) and manufacturing (dairy products) have traditionally formed the district’s economic base and are still contributing to the majority of GDP growth in the district. However, Matamata-Piako is also experiencing growth in professional services, construction, and retail trade. Tourism industry growth was particularly strong in the period from 2011 -2016 but has slowed in the last three years and due to Covid-19 in 2020 is likely to be significantly impacted in the short term.³

3.2 Data limitations, assumptions and accuracy

The data presented in this chapter does not represent all the waste and diverted materials generated in the district. We can only determine the amount of waste and diverted material from the data managed by MPDC and the voluntary information provided from the private and commercial sector. Information about all wastes is not readily available from private enterprise for reasons of commercial sensitivity.

MPDC holds historical data on diverted materials and solid waste to landfill for their district. For the purposes of this Waste Assessment, data from 2015/16 onwards has been supplied by MPDC (and is based on weighbridge records and contractor information).

To obtain a better understanding of waste data within the district, a per capita figure has been used as a guide. This is the total amount of waste produced divided by the total number of people in a defined area. It is an indicator of average ‘waste’ production on a per person basis but is not directly equivalent to the amount of waste an individual throws away each year, as much of the waste is produced from commercial sources. For consistency purposes with MPDC’s other strategic planning documents, the Infometrics projections adopted by MPDC have been used for population figures as well as GDP growth.

² Accessed 22 September 2020 <http://www.stats.govt.nz/tools/2018-census-place-summaries/matamata-piako-district>

³ Accessed 23 September 2020 <https://ecoprofile.infometrics.co.nz/matamata-piako%2bdistrict/Gdp/GrowthIndustries>

It is acknowledged a Waste Assessment is only a snapshot in time of the data collected for the purposes of future waste planning and preparation of the WMMP. It is the conclusion of this report that the data within, when combined with the “Solid Waste Surveys report” prepared for MPDC in August 2020 by Waste Not Consulting, is sufficient to inform future waste planning within the Matamata-Piako district and no further data is required at this time.

The information obtained for completing this waste assessment was considered appropriate when giving regards to:

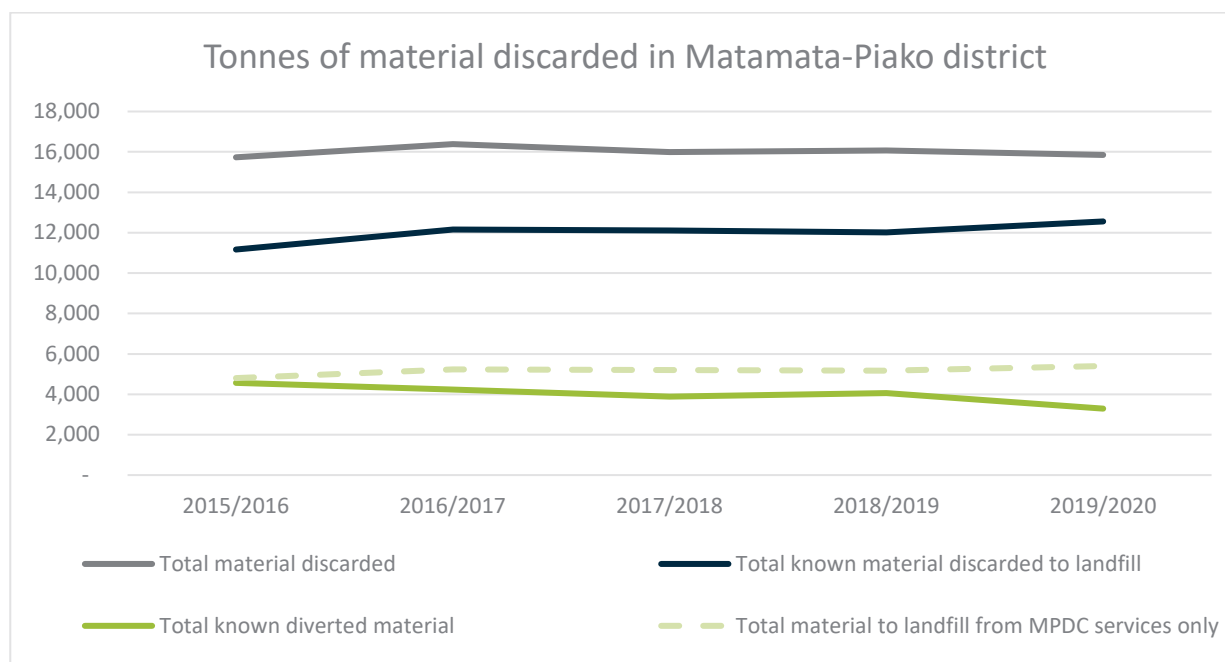
- the significance of the information
- the costs and difficulty in obtaining the information
- the extent of MPDC’s resources
- the possibility that MPDC may be directed under the Health Act 1956 to provide the services referred to in that Act
- the impact on the completeness of the assessment, particularly the forecast of future demands and options assessed

3.3 Materials discarded

By measuring the total materials discarded both through diversion and disposal activities, focus can be directed at the impact of reduction, re-use, recycling and recovery. This is not easy to measure, as accurate and measurable data about farm landfills, home composting, private landfills and private diversion services (including recycling) is not available. For the purposes of this report, amounts of diverted materials and solid waste disposed of to landfill have been combined to provide a baseline of the total amount of material discarded in Matamata-Piako. To calculate the total waste, data provided by MPDC on their council services has been combined with data provided from the Solid Waste Surveys report on non-council services.

Figure 1 illustrates the historic tonnage of materials discarded (both for disposal and diversion) since July 2015. The volume of total material discarded has grown 0.7% over the 5 years shown. This is lower than the population growth of 5.1%. Total known material discarded to landfill shows a similar trend but with sharper growth in the last two years for a total growth of 12% from 11,167 tonnes in 2015/16 to 12,557 tonnes in 2019/20. The dashed line indicates the total material discarded to landfill from MPDC services only. This refers to data recorded from MPDC kerbside collections and from MPDC refuse transfer stations (RTS). The gap between the two landfill lines indicates that more than half the waste from the district is discarded to landfill using non-council services. While material to landfill from MPDC services also increased by 12% in five years, in contrast, the quantity of total known diverted material has fallen 19% from 4,566 tonnes to 3,290 tonnes. As described later in this report, the decline in total known diverted material in 2019/20 could be related to COVID-19 disruption to services.

Figure 1 Total tonnage of materials discarded in Matamata-Piako district (July 2015 to June 2020)



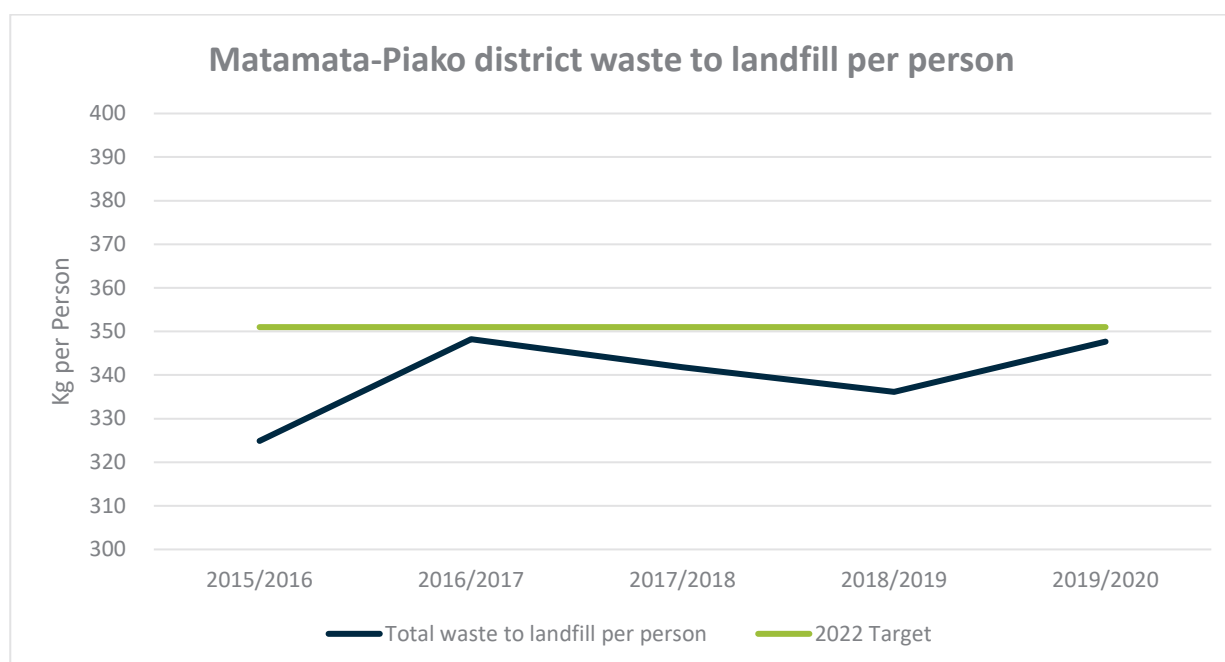
3.3.1 Progress against 2017 WMMP Materials discarded per capita targets

There were two targets set in the 2017 WMMP for the Matamata-Piako district. The first target refers to the total waste sent to landfills, so it includes waste from both MDPC services and non-council services:

A 13% reduction in the total quantity of waste sent to landfills from 404kg per person per annum to 351kg per person by 2022

Figure 2 below shows that this target has been achieved every year since 2015. Although the trend is going towards the target in the last year, it is still 56kg per person below the 404kg original starting point.

Figure 2 Matamata- Piako district waste to landfill per person



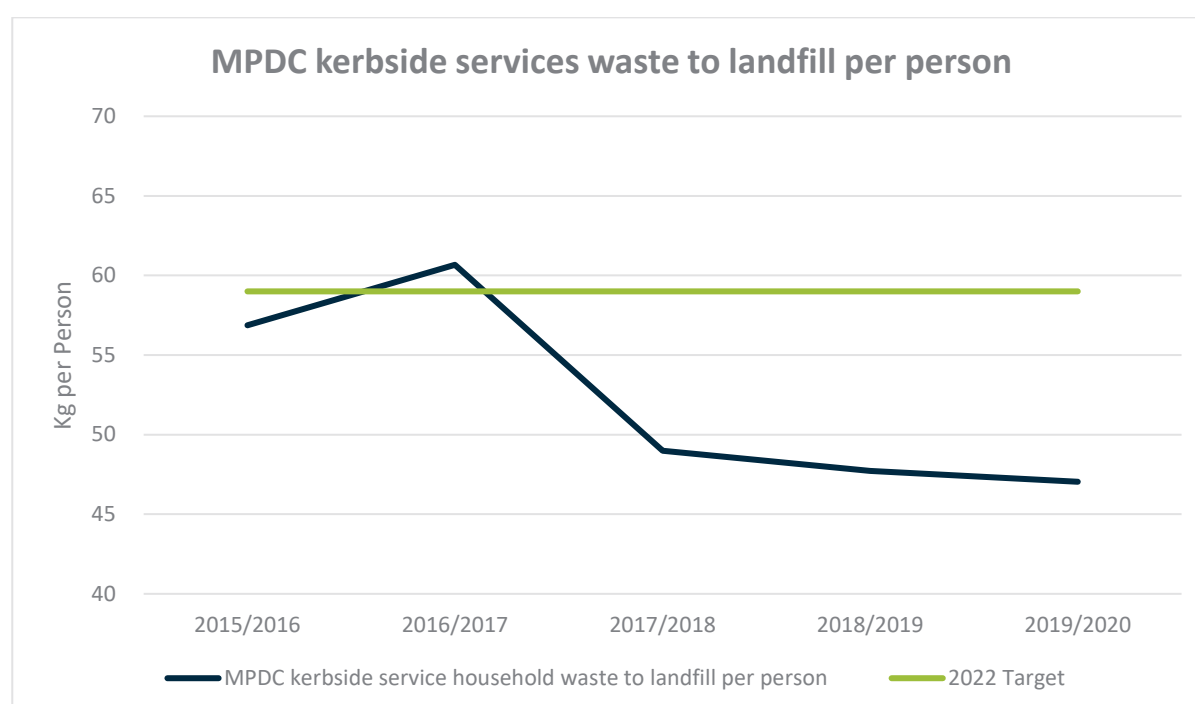
Although increasing, waste per capita for MPDC is still average to low compare to other Councils in New Zealand. An explanation for this could be the rural nature of the district. There is anecdotal evidence from a number of rural councils that many rural property owners choose to make their “own arrangements” for waste disposal as the kerbside service is not necessarily available to them. So, while the waste per capita is low, this could be evidence that alternatives are being used to deal with on-farm waste such as use of private kerbside waste collections, farm landfills, offal pits or burning waste.

The second target refers to kerbside household waste to landfill, which can be measured against kerbside waste from MPDC kerbside services only in the absence of data on private kerbside collection services. The kerbside target is:

A 5% decrease in kerbside household waste to landfill from approximately 62kg per person per annum to 59kg per person per annum by 2022.

Figure 3 shows that this target has been achieved every year since 2015/16 except the 2016/17 year. After trending down for three years it has reduced significantly to 47kg per person in 2019/2020. This recent downward trend could reflect an increase in households using non-council services or alternatively it could reflect more awareness in the community of the effects of their waste generation and a reduction in household item packaging over this period.

Figure 3 MPDC kerbside services household waste to landfill per person



3.3.2 Comparison to other Local Authorities

Table 1 provides a summary of information from the Waste Not Consulting report comparing MPDC per capita waste to landfill with other similar districts. The per capita disposal rate for MPDC is one of the lowest of the areas measured. The MPDC disposal rate of 0.369 tonnes per capita of waste to Class 1 landfills in 2020 is a 12% decrease from the MPDC 0.419 calculated in 2010.

Table 1 Disposal rates compared to other local authorities

| Overall waste to landfill – including special wastes | Tonnes per capita per annum |
|--|-----------------------------|
| Gisborne District 2017 | 0.296 |
| Waimakariri District 2017 | 0.325 |
| Ashburton District 2015 | 0.366 |
| Matamata-Piako District 2020 | 0.369 |
| Tauranga and WBOP District 2019 | 0.503 |
| Taupo District 2013 | 0.528 |
| Kapiti Coast District 2017 | 0.546 |
| Whangarei District 2017 | 0.640 |

3.4 Waste to Landfill

3.4.1 Sources of waste to landfill

The Tirohia Landfill in the Hauraki district is a regional facility that receives waste from outside Hauraki including the Matamata-Piako district. Based on data from the Solid Waste Survey for MPDC by Waste Not Consulting in August 2020, of the total waste discarded to landfill from the Matamata-Piako district, 93% is taken to Tirohia Landfill. The remaining 7% is disposed of at other waste disposal facilities outside the district. MPDC services produce approximately 43% of the waste taken to Tirohia Landfill from the Matamata-Piako district. MPDC kerbside collections contribute 15% made up of 9% direct to Tirohia Landfill and 6% from kerbside collections delivered initially to one of the three council run RTS. General waste dropped at MPDC RTS facilities contribute 28%. Note that there are no private RTS in the Matamata-Piako district. Non-council services taken directly to Tirohia Landfill account for approximately 50% of waste to landfill.

Most non-council service waste is taken direct to landfill rather than via a MPDC RTS. Most MPDC collected kerbside waste is also taken direct to landfill. The main users of the MPDC RTS are residents that don't receive the MPDC kerbside collection service or residential and commercial customers with bulky waste not suitable for kerbside collection.

Based on the July 2020 solid waste survey, Figure 4 shows approximately 34% of waste disposed came from the three MPDC RTS and 9% from Council kerbside collections direct to landfill. MPDC controlled services account for 43% of waste disposed. This is a significant decrease from the 63% share of the waste disposed of in the 2010 year.

Figure 5 shows the waste sources for waste received at the three MPDC RTS in the week surveyed. Industrial/Commercial/Institutional (ICI) waste is only 11%, likely due to more commercial waste going direct to landfill via private collection companies. The 44% of residential waste indicates that many of the households in the district that are not offered the council kerbside collection (~33% of all households) may be utilising the RTS service instead of or in addition to a private collection service. The 20% of Construction and Demolition (C&D) waste is likely coming from home renovations and other housing development in the district.

Figure 4 Source of waste disposed to Tirohia Landfill (August 2019 to July 2020)

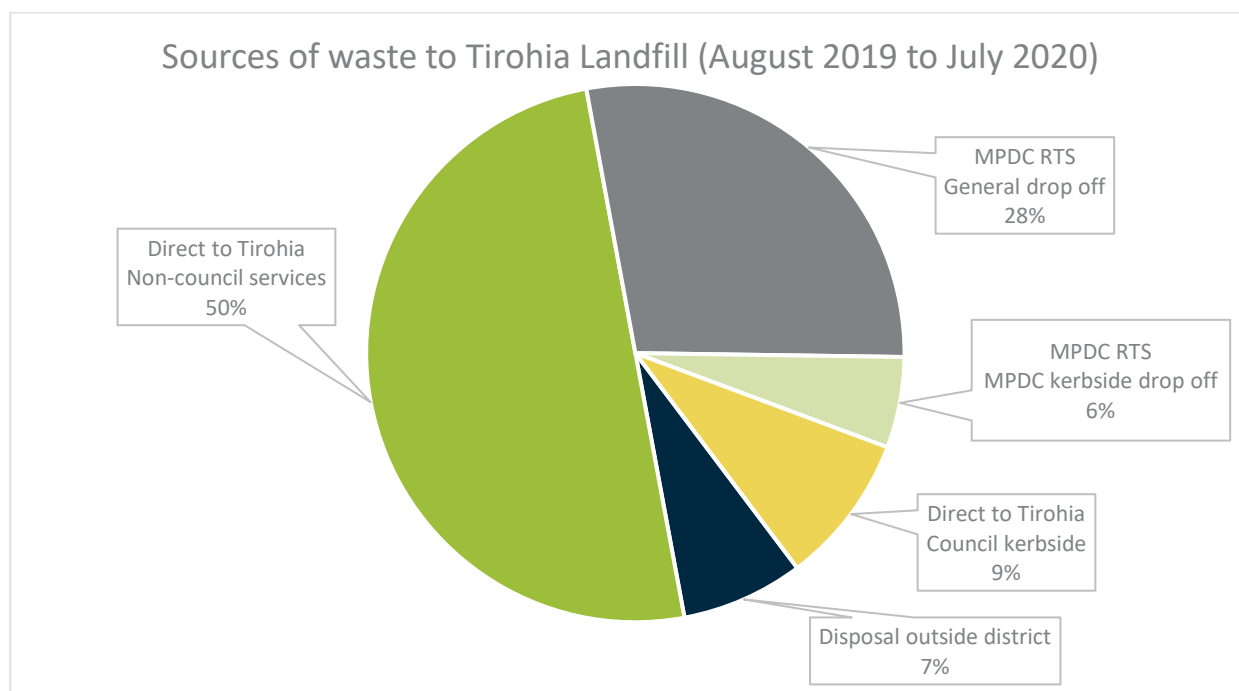


Figure 5 Sources of waste to Tirohia Landfill from MPDC operated RTS July 2020

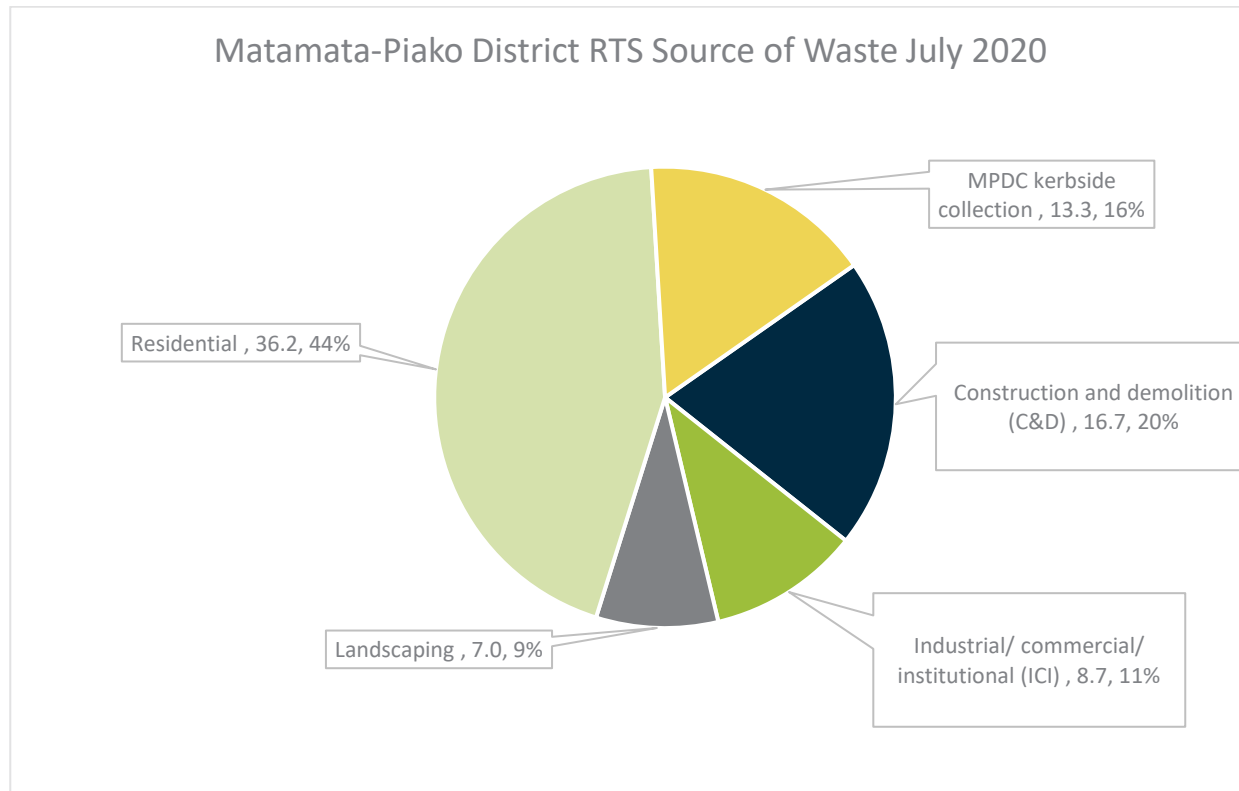
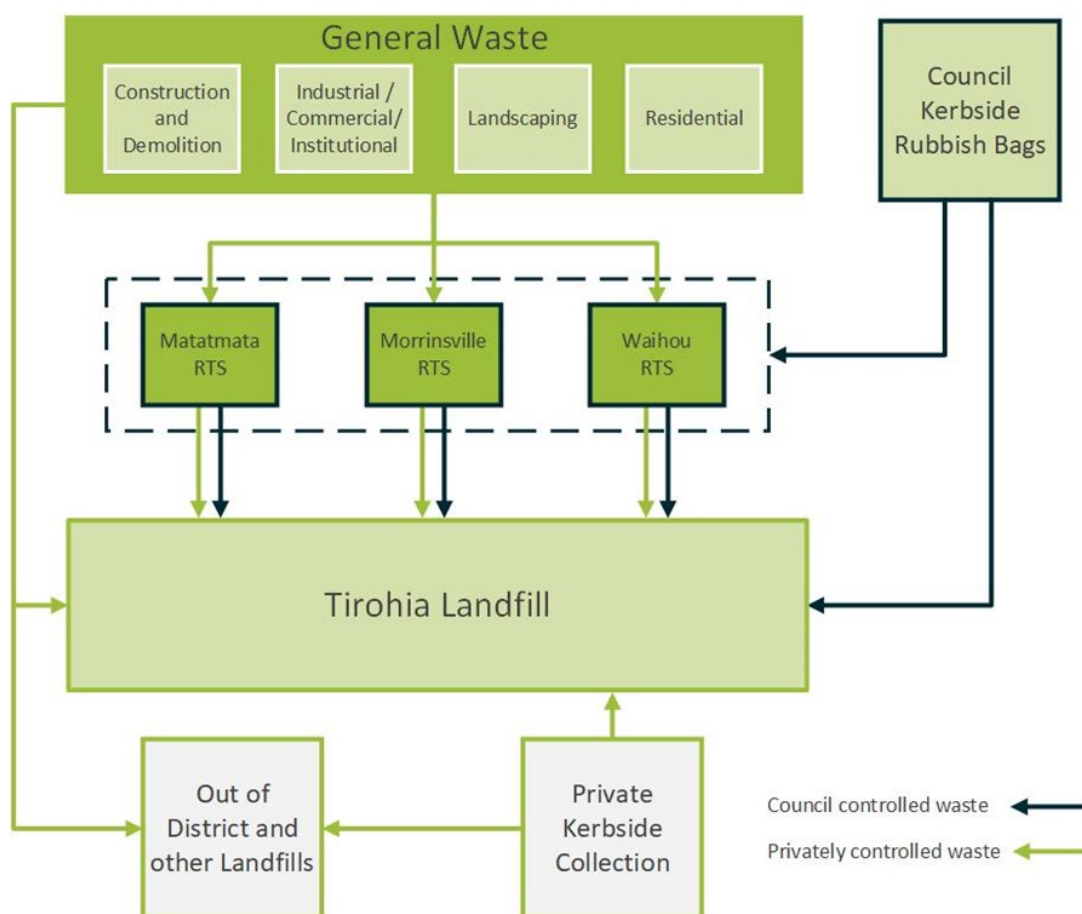


Figure 6 below depicts the source and flow of waste in the Matamata Piako district.

Figure 6 MPDC flow of waste to landfill (August 2019 to July 2020)



Source: Based on Solid Waste Surveys report prepared for Matamata-Piako District Council in August 2020 by Waste Not Consulting.

3.4.2 Cleanfill

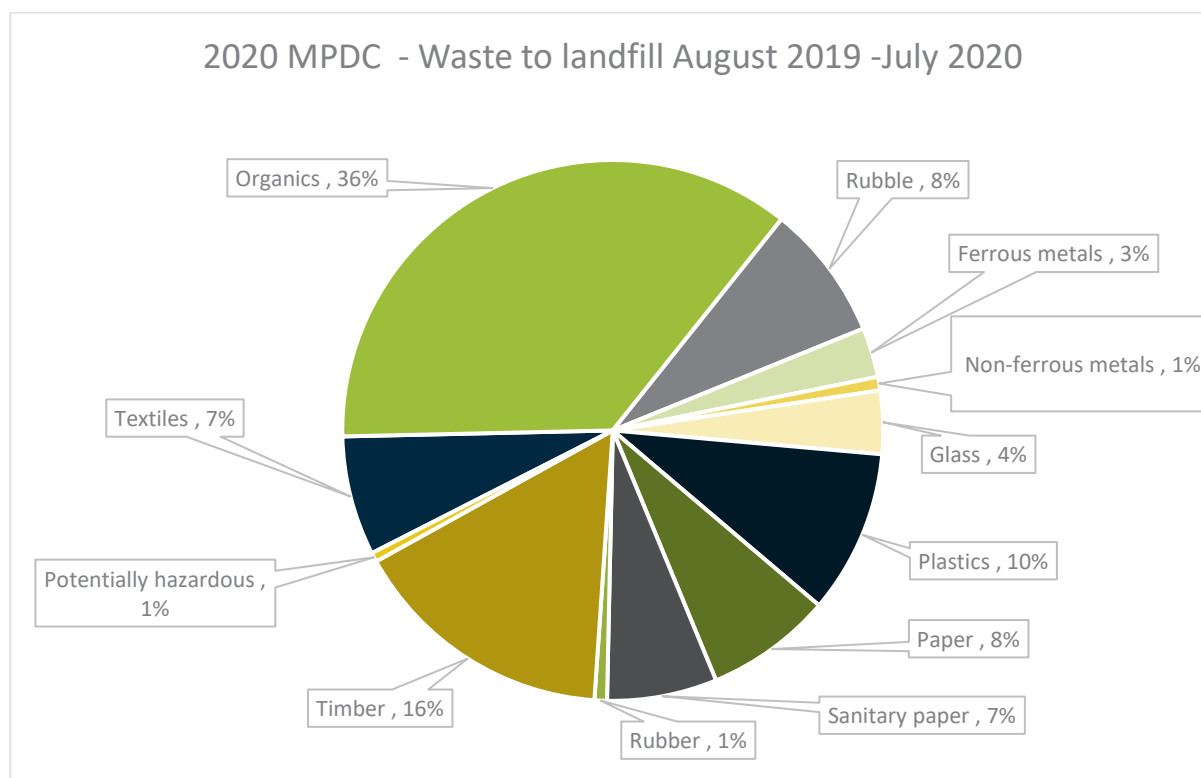
Cleanfill tonnage information is currently not captured by MPDC. There are several cleanfill disposal locations in the Waikato region that are monitored by the Waikato Regional Council.

3.4.3 Composition of waste to landfill

An analysis of the composition of waste to landfill in the Matamata-Piako district was completed by Waste Not Consulting in August 2020. Visual surveys were used for waste being disposed of at the three Refuse Transfer Stations, located in Matamata, Morrinsville and Waihou. The data from the surveys was combined with the weighbridge records and other information from Council to calculate the composition and quantity of waste being disposed to the Tirohia Landfill in the Hauraki district and other landfills outside the district.

Figure 7 illustrates the district composition of waste disposed to landfill (extrapolating survey data to an annual figure) for the year August 2019 to July 2020. Organics was the largest component of the district waste stream during the survey period, comprising 36% of the total which includes kitchen waste and green waste. The survey took place at the end of July, which is associated with low vegetative growth and low levels of gardening activity by residents. It is likely the quantity of green waste would have been greater at other times of the year. Generally, waste disposal is lowest in the winter months, rising towards an annual peak in spring, early summer. Timber at 16%, was the second largest component of the waste stream.

Figure 7 Composition of solid waste to landfill (August 2019 to July 2020)



Source: Solid Waste Surveys report prepared for Matamata-Piako District Council in August 2020 by Waste Not Consulting.

3.5 Diverted materials

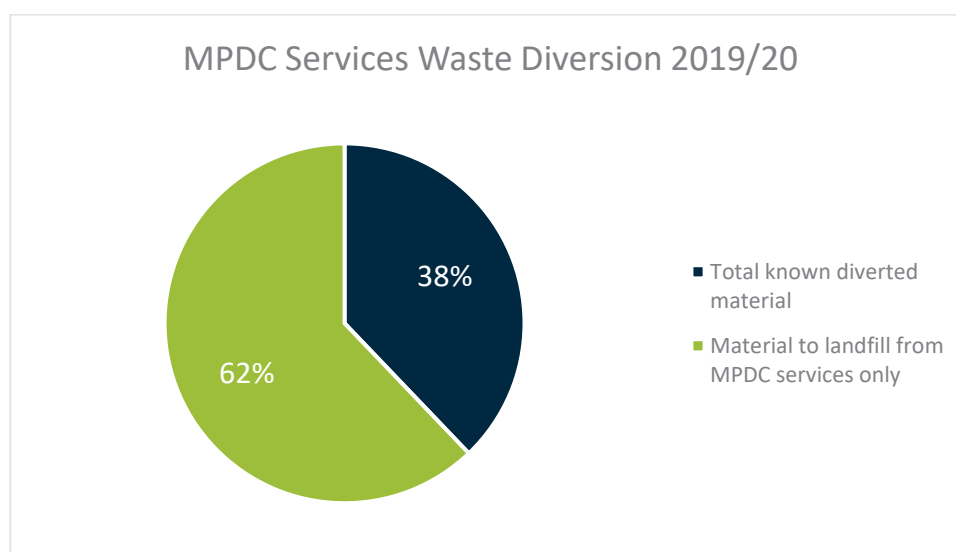
The diverted materials data in this Waste Assessment includes recycled materials, scrap metal, and organic waste from MPDC kerbside recycling services and RTS services. This information is based on MPDC's records sourced from weighbridge or contractor records and data from the 2020 Solid Waste Survey.

3.5.1 Progress against diverted material target

The district has a diverted materials target of 45% or more of total waste from MPDC kerbside collection and RTS services.

In 2019/20, 3,290 tonnes of material were diverted from landfill in Matamata-Piako, a 19% increase on the prior year. Figure 8 shows only 38% of waste from MPDC services was diverted in 2019/20, still 7% short of the 45% target.

Figure 8 Waste diversion achieved for 2019/20 from MPDC services only

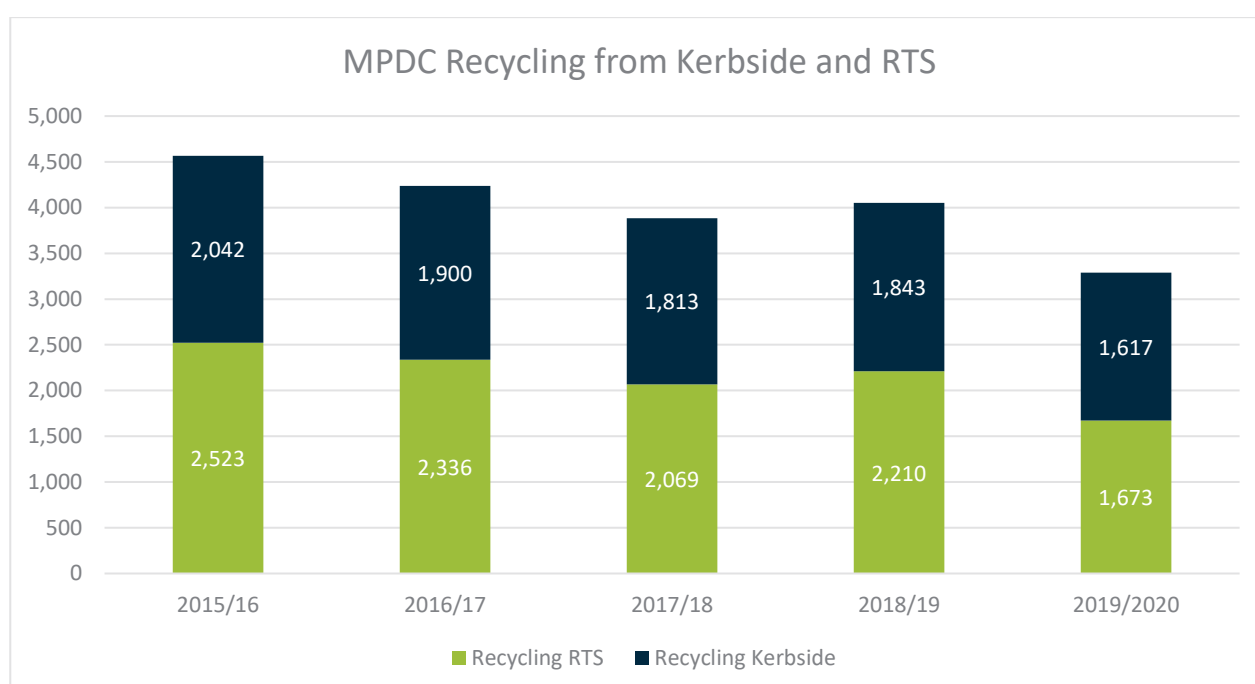


3.5.2 Sources of diverted materials

Data on diverted materials is limited to services managed by MPDC and therefore reflects the residential market. Figure 9 shows the quantity of diverted materials for the 5 years from July 2015 to June 2020 from either MPDC Kerbside collections or MPDC RTS. On average over the past 5 years 46% of these materials come from kerbside recycling, with the remaining 54% sourced from RTS (paper, cardboard, plastics, metal cans and glass bottles and jars, green waste and scrap metal). The quantity of diverted material from kerbside recycling was lower as a proportion of overall diverted material in 2015/16. No data is available on non-council services diverted materials.

The relatively high use of the RTS facilities may reflect both the rural nature of the district and the geographic limits of the current kerbside collection service offered by MPDC.

Figure 9 Quantity of recyclables collected at Kerbside and RTS



3.5.2.1 Re-use

MPDCs do not currently operate “second-hand” facilities as part of their RTS. MPDC relies on community groups and private sector to support re-use. No information is available on the volume of material that is re-used.

3.5.2.2 Kerbside recycling and drop-off centres

Approximately 3,290 tonnes of recyclables were sorted and processed for the district in 2019/20, a decrease from the peak of 4,566 tonnes in 2015/16. The recyclables were collected from kerbside collections, and recycling facilities within the three RTS. These recyclables consist of paper, cardboard, glass bottles and jars, all plastics (recently restricted to 1 & 2 only) and aluminium/steel cans.

The level of contamination within the kerbside collection service is not currently measured and can impact actual recyclable tonnage.

The volume of hazardous material disposed of safely doubled in 2019 to 1149 kg and doubled again in 2020 to 2172kg. This is likely to be due to increased awareness in the community of safe disposal options.

MPDC offers drop-off facilities at three RTS and have provided a kerbside recycling service for more than 10 years. In 2013 separate collections of mixed recycling and glass were introduced, using 240-litre wheelie bins for mixed recycling and crates for glass recycling. The recyclables are collected fortnightly.

Figure 10 shows the source of recyclables collected through either a council kerbside collection process or public drop-off at RTS from July 2019 to June 2020.

Figure 10 Sources of diverted materials RTS and kerbside

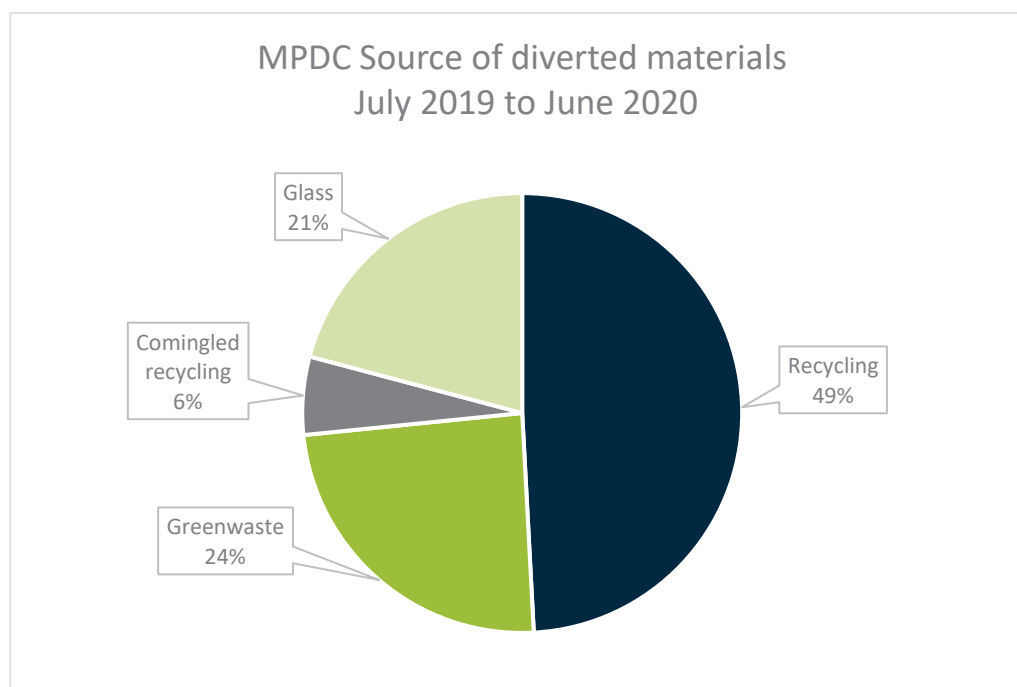
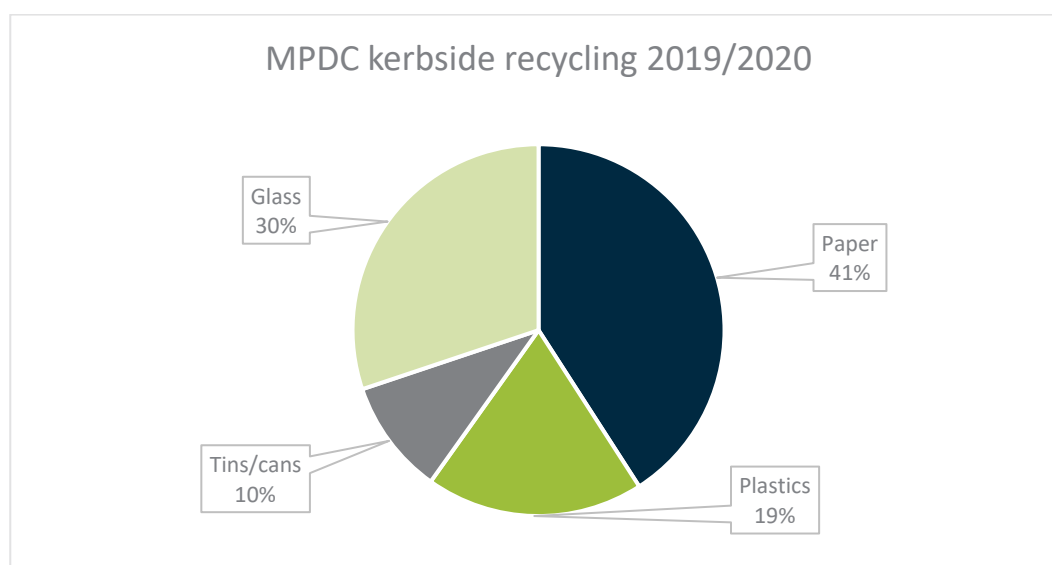


Figure 11 shows the composition of recyclables collected through the council kerbside collection process only from July 2019 to June 2020. The largest components of the kerbside recyclables collected are glass and fibre (paper and cardboard). As this data is based on weight (tonnage) as opposed to volume, heavier products such as glass and fibre (paper and cardboard) generally outweigh lighter plastics and metals.

Figure 11 Composition of recyclables collected by MPDC kerbside service 2019/2020

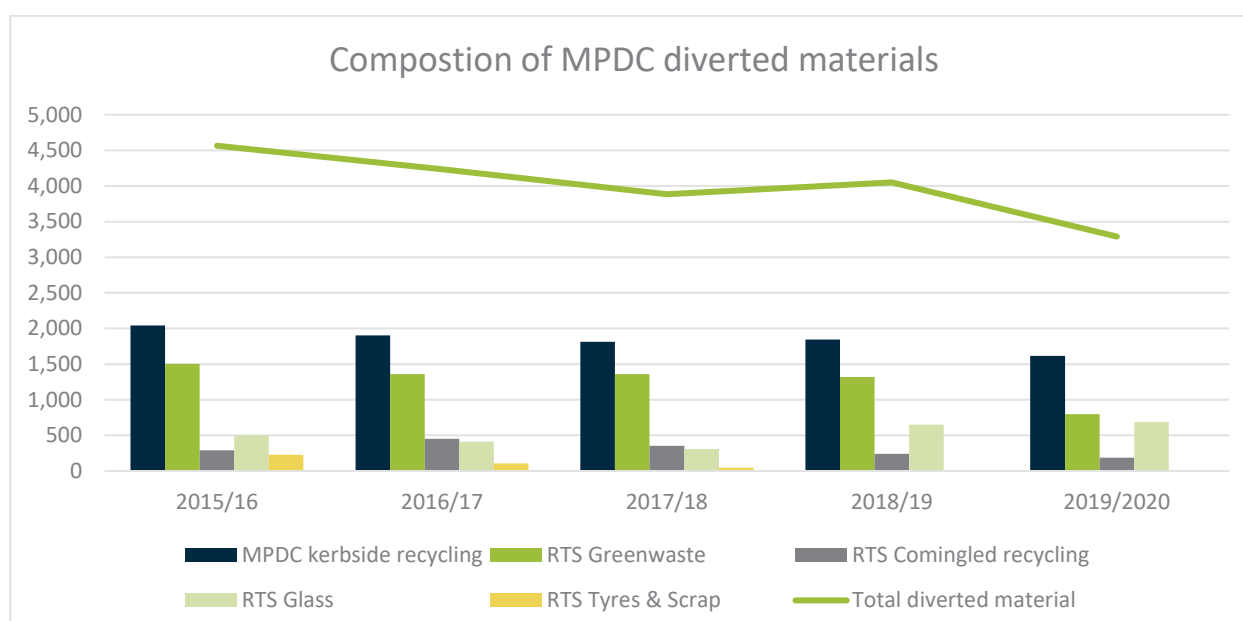


3.5.3 Composition of diverted materials

A summary of the composition of all diverted materials by year is presented in Figure 12. Overall, the total volume of diverted materials has been decreasing. MPDC kerbside recycling makes up the largest proportion in each year followed by RTS green waste and RTS glass. The volume of green waste decreased slightly between 2015/16 and 2018/19 but dropped sharply in 2019/20. As mentioned earlier, this sharp decrease is likely to be greenwaste being held at RTS for longer due to delayed collection during the COVID-19 period from February to May 2020. During this time the green waste will have decomposed reducing its weight at collection. The volume of glass has increased in the last two years.

There are different diversion options available at the different transfer stations across the district with no reuse shops or resource recovery centres. More diversion could be achieved with more comprehensive diversion facilities available at all transfer stations.

Figure 12 Composition of diverted materials in MPDC (July 2015 to June 2020)



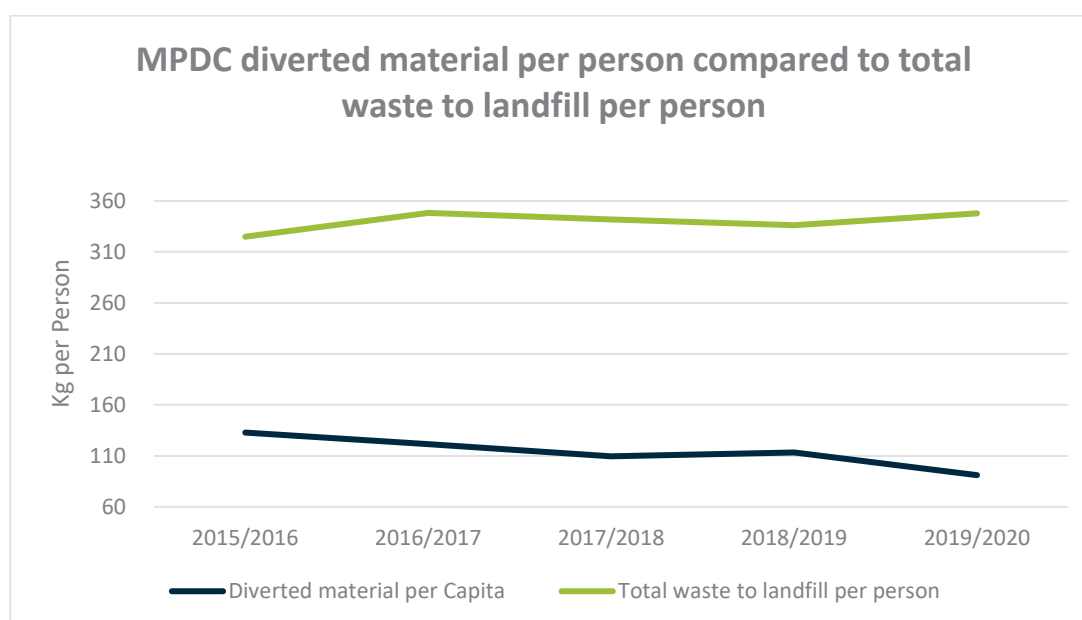
3.5.4 Diverted materials per capita

To obtain a better understanding of diverted materials within the district a per capita figure can be used to compare both changes over time at MPDC as well as how MPDC is performing alongside other councils.

Figure 13 illustrates the historic diverted materials per capita for the district and compares it to the total waste to landfill per person. Diverted material decreased from 133 kg/capita in 2015/16 to 113 kg/capita in 2018/19 before decreasing again to 91 kg/capita in 2019/20. The 5-year average is 114 kg per capita of diverted material. The trend lines show the strong correlation between diverted material decreasing and waste to landfill increasing.

During 2013 kerbside recycling services changed to a fortnightly 240l recycling bin with separate glass crate collection which initially increased material diversion. However, since its initial introduction, kerbside recycling volumes have been reducing over time from 2,042 tonnes in 2015/16 to 1,617 tonnes in 2019/20.

Figure 13 MPDC diverted material per person compared to total waste to landfill per person (July 2015 to June 2020)



3.6 Diversion Potential

Potentially divertible materials are components of the waste stream that have been identified as targets for possible diversion from landfill, mainly through recycling and recovery activities. The Waste Not Consulting composition report calculated the diversion potential from RTS (excluding kerbside collections).

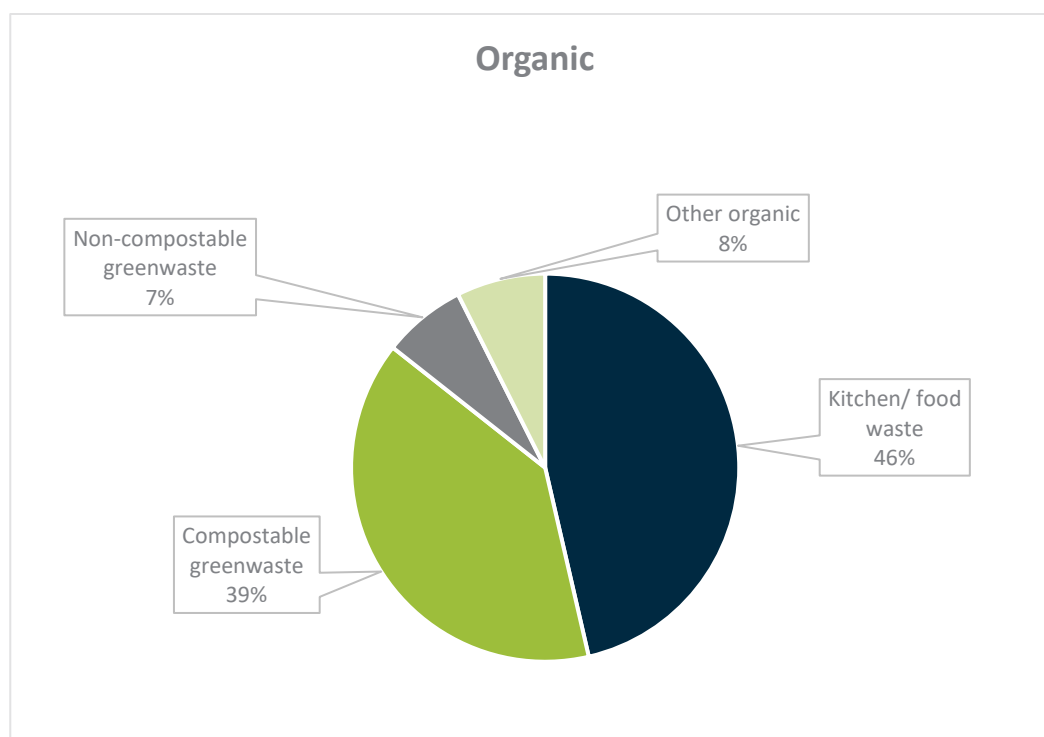
The 2020 analysis had a district total of potential divertible material from RTS of 26.5 tonnes per week. This highlights that while recycling programmes have been successful at diverting some material from landfill, more can be achieved. Approximately 55% of potentially divertible material are recoverable materials of which 26% is cleanfill rubble and reusable timber, 18% is paper, 13% is metals and 6% is textiles. The remaining 45% are compostable materials made up of organics at just over 30% and C&D waste (new plasterboard and untreated timber) at nearly 15%.

3.6.1 Organic materials

Organic materials are a major contributor of waste to landfill in Matamata-Piako. The 2020 Solid Waste Survey analysis indicates 36.1% (4,533 tonnes per year) of all waste to landfill is organic.

Figure 14 illustrates the composition of organic materials disposed to landfill (extrapolating survey data to an annual figure) for the year August 2019 to July 2020. Both Kitchen/food waste (46% of total organics) and compostable green waste (39%) are potentially divertible. Non-compostable greenwaste (7%) and multi-material or 'other' such as meat processing waste (8%) are less likely to be divertible in the short term.

Figure 14 Composition of organic materials disposed to Tirohia Landfill (August 2019 to July 2020)

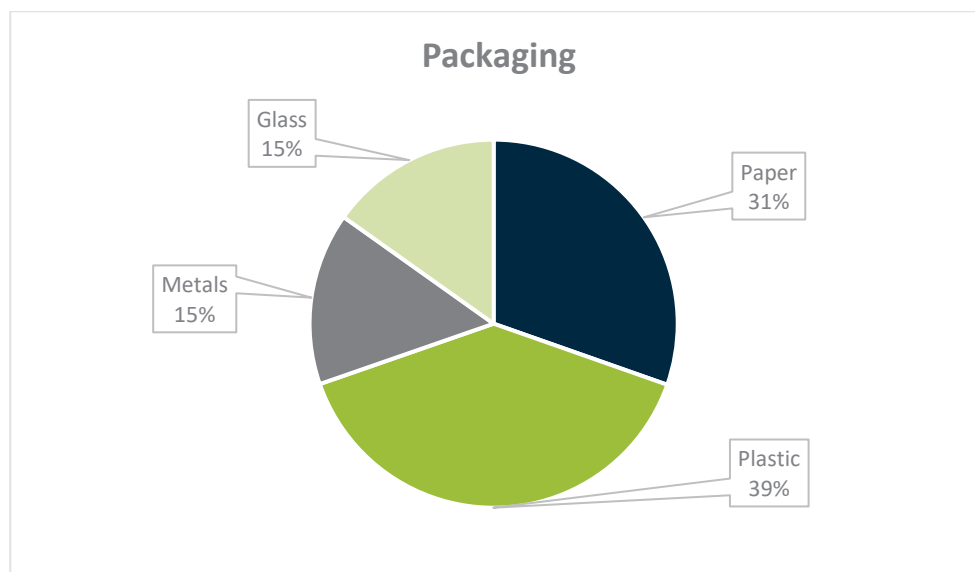


Currently there is no district infrastructure to recover kitchen and food waste. Therefore, industry and households must manage the process themselves, through utilisation of pig farms, home composting/worm farming, Bokashi systems or other alternatives.

3.6.2 Packaging Materials

Plastics, paper, metals and glass (packaging materials) also account for a high proportion of waste to landfill, at 24.9% (3,127 tonnes per year). Figure 15 illustrates the composition of packaging materials disposed to landfill (extrapolating survey data to an annual figure) for the year August 2019 to July 2020.

Figure 15 Composition of packaging materials disposed to Tirohia Landfill (August 2019 to July 2020)



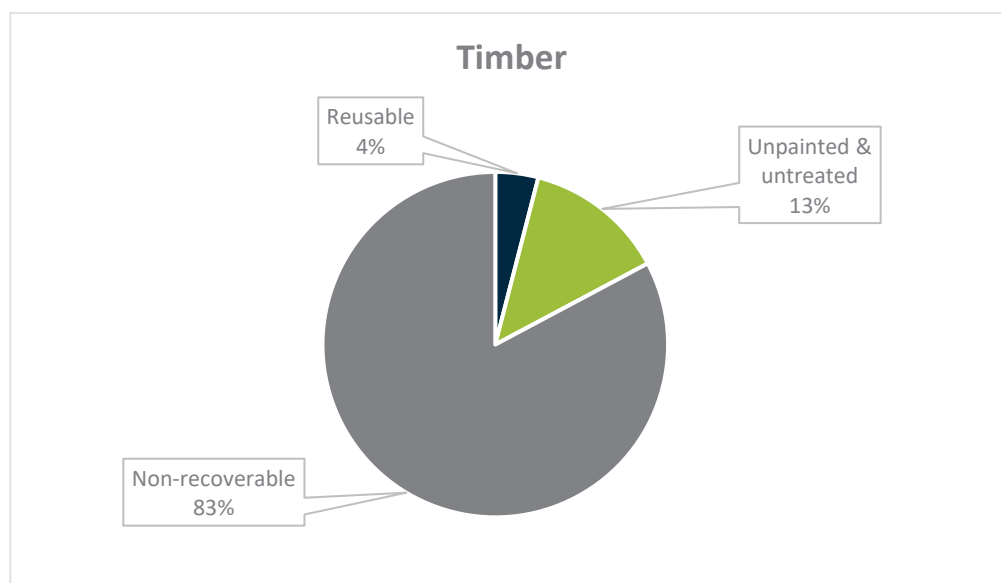
There are several key sources of recyclable material that can be targeted to reduce packaging materials to landfill. MPDC has put in place best practice kerbside recycling collection services to capture good quality material. This service could be offered to more households (e.g. on rural/urban fringe) and businesses.

3.6.3 Construction and Demolition materials

Timber accounts for 15.9% (1,997 tonnes per year) of all waste to landfill. Figure 16 illustrates the composition of timber disposed to landfill (extrapolating survey data to an annual figure) for the year August 2019 to July 2020. The majority (83%) is non-recoverable, however 17% is potentially divertible or reusable.

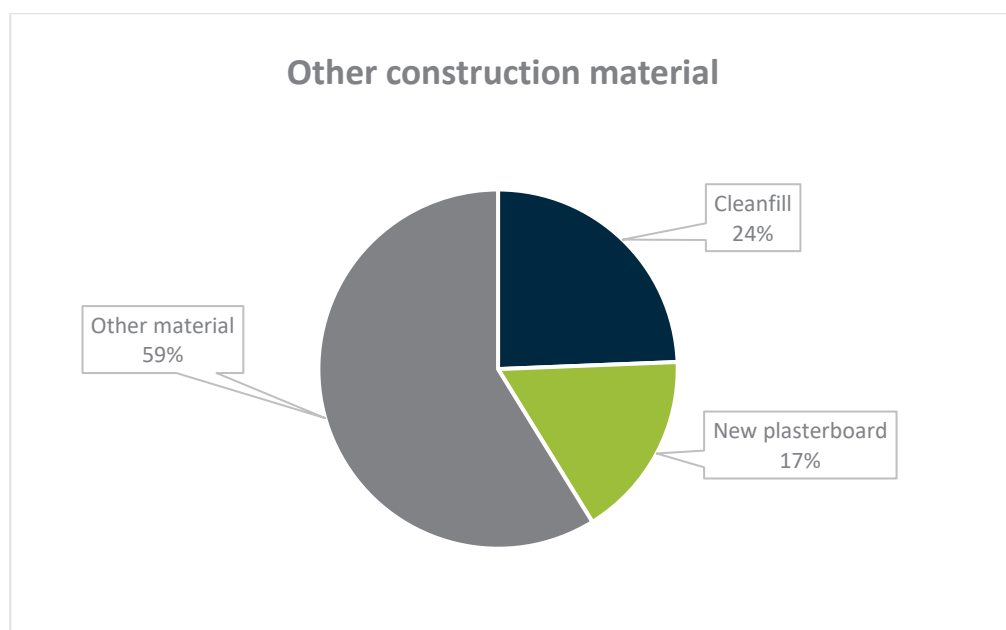
Major sources of timber waste are the industrial, commercial, and C&D sectors. Commercial operators are generally the largest producers of timber material to landfill and this group can potentially be the focus of waste minimisation efforts, although there are some challenges in the recovery of post-consumer waste wood due to the presence of treated timber and other contaminants.

Figure 16 Composition of timber disposed to Tirohia Landfill (August 2019 to July 2020)



Other construction material accounts for 8.1% (1,017 tonnes per year) of all waste to landfill. Figure 17 illustrates the composition of this construction material disposed to landfill (extrapolating survey data to an annual figure) for the year August 2019 to July 2020. The majority (59%) is a mixture of material, however the remaining 41% is cleanfill and new plasterboard. Further investigation will be required to analyse how much of this material is potentially divertible for reuse.

Figure 17 Composition of timber disposed to Tirohia Landfill (August 2019 to July 2020)



4 Existing Recycling and Waste Facilities and Services

This Chapter includes a summary of information regarding waste management and minimisation services provided within the district for reduction, re-use, recycling, recovery, treatment, and disposal. This includes MPDC services as well as private and commercial services, where available and applicable.

These services include:

- waste minimisation education and behaviour change programmes
- initiatives for re-use of waste and diverted materials
- residential kerbside collection of recyclables and residual waste
- organic waste recovery
- RTS operation for both domestic and commercial types of waste and diverted materials
- hazardous waste
- landfill disposal
- litter bin servicing and removal of illegal dumping

MPDC Transfer Station operating hours are 10:00am to 4:00pm on the following days:

- Matamata: Tuesday, Wednesday, Thursday, Saturday and Sunday
- Morrinsville: Monday, Tuesday, Thursday, Saturday and Sunday
- Waihou: Wednesday, Friday and Saturday

Each transfer station has dedicated public drop-off facilities for refuse, recycling, scrap metal, hazardous waste and green waste with Matamata also accepting clean fill and bagged silage wrap. The recyclables accepted include those collected as part of the kerbside recycling collection service.

4.1 Reduction

There are several programmes and initiatives that are in place in the Matamata-Piako district that encourage waste reduction. It should be noted that while programmes are listed under “reduction” initiatives, the programmes generally relate to all levels of appropriate waste management and minimisation behaviour, i.e. re-use, recycling, recovery, treatment, and disposal.

Council currently runs or supports several waste education and behaviour change programmes aimed at all levels of the community. It financially supports the:

- EnviroSchools programme facilitated by Waikato Regional Council. EnviroSchools aims to take a holistic approach to environmental education through planning, designing and creating a sustainable school. There are 10 active schools in the district.
- Zero Waste Education (ZWE) programme that teaches children about sustainable resources. They arrange school visits which aim to engage and educate children about waste management.
- Paper4trees Programme operated by the Environmental Education for Resource Sustainability Trust (EERST). This national school programme rewards schools with trees for recycling paper. It is acknowledged that this programme is focused on recycling rather than reduction.
- Love Food Hate Waste New Zealand programme run by WasteMINZ and funded by Territorial Authorities. This programme is focused on giving practical actions and information to New Zealanders wanting to reduce their food waste.

- Para Kore programme that delivers education and training on marae to increase the reuse, recycling and composting of materials.
- Transition Matamata local community group
- WasteMinz TA Forum
- A-Mark Direct – Rural schools

Council also makes use of social media, radio and print advertising to support key waste services messages.

4.2 Re-use

The MPDC approach to re-use is to support existing local and regional community based or private sector organisations that take second-hand goods for repair and resale. MPDC RTS do not have re-use shops.

Private organisations also offer the re-use of waste or diverted materials. For example, recovery of scrap metal and wood by skip bin operators.

Table 2 shows the opportunity shops in the district. There are also multiple options in neighbouring districts. In addition to physical stores there are also online options such as TradeMe.

Table 2 Matamata-Piako district opportunity shops

| Matamata | Morrinsville | Te Aroha |
|-----------------|--------------------|--------------------------|
| Hospice | Hospice | Salvation Army |
| The Op Shop | Red Cross | Good as New |
| Salvation Army | WORN | Fur-Get-Me-Not |
| Red Cross | Everybodys Op Shop | Opportunity Shop |
| Community Chest | | Mountain Railway Op Shop |

4.3 Recycling

This section outlines the available recycling services. It should be noted that over recent years the end to end recycling system has been significantly impacted by commodity price fluctuation due to China National Sword restrictions since 2018. This impacted the Eastern Waikato Shared Services Solid Waste Contract and the cost of recycling services. Nationally this has led to restrictions on the range of mixed plastics and mixed paper that is recycled, and in some cases, increased volumes of waste disposed to landfill. Covid-19 lockdown also impacted the processing of recyclables. Due to national messaging many local authorities are now dealing with higher levels of contamination in the recycling bins, which can impact the recycling service.

4.3.1 Recycling Services

There are several council services that cater for the diverted materials market within the district. These include the kerbside recyclables collections provided by contractors on behalf of MPDC, and recycling facilities at MPDC RTS.

In addition, some private waste companies offer commercial businesses recycling collection services. There is no data on the volumes captured or utilisation of private services.

4.3.2 Processing Facilities

There are no diverted material processing facilities in the Matamata-Piako district. MPDC uses facilities in neighbouring districts for the processing of material it collects. A summary list of known recycling/recovery facilities in neighbouring districts used by both the private sector and other councils are outlined in Table 3.

Table 3 Diverted material processing facilities outside Matamata-Piako district (excluding organics)

| Name/Operator/Owner | Type | Key service / waste stream | Location |
|---------------------------------|--|------------------------------------|--------------------|
| Smart Environmental Ltd | MRF and bulking station | Sorting and bulking of recyclables | Kopu |
| EnviroWaste Services Ltd | MRF | Sorting and bulking of recyclables | Hamilton |
| Visy | Materials Recycling Facility and glass furnace (previously OI) | Glass and other materials sorting | Onehunga, Auckland |
| Envirofert | Cleanfill | Clean plasterboard | Tuakau |
| South Waikato Achievement Trust | Dismantling site | Electronic waste | Tokoroa |
| SIMS Pacific | Scrap yard | Metals | Auckland |
| Oji Fibre Solutions | Materials Recycling Facility | Paper and card | Auckland |

4.3.3 Product Stewardship/Take Back Schemes

A summary list of known product stewardship schemes operating in New Zealand is outlined in Table 4.

| Product Stewardship Scheme | Service/Key waste stream |
|--|---|
| AgRecovery | Provides NZ farmers and growers with programmes for container recycling, drum recovery and collection of unwanted and/or expired chemicals. |
| Dell New Zealand | Take-back of Dell branded computer equipment. |
| Envirocon | Waste concrete (including potentially harmful liquids) is diverted from landfill and upcycled into value-added precast concrete products for the Interbloc Modular Wall System. |
| Exide Technologies | Take-back vehicle batteries. |
| Fuji Xerox Zero Landfill Scheme | Fuji Xerox remanufacture, reuse and/or recycle used equipment such as printers, photocopiers and printing consumables. Parts that cannot be reused are recycled. |
| Fonterra Milk in Schools recycling programme | Milk cartons (including straw and straw wrapper) are collected from schools participating in the programme. They are broken down into components (paper, aluminium foil and plastic) and recycled into roof tiles, books and paper. |
| Glass Packaging Forum | The forum connects businesses that sell glass-packaged consumer goods with those that collect and recycle glass. This helps to improve the quality and quantity of glass recycled. The aim is zero container glass to landfill. |
| HP New Zealand | Take-back of HP/Compaq branded computer equipment. |
| Interface ReEntry Programme | The scheme recycles used Interface carpet tiles into new carpet tiles and other products. PVC backed carpet tiles beyond their usable life are sent back to the original manufacturer in the US where they are stripped and remanufactured. |
| Plasback | Plasback collects and recycles agricultural plastics such as bale and silage wrap, and crop bags. The silage plastic is recycled into Tuffboard, a plywood replacement sheet that has many uses on farms. |

| Product Stewardship Scheme | Service/Key waste stream |
|--|---|
| Refrigerant recovery scheme | The Trust for the Destruction of Synthetic Refrigerants, also known as RECOVERY collects and responsibly disposes of refrigerants used in the refrigeration and air conditioning industries. |
| Resene Paintwise | Take-back of Resene branded paint and paint receptacles. User pays for non-Resene branded paint and paint receptacles. |
| RE:Mobile | The programme offers e-waste recycling for mobile phones and accessories. Unwanted mobile phones still in working order are sold for refurbishment and resale overseas while others are recycled. Proceeds from the scheme are donated to Sustainable Coastlines, an organisation which plants trees along waterways to restore habitats for native animals, reduce sediment and improve water quality. |
| Recovery Oil Saves the Environment (ROSE) | The used-oil recovery programme enables users, oil producers and regulators to responsibly collect, transport, use and dispose of used oil. |
| Soft Plastic Recycling Scheme | Soft plastic packaging is collected from participating stores and delivered to two NZ processors – Future Post in Waiuku and Second Life Plastics in Levin. The soft plastics are made into new products such as plastic fence posts, cable covers & garden edging. |
| Sharp Comprehensive Recycling and Waste Reduction Scheme | Sharp New Zealand aims to reuse and recycle 100% of its packaging materials, electronic products, equipment and obsolete and used parts. |

There are several other commercial organisations that will accept waste materials for recycling, though recycling is not their main function. For example, Hearing Aid batteries can be recycled through Pharmacies; EIS freely accepts residential eco-bulbs for recycling.

The Rubbish and Recycling pages on the MPDC Website detail how to reduce, re-use, recycle, recover, and dispose of waste in the district.

4.4 Recovery

The WMA defines recovery generally as the extraction of materials or energy from waste or diverted material for further use or processing, and this includes making waste or diverted material into compost.

MPDC currently runs or support services for the effective and efficient recovery of organic materials including:

- Encouraging home composting, bokashi or worm farming.
- All MPDC RTS have separate green waste facilities. The green waste is managed by the Waste Services contractor and is generally processed at Envirofert in Tuakau.

A summary of known organic waste operators is provided below in Table 5.

Table 5 Organic waste operators

| Name/Operator | Type | Key service / waste stream | Location |
|--------------------------------------|--------------------------------|---|---------------|
| Waste Management NZ Ltd | Green waste private collection | Green waste collection from 240 litre mobile bins (monthly pick up), medium skip bin (as required) and FlexiBins (weekly). | Hamilton |
| Redlid | Green waste private collection | Green waste collection from 240 litre mobile bins, 600L garden bags or 3,6 or 9 cubic metre skips (as required pick up) | Hamilton |
| Wheelie Bin Services Ltd | Green waste private collection | Green waste collection from 240 litre mobile bins (monthly pick up) and 4,7 or 9 cubic metre skip bin for compost collection (as required). | Waharoa |
| Enviro Waste Services Ltd | Composting Facility | Green waste, food Wastes | Hampton Downs |
| Envirofert | Composting Facility | Green waste, food wastes | Tuakau |
| Waste Management NZ Ltd/Living Earth | Composting Facility | Green waste and food wastes | Tirohia |
| TCDC | Trial facility - composting | Green waste, biosolids | Whitianga |
| Wilson Sand | Composting Facility | Green waste | Matamata |

4.5 Treatment and Disposal

4.5.1 Hazardous Waste

Hazardous Waste facilities are located at each MPDC RTS for the collection of domestic quantities for a fee. When required, the collected chemicals are neutralised and treated by a professional chemical contractor. It is noted that these facilities are not well used, and further investigation is recommended to learn where the hazardous waste in the Matamata-Piako district is going.

4.5.2 Landfills

Waikato Regional Council regulates landfills and closed landfills. There are three closed landfills located in Matamata, Waihou, and Morrinsville, there are no active Class 1 Landfills in the district. All municipal solid waste from the three MPDC RTS is disposed to the Class 1 Tirohia Landfill in the Hauraki district. Tirohia is privately owned and operated by Waste Management NZ Ltd and has a landfill gas capture system. Captured gas is used to generate power. Tirohia is expected to meet the Matamata-Piako district's residual waste needs until the end of its consent in 2035.

In addition to Tirohia landfill, the Hampton Downs landfill in Waikato district is also a Class 1 landfill that could take MPDC's tonnage.

4.5.3 Litter Bins

MPDC operates a network of litter bins for the disposal of waste while people are "out and about". Most of the litter bins are located in shopping centres, significant reserves and recreation areas. Kaimai Valley Services (KVS), the works division of MPDC, regularly collect the rubbish from these bins and deliver them to the RTS.

4.5.4 Fly tipping/Illegal dumping

Low amounts of illegal dumping or fly tipping of rubbish occurs in remote areas, recreational areas, abandoned properties and on roadsides. Rubbish can also be found dumped outside the RTS and piled up beside urban litter bins. Roadside rubbish is typically cleaned up by MPDC's roading contractors. Other illegal dumping sites are uplifted by KVS, and where applicable litter enforcement notices are issued.

As RTS fees increase (through ETS and Waste Levy Costs), it is possible that the incidence of illegal dumping will also increase, as people perceive that they cannot afford to appropriately dispose of waste.

The Department of Conservation and Waikato Regional Council also have responsibilities for illegal dumping. The extent of the problem of illegal dumping is not known, as each organisation records it differently. The issue of Freedom Campers was raised at a national level following tourism industry concerns of the anticipated increase in tourism numbers during the Rugby World Cup. Individual local authorities have implemented a range of bylaws, restrictions, and measures depending on the extent of the concern locally.

4.6 Regulation

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

Council operates in the role of regulator with respect to:

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

The WMA requires that Council review their waste bylaws every five to ten years. Waste-related bylaws must not be inconsistent with a council's WMMP which is reviewed every six years. Table 6 summarises the current scope of the solid waste bylaw in the district.

Table 6 Solid waste bylaw – Matamata-Piako district

| Bylaw | Bylaw came into force | Purpose |
|--------------------------|-----------------------|---|
| Solid Waste Bylaw | 2017 | Purpose is to support: <ul style="list-style-type: none"> • The promotion and delivery of effective and efficient waste management and minimisation in MPDC as required under the WMA 2008 • The implementation of Council's WMMPs • The purpose of the WMA and the goals of the NZ Waste Strategy • The regulation of the collection, transport, and processing of waste • The protection of the health and safety of waste collectors, waste operators and the public • The management of litter and nuisance in public places. |

There is scope to review the existing Solid Waste Bylaw to ensure it covers wider waste issues such as:

- Consent to collect household waste
- Ban on identified waste streams to landfill
- Collection requirements
- Facility requirements

The Waikato Regional Council also has responsibilities and powers as regulator and statutory obligations.

5 Future Growth and Demand for Waste Services

The future demand for waste services will be influenced by a number of key drivers including:

- demographic change, e.g. population, household changes
- change in commercial and industrial activity/economic conditions
- land use changes
- impact of waste flows from other districts
- consumption patterns and product quality
- the occurrence of natural disaster events
- national policy and legislation, e.g. product stewardship schemes, waste levy changes, ETS changes
- impact of waste minimisation behaviour change programmes
- community expectation.

In taking the above demand drivers into account it is noted that there will be continued pressure on existing waste management and minimisation infrastructure and services. While there is adequate landfill disposal capacity in the medium to long term future, it is the MPDC's desire to improve its capacity to divert waste.

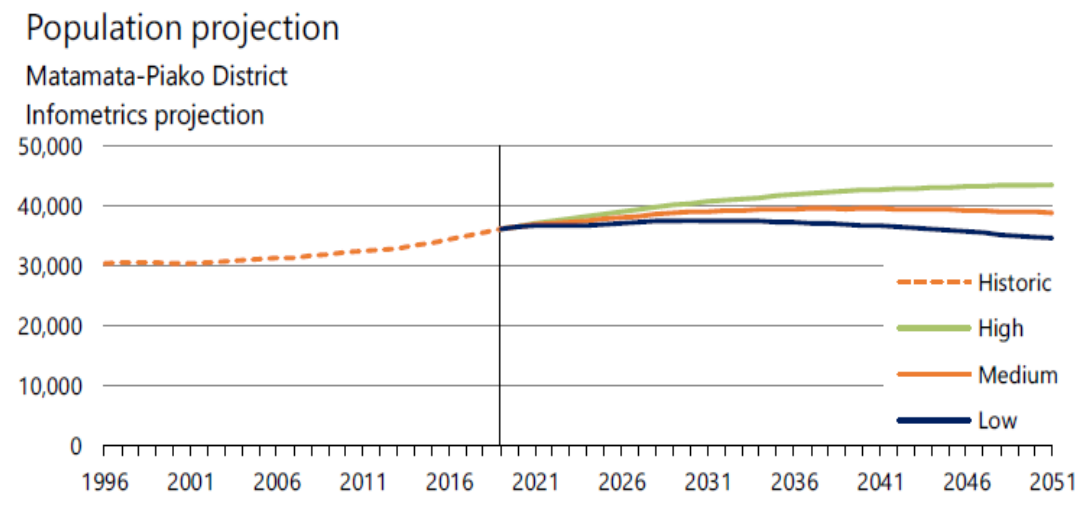
Although there is low projected population growth there will be some increasing demand over time on MPDC's kerbside collection services. These demands can be met through expansion of fleet and collection routes and the existing transfer stations.

5.1 Demographics/population change

A key factor affecting future demand is population growth. Figure 18 graphically displays different growth scenarios, and the medium projection has been adopted for 2021 LTP purposes. The Matamata-Piako population has grown by an average of 1.5% over recent years. This steady growth is expected to continue in the short term but slow further over a 20-year period. The local population trends are:

- Some growth is expected to be driven, at least in part, by intensification and the increased development of multi-unit dwellings (MUDs) which are likely to require special waste services.
- Population growth in urban areas of MPDC is expected to be more likely single dwellings with standard kerbside collection services.
- Our population aged 65+ years is growing. This is likely to result in more specialised retirement villages, perhaps similar in intensity levels to MUDs. Resource consent applications received by MPDC show that these types of developments are on the rise in Matamata, for example the Long Islands retirement complex.

Figure 18 Matamata-Piako Predicted Population Growth



Source: Infometrics projection (2019)

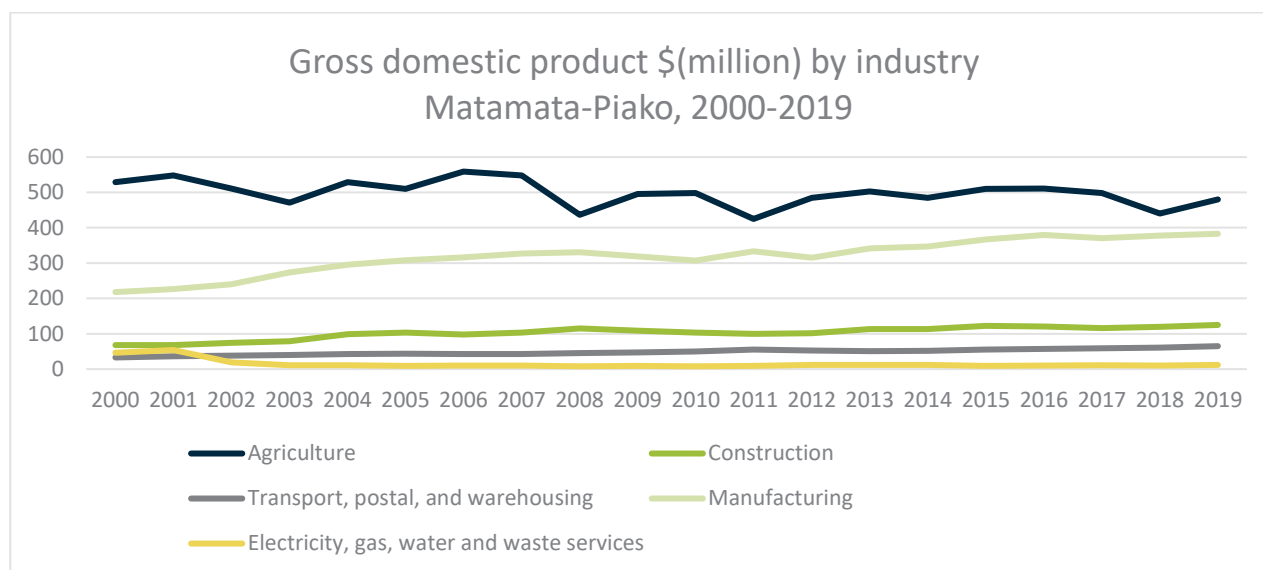
5.2 Commercial and industrial economic activity

The other factor that has a large determinative effect on the volume of waste produced is industrial activity and economic conditions as measured by the Gross Domestic Product (GDP). In 2019, the Matamata-Piako district GDP represented 0.7% of New Zealand's GDP, valued at \$2.1 billion. Key points include:

- From 2009–19, Matamata-Piako's economy increased 17.6% (national increase was 28.5%)
- The 2009–19 increase was primarily driven by dairy product manufacturing and agriculture
- In 2018, Matamata-Piako's GDP decreased 0.8%, driven by decreases in agriculture (primarily dairy cattle farming)
- In 2019, Matamata-Piako's GDP increased 4.1%, driven by increases in agriculture (primarily dairy cattle farming).

Figure 19 shows the growth by industry of key sectors in the Matamata-Piako district since 2000. Manufacturing shows steady growth while Agriculture is more variable.

Figure 19 MPDC historical economic growth by industry 2000-2019



5.3 Land use changes

In general, there has not been any significant changes in land use or industry that affect the demand for waste services. The district continues to have a strong agriculture industry. Tourism activity has been strong within the district; however this was impacted by Covid-19 in 2020, but the impact is expected to be short term. There is an ongoing trend of more lifestyle developments across the district, however this is not significant with population projections not increasing significantly.

5.4 Waste from other areas

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

MPDC collaborate with neighbouring councils in setting fees and charges and all landfill disposal and processing is outside of the Matamata-Piako district.

5.5 Community Expectation and Consumer behaviour

If waste minimisation objectives continue to be important to the community, demand will continue for kerbside collection of recyclables and there will be increased demand for the collection of other recoverable materials as well as the associated processing infrastructure. There may be increasing pressure on existing resource recovery centres to expand their capacity and, if these objectives are to be met, there is likely to be a need for RTS not currently providing recovery services to develop their operations.

A key strategy to achieve diversion targets is the development of resource recovery facilities at RTS where a great proportion of reusable and potential divertible material is captured. There is the opportunity for local circular economy businesses to co-locate at the RTS sites to support this diversion.

Consumer behaviour is a key driver for household waste generation in particular. OECD research indicates that there are a number of factors that influence household waste generation including:

- family composition, e.g. household numbers and children
- household income and size
- attitude toward the environment and recycling
- presence of volume-based charging systems for waste
- frequency of waste collection
- technological shifts and product supply changes
- increased product packaging
- presence of infrastructure and services to enable resource recovery.

These issues are the target of a range of council and government policies and programmes, both at a local and national level. Although contributing factors such as family size and household income are difficult to influence, there are positive correlations between attitude toward the environment and waste generation that can be influenced.

Other important factors are the presence of volume-based charging systems, such as user-pays schemes and other economic disincentives such as waste levies.

Another example of how these factors can be influenced is through the establishment of product stewardship schemes for priority products. There are a number of local 'community-based social marketing' programmes that have arisen over the last decade, including several of them implemented as part of MPDC's waste minimisation education programmes. These policies and programmes have the common aim of reducing waste generation at a household level by targeting influencing factors.

MPDC ran a community consultation programme in 2020 which has helped to understand community views relating to solid waste services (<https://www.mpd.govt.nz/have-your-say/solid-waste>). In summary the community supports:

- a vision to become a zero-waste community by 2038
- a move to rates funded 80L refuse bin collected weekly
- continued provision of recycling collections
- the development of resource recovery centres in Matamata and/ or Morrinsville and maintaining the Waihou (Te Aroha) transfer station

There was not strong support for a food scrap bin collected weekly.

5.6 Natural and man-made disasters

Natural and man-made disasters apply a different pressure upon waste services and other inter-related services. The earthquakes in Christchurch, the Covid-19 pandemic, and China's National Sword Policy re-emphasise the need for planning. Lessons can be learnt from these events to assist in preparing for future events in the Matamata-Piako district.

5.7 National policy and legislation

Central Government has an important role to play in driving waste minimisation across the country, including in the Matamata-Piako district. National policy will always influence the demand for waste services. Councils can advocate for changes at a national level, that then support local waste minimisation efforts, through active participation in consultation processes. By participating in consultation, MPDC can ensure that Matamata-Piako-specific considerations are factored into national legislation. There are several policy and legislation changes being considered in the short term including:

- priority products, product stewardship schemes and a container return scheme
- waste levy increases and the Emissions Trading Scheme (ETS)
- response to China National Sword
- response to Covid-19's effect on the national economy

Legislation such as the WMA contains a range of mechanisms aimed at reducing waste to landfill, such as the waste levy and product stewardship provisions. While some of these were discussed in Chapter 2, they are assessed further here with respect to their implications on future demand and as demand management strategies.

5.7.1 Priority products, product stewardship schemes and a container return scheme

Product stewardship relates to a process through which those involved in the lifecycle of a product or service are involved in identifying and managing its health, safety and environmental impacts from the development and manufacture of a product through to its use and final disposal.

For example, there are many products that are difficult or hazardous to dispose of, yet the industry takes no responsibility for ensuring final disposal of the product. Schemes are often required to allow for disposal costs to be added to a product, such as in 'take back' or 'deposit refund' schemes, which work well in some countries for products such as tyres or containers.

Other issues stem from the rapid nature of technological change and thus obsolescence of some products, even before the end of their usable life.

While product stewardship schemes in New Zealand accredited under the WMA are likely to focus on minimising waste, they may also reduce other environmental impacts during the product's lifecycle. Some schemes may work to ensure a product is disposed of properly or recycled, while other schemes may work to make changes in the design of a product to reduce the use of toxic material. This would likely reduce both the environmental impact of manufacturing and make recycling easier.

The WMA provides for regulations to be developed in relation to the priority products that are identified by the Government. The Government recently identified the following proposed priority products:

- 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)

MPDC will continue to support national and local product stewardship schemes and advocate to see schemes developed that support local waste diversion initiatives. MPDC will continue to collaborate with neighbouring Councils to develop and support waste diversion initiatives.

The Container return scheme will potentially impact the kerbside recycling service.

5.7.2 Waste Disposal Levy Increase and Emissions Trading Scheme (ETS)

Aside from the product stewardship provisions of the WMA, it also contains Waste Disposal Levy provisions which, as discussed in Chapter 2, will provide funding to promote waste minimisation initiatives and if increased over time will provide a disincentive to landfill waste. It is likely that the waste levy will be increased significantly over this WMMP planning cycle with final ratification of the Government's proposed increases expected in late 2020. Once ratified, the Waste Disposal Levy will increase from \$10 per tonne to \$60 per tonne and extend its application to other types of landfill (but at a lower cost per tonne).

The large increases in levy rates and ETS costs are expected to reduce demand for landfill services and increase demand for recycling and waste diversion. They may also increase the need for enforcement to address illegal dumping.

Proposed increases in the waste levy are occurring at the same time as measures are being implemented to increase ETS costs. Increased ETS price and reduction in availability of NZ Units in the ETS is anticipated in this WMMP planning cycle. The cap on the price of NZ Units is expected to increase from \$25 per tonne to \$50 per tonne. The subsequent increase in waste disposal cost will be specific to a particular landfill. Indicatively ETS costs may increase from \$5-15 per tonne to \$10-30 per tonne. These changes are also expected to increase demand for recycling and waste diversion.

5.8 China National Sword

The imposed restriction on the quality of recyclable material accepted by China has had a global impact on the market and revenue for recyclables, particularly mixed plastic and mixed paper. The significant reduction in commodity prices and difficulty in finding stable markets has led to changes to recycling collection and processing services. This includes limiting the types of some materials collected, removing glass from mixed collection services, and a focus on reducing contamination through the end-to-end process. Over recent years, including during the pandemic, some recyclables previously diverted from landfill have been cleanfilled or landfilled with no cost-effective available alternative.

For this situation to change Government needs to take leadership on the issue and remove non-recyclable plastics from the market. Due to affordability and logistical reasons it is currently difficult to implement effective measures at a district level.

5.9 Projected waste volumes

Over recent years there has been an increase in waste to landfill in the Matamata-Piako district (see Chapter 3 for more analysis). The key factors that influence this are the high proportion of residents and businesses that choose to use a private collection service, disruption to recycling markets and the range of products that can be diverted, and the prevailing economic conditions. While there has been a focus to divert material from landfill from domestic sources, this has not translated into industry and commercial sources. Chapter 3 also discussed the fact that significant diversion potential still exists. Covid-19 has had an impact on the economy and tourism however the agriculture sector remains stable. Overall waste volumes are expected to remain stable unless investment in infrastructure and services impacts volumes. The biggest impact will be if MPDC changes how the service is provided and funded, and the proportion of waste collected by MPDC versus the private sector.

Figure 20 provides actual and projected waste volumes to landfill and diversion volumes, based on different levels of MPDC intervention in MPDC provided services.

For the purposes of the projection the total diverted material figure for 2019/20 was increased by using the average greenwaste tonnage for the last four years (1,386 tonnes) instead of the actual tonnes collected (685 tonnes) which gives a status quo diversion percentage of 42% instead of the actual of 38%. This recognises that the greenwaste figure for 2019/20 was likely low due to extra decomposition occurring while collection was delayed during the COVID-19 period from February to May 2020.

The scenarios modelled are:

- Status quo – no change to services or programmes (42% of total MPDC Kerbside and RTS services material diverted 2019/20)
- Enhanced status quo – minor changes to services, increased education to increase the diversion of recyclables, minor improvements at RTS (increasing to 49% of total MPDC Kerbside and RTS services material diverted from 2023/24)
- Advanced status quo – significant investment into new services and facilities to support greater diversion (increasing to 60% of total MPDC Kerbside and RTS services material diverted from 2022/23)

Further description of options to support waste diversion are provided in Chapter 7.

Figure 20 Projected waste volumes



The projected waste volumes shown above illustrate the expected change in kg/capita/year based upon three different options that could be introduced from 1st July 2023.

The status quo will not result in any improvement in MPDC achieving its vision and targets. However, the enhanced or advanced options show a significant opportunity to reduce the amount of waste sent to landfill (and a corresponding amount of waste diverted per capita).

Under the enhanced option landfilled waste is expected to reduce over the period of the plan from the expected 2020/21 level of 150kg per capita to 131kg per capita. Diverted material is expected to increase from the expected 2020/21 level of 107kg per capita to 126kg per capita.

Under the advanced option landfilled waste is expected to reduce over the period of the plan from the expected 2020/21 level of 150kg per capita to 103kg per capita. Diverted material is expected to increase from the expected 2020/21 level of 107kg per capita to 154kg per capita.

The projections above are based on MPDC's current RTS and kerbside collection services tonnage and an average greenwaste figure as mentioned above (noting that not all households use the MPDC service). If there is a future increase in use of MDPC kerbside services, then the potential divertible tonnage will likely increase.

6 Council's Future Planning Framework

6.1 Where do we want to be?

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

The reason for discussing MPDC's vision and targets is to provide a sense of direction when scoping the options. It is difficult to scope what options might be needed if there is no consideration for the outcomes desired. The vision and targets discussed in this Waste Assessment have been derived from looking at the MPDC's proposed WMMP and LTP and Asset Management Plan.

6.1.1 Vision

MPDC has an aspirational vision of 'Zero waste 2038, working towards a low-waste future and a circular economy'.

6.1.2 Goals and Objectives

G1: A community committed to minimising waste sent to landfill

- Provide sustainable services that are cost-effective to the community as a whole.
- View waste as a resource, improving and modifying collections and facilities so that more materials and products can be diverted from landfill.
- Prioritise waste reduction, reuse, recovery and recycling initiatives that align with other council objectives.
- Promote, encourage, and emphasise reduction, reuse and recycling.
- Remove or reduce barriers that are preventing the community make best use of existing services and any potential new services.

G2: A community that considers, and where appropriate implements, new initiatives and innovative ways to assist in reducing, reusing and recycling wastes

- Process and manage waste locally, or within the district, wherever feasible and cost-effective.
- Investigate and implement new services, facilities, or other initiatives that will increase the amount of waste reduced, reused, or recycled.
- Investigate the feasibility of developing community resource recovery centres for bulky goods, e-waste, rural waste and other waste streams to 'future-proof' our Refuse Transfer Stations.
- Consider the Circular Economy in making any decisions.

G3: Minimise environmental harm and protect public health

- Ensure the reduction of environmental harm is understood from a holistic perspective that incorporates tikanga and mātauranga Māori (indigenous knowledge) as an important component of sustainable practices.
- Consider the environmental impact and public health implications of all waste management options and choose those that are cost-effective to the community, while also protecting environmental and public health.

6.1.3 Targets

Proposed targets are:

- Proportion of waste diverted (recycling or composted) from transfer station and kerbside recycling collection service
 - 45% or more of the total waste diverted from landfill.
- A 30% decrease in organic waste going to landfill by 2025
- Total quantity of kerbside household waste sent to landfill
 - Reduction of 1% per person per year (from previous year).
- A minimum of 5 new waste minimisation services are implemented before 2025 (i.e. e-waste, batteries, etc).

6.2 Matamata-Piako Specific Issues

Having reviewed progress against the previous WMMP Action Plan and considering the change in waste quantities since the last WMMP, Council have identified the following issues that need to be addressed in the next WMMP:

1. Increasing waste to landfill

The volume of waste disposed to landfill in the Matamata-Piako district has been increasing. MPDC has limited influence over the quantity of waste disposed as the majority of residents and businesses use private sector refuse services (bins) rather than the MPDC refuse bag service. Private sector bins contain a higher proportion of potentially divertible material (such as glass) than MPDC refuse bags.

2. Decline in diverted material

Recent disruption to recycling markets has impacted the range of materials collected for diversion from landfill. This has impacted the cost of the service and the achievement of diversion targets.

3. High volume of divertible material disposed through RTS

Readily recoverable dry recyclables, construction and demolition waste, organic and re-usable items are disposed at RTS by mostly residential customers, when they could be reduced, re-used, or recycled with more options to separate waste streams at RTS.

4. High volume of organic waste going to landfill

While green waste is separated at the RTS, there is currently no separate organic collection and processing service offered by MPDC and low resident preference for an organic kerbside collection service. There are nearby organic processing facilities available that MPDC could utilise if a collection service were introduced.

5. Cost and volume uncertainty due to legislation change

Significant national regulation changes are likely to occur in this WMMP planning cycle. These include an increase in the Waste Disposal Levy, and an increase in price and reduction in availability of NZ Units in the Emissions Trading Scheme. The possible introduction of a container return scheme and other product stewardship schemes may impact recycling bin composition and RTS waste composition. These changes may impact the range and type of services offered by MPDC.

These issues are relevant to the options discussed in Chapter 7.

7 Options Assessment

This chapter reviews the practicable options available to meet the forecast demand for waste management and minimisation services in the Matamata-Piako district and addresses district specific issues.

Table 7 below expands on the district-specific issues listed in Chapter 6 and presents options that MPDC could introduce to address those issues. The options cover education, regulation and service provision. The options are then assessed for alignment with waste minimisation targets, costs and ease of implementation. Several options are recommended to be included in the WMMP for consultation with the community.

7.1 Kerbside options

Enhanced Status Quo

- Provide a MPDC kerbside rates funded refuse bin service to restrict disposal volume (size and/or frequency).
- Extend MPDC's kerbside collection service to more rural households and to businesses. (not recommended but extent of current urban collections will be reviewed)

Advanced Status Quo

- Provide a separate organic collection service, for green waste, kitchen waste or both to urban households. (not community preference but options will be reviewed)

7.2 RTS options

Enhanced Status Quo

- Provide additional education and staff at RTS.

Advanced Status Quo

- Upgrade existing RTS to resource recovery centres with more diversion options offered, adjust layout and charging to promote diversion over disposal.

Table 7 Options Assessment

| Issue | Description | Approach | Options | Increased diversion | Cost | Ease of implementation | Commentary | Recommended option for WMMP |
|--|---|-----------|--|---------------------|--------|------------------------|--|-----------------------------|
| 1. Increasing waste to landfill | <p>The volume of waste disposed to landfill in the Matamata-Piako district has been increasing.</p> <p>MPDC has limited influence over the quantity of waste disposed as the majority of residents and businesses use private sector refuse services (bins) rather than the MPDC refuse bag service.</p> <p>Private sector bins contain a higher proportion of potentially divertible material (such as glass) than MPDC refuse bags.</p> | Influence | 1.1. Encourage residents to use the MPDC diversion service to reduce waste to landfill. | Low | Low | Simple | Review communication strategy and promotion of MPDC solid waste services. | Yes |
| | | | 1.2. Establish a business waste minimisation programme to advise business on ways to reduce waste. | Low | Low | Relatively simple | Lead initiatives to promote the establishment of business waste minimisation programmes. | Yes |
| | | | 1.3. For rural waste, adopt a proactive and collaborative approach working with Waikato Regional Council, Ministry for the Environment and private sector parties, such as AgRecovery and Federated Farmers, on farm waste management to address the potential for harm to the environment and adverse community health effects. | Medium | Low | Simple | Look to adopt NZ Rural Waste Minimisation Project guidelines and work with the industry to improve farm practices. This would include providing information on disposal options from recognised good practice disposal operators. | Yes |
| | | Regulate | 1.4. Enforce the current bylaw and advocate for Waikato Regional Council to enforce regulations | Medium | Medium | Relatively simple | <p>The current bylaw encourages the separate of refuse, recycling and organic and the licensing of waste operators but may not be fully enforced. The Waikato Regional Council has regulations to protect the environment and managing the burning and disposal of waste but may not be actively monitored and enforced.</p> <p>The major commercial waste operators offer private recycling and organic services, however, these may not necessarily be offered within the Matamata-Piako district.</p> <p>The enforcement of licenses and requirement to separate materials may have a degree of opposition. However, the current bylaw and Waikato Regional Council regulations should be monitored and enforced.</p> | Yes |
| | | | 1.5. Review the effectiveness of the current bylaw in supporting waste diversion and protecting the environment from harm and implement changes. | Low | High | Complex | The introduction of new bylaws can be complex and time consuming to implement. This option would have compliance monitoring and enforcement costs that would need to be funded. | No |
| | | | 1.6. Restrict or ban specific types of waste in kerbside rubbish collection bins. | Medium | High | Complex | Bans on particular materials can be difficult to implement. | No |
| | | | 1.7. Implement better data reporting aligned to the National Waste Data Flow standard. | Low | Low | Relatively simple | Improved data provides better understanding of total discarded volumes both domestic and commercial which helps to set realistic strategic objectives and policies. MPDC is required to hold and report against accurate and reliable data. | Yes |
| | | Service | 1.8. Provide a MPDC kerbside rates funded refuse bin service to restrict disposal volume (size and/or frequency). | Medium | Medium | Relatively simple | <p>Restricting the volume of kerbside refuse bins would encourage residents to use diversion services and alternatives.</p> <p>Recent consultation indicates strong support for a MPDC rates funded kerbside refuse bin service. The timing of a change in refuse collection services will need to align to a change in waste service contract (2023).</p> <p>Although a universal MPDC service is likely to be cheaper than private collection services due to the economies of scale, it would increase the cost of MPDC rates (which should be offset by a reduction in private bin or refuse bag costs) and reduce customer choice in collection service provider.</p> | Yes |
| | | | 1.9. Extend MPDC's kerbside collection service to more rural households and to businesses. | Medium | High | Complex | It is unlikely to be cost-effective to provide services to all rural residents due to the distances between properties. Some rural roads are not suitable for MPDC collection vehicles. Rural households often have alternative arrangements in place for their waste disposal and do not want a kerbside collection service. | No |

| Issue | Description | Approach | Options | Increased diversion | Cost | Ease of implementation | Commentary | Recommended option for WMMP |
|--|--|-----------|---|---------------------|--------|------------------------|---|-----------------------------|
| | | | | | | | Business customers often require additional capacity to that offered by the MPDC service and have access and storage limitations at their premises. Bespoke arrangements are often required, with these better suited to private service providers. | |
| 2. Decline in diverted material | Recent disruption to recycling markets has impacted the range of materials collected for diversion from landfill. This has impacted the cost of the service and the achievement of diversion targets. | Influence | 2.1. MPDC will promote and support resilient end to end recycling options and local circular economy initiatives. | Low | Low | Relatively simple | Lead initiatives to promote local circular economy initiatives and resilience recycling. This includes any legislative changes such as the Container Deposit Scheme. | Yes |
| | | | 2.2. Continue to promote waste minimisation consumer behaviour. | Low | Low | Simple | Continue to fund and promote waste education programs that encourage waste minimisation behaviour | Yes |
| | | | 2.3. Work with recycling processing facility operators to improve sorting capability and increase market availability and price for recycling products | Medium | Medium | Complex | Work with local and regional recycling processing facilities to understand what can be done to improve recycling systems | Yes |
| 3. High volume of divertible material disposed through RTS | Readily recoverable dry recyclables, construction and demolition waste, organic and re-usable items are disposed at RTS by mostly residential customers, when they could be reduced, re-used, or recycled with more options to separate waste streams at RTS. | Influence | 3.1. Provide advice to customers at the RTS to encourage diversion. | Medium | Low | Relatively simple | Embed initiatives that support the waste hierarchy (reduce, reuse, recycle) so when economic growth occurs end to end systems are in place to support waste diversion and beneficial use, instead of disposal. This could include the provision of an education service at existing RTS that encourages users to recover rather than dispose of discard material and would therefore be relatively simple to implement. | |
| | | | 3.2. Provide information to customers about where to take reusable items, such as bulky items, C&D items, Ag Recovery items, and organics rather than dispose at RTS. | Medium | Low | Relatively simple | Promote existing local and regional facilities that divert discarded material including local industry, business, and charitable trusts. | Yes |
| | | | 3.3. Advocate and support government circular economy initiatives and promote priority product stewardship schemes. | Medium | Low | Relatively simple | Continue to support circular economy and priority product stewardship schemes | Yes |
| | | Service | 3.4. Upgrade existing RTS to resource recovery centres with more diversion options offered, adjust layout and charging to promote division over disposal. | Medium | High | Complex | Due to potentially high capital cost further investigation into viable options is required. Could involve minor changes to existing RTS or more comprehensive improvements to facilities. Further analysis of specific waste stream diversion is required, such as organic material, construction and demolition, farm waste product stewardship initiatives. | Yes |
| | | | 3.5. Upgrade the current weighbridge software and hardware to support the accurate recording of waste and diversion volumes. | Low | Medium | Relatively simple | MPDC needs to record accurate and reliable information in relation to discarded materials. The software and codes should align to the National Waste Data Flow standards for ease in reporting. | Yes |
| 4. High volume of organic waste going to landfill | While green waste is separated at the RTS, there is currently no separate organic collection and processing service offered by MPDC and low resident preference for an organic kerbside collection service. There are nearby organic processing facilities available that MPDC could utilise if a collection service was introduced. | Influence | 4.1. Promotion of the use of organic waste separation and utilisation of existing regional processing facilities and home / farm composting. | Low | Low | Relatively simple | MPDC can support industry groups and key stakeholders to drive initiatives that derive the most beneficial use from a range of organic material. MPDC can continue to support education programs for residents to reduce food waste and home compost. Continue existing education programs such as “Love Food Hate Waste NZ”. Lead initiatives to promote waste reduction and separation of food waste from local businesses. | Yes |
| | | Service | 4.2. Provide a separate organic collection service, for green waste, kitchen waste or both to urban households. | High | High | Relatively simple | A kerbside collection service would significantly increase opportunities for diversion of organic material particularly food waste. Recent consultation indicates low preference for this option. Full cost benefit analysis required as to whether this is an appropriate response (this option to be consistent with outcome of MfE collection service review). | TBC subject to consultation |

| Issue | Description | Approach | Options | Increased diversion | Cost | Ease of implementation | Commentary | Recommended option for WMMP |
|---|--|-----------|--|---------------------|--------|------------------------|--|-----------------------------|
| | | | 4.3. Extend the separate organic collection service to businesses and rural households | High | High | Relatively simple | It is unlikely to be cost-effective to provide services to all rural residents due to the distances between properties. Some rural roads are not suitable for MPDC collection vehicles. Rural households often have alternative arrangements in place for their waste disposal and do not want a kerbside collection service. Business customers often require additional capacity to that offered by the MPDC service and have access and storage limitations at their premises. Bespoke arrangements are often required, with these better suited to private service providers. | No |
| 5. Cost and volume uncertainty due to legislation change | Significant national regulation changes are likely to occur in this WMMP planning cycle. These include an increase in the Waste Disposal Levy, and an increase in price and reduction in availability of NZ Units in the Emissions Trading Scheme. The possible introduction of a container return scheme and other product stewardship schemes may impact recycling bin composition and RTS waste composition. These changes may impact the range and type of services offered by MPDC. | Influence | 5.1. Advocate for changes, providing a MPDC perspective. | Low | Low | Relatively simple | Continue to contribute to national and district policy development, advocate to ensure MPDC issues are addressed and are reflected in legislation changes. | Yes |
| | | | 5.2. Continue to work collaboratively on regional initiatives. | Low | Low | Relatively simple | To effectively manage risks associated with change and uncertainty MPDC needs to continue to work collaboratively with neighbouring Councils and the Waikato Regional Council to support any regional initiatives | Yes |
| | | Regulate | 5.3. Review bylaws to make sure they are consistent with national legislation. | Low | Medium | Simple | Continue to review district solid waste bylaws and policies to ensure they are consistent with National guidelines and legislation. This would apply following the introduction of a national collection standard or container return scheme. | Yes |
| | | Service | 5.4. Review services and facilities to minimise the cost impact. | Low | Low | Relatively simple | Continue to review the services that MPDC provides. As cost of landfill disposal increases, look to introduce additional diversion options to reduce the cost impact. Provide district facilities and consistent services that support the cost-effective diversion of material from landfill, options outlined above. | Yes |

8 Statements of Proposal

In looking at options for meeting future demand MPDC will continue with their current waste minimisation actions (i.e., the status quo) including the continued support and provision of educational programmes. MPDC will also continue to support existing waste minimisation and resource efficiency initiatives, advocate to government for change, maintain the existing transfer station facilities and collaborate with other councils to promote waste management and minimisation.

The Tirohia Landfill along with other regional consented landfills is expected to meet the Matamata-Piako district's long term residual waste disposal needs.

MPDC will review and implement the options to address Matamata-Piako district specific issues. In addition, MPDC propose to continue providing the following waste management and minimisation services:

8.1 Reduce

- MPDC will continue to provide a variety of communication, education and behaviour change programmes targeted toward schools, businesses, the wider community and Council's own activities.

8.2 Re-use

- MPDC will continue to promote re-use opportunities, e.g. through website directory of re-use companies and investigate upgrading MPDC's RTS to resource recovery parks which could include repair and reuse activities.

8.3 Recycle

- MPDC will continue to provide, and in some cases extend, kerbside recycling services to selected properties, both residential and business dwellings.
- MPDC will continue to provide access to public recycling centres distributed throughout the district.
- MPDC will continue to promote separation of recycling from waste and facilitate this at transfer stations with the purpose of increasing recycling rates at the facilities.

8.4 Recovery

- MPDC will continue to explore options to assess how organic materials can be better managed within the district.

8.5 Treatment

- MPDC will continue to promote responsible hazardous waste collection and disposal within the district and enable drop-off of hazardous waste at its RTS sites.
- MPDC will continue to promote product stewardship options for problem wastes such as agricultural chemicals and e-wastes and enable the use of MPDC's RTS for consolidation of material as part of any schemes established.

8.6 Dispose

- MPDC will continue to ensure a regular rubbish collection service is available to households and the public including access to the MPDC's RTS or drop-off facilities and ensure appropriate disposal at regional landfills.

8.7 Jointly or individually delivered waste services

The Eastern Waikato Councils provide similar services to their ratepayers and residents and currently have a shared waste services contract. A Section 17A review was completed in May 2020, which recommended the councils move away from shared contracts in future. Each individual council would take greater responsibility for strategy and policy with individual Waste Assessments and WMMP. When the existing shared services contract expires in 2023, the Section 17A review recommended that the councils undertake joint procurement for their new contracts, but that each council award and manage its own separate service contract. The Section 17A review also recommended that RTS operation be excluded from the joint procurement to enable each council to explore its own RTS operations arrangements, which could include greater use of in-house resources and community groups.

Broader regional waste services collaboration occurs in the Waikato region, with officers from the councils of the Waikato region meeting regularly to share knowledge and explore regional opportunities. Some education services are delivered at a regional level.

9 Statement of Public Health Protection

The draft Waste Assessment has to be sent for comment to the Medical Officer of Health for the district.

Comments received are included in Appendix A.

Appendix A Letter from Medical Officer of Health



28 January 2021

Niall A. Baker
Senior Policy Planner
Matamata-Piako District Council
P.O. Box 266
Te Aroha 3342

Dear Niall,

Thank you for the opportunity to comment on the draft Matamata-Piako District Council Waste Assessment November 2020, as per the requirements of Section 51(5)(b) of the Waste Minimisation Act 2008. We note the Waste Management & Minimisation Plan 2021-2027 (WMMP) is in draft and was also provided to show linkages between the two documents. We have reviewed the Waste Assessment with the view that recommendations made will also be considered for the new WMMP. It is noted that the findings of the Waste Assessment will support the solid waste content in the new WMMP.

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

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

We commend Council's aspirational vision of, 'Zero Waste 2038; working towards a low waste future and a circular economy'. This vision aligns with a public health perspective on waste management. Actions taken to minimise waste will minimise the impact of waste on the environment. Human health and the health of the environment are mutually interdependent.

We recognise one of Matamata-Piako District Council's (MPDC) goals for 'Zero waste 2038' is to minimise environmental harm and protect public health. This goal will help ensure that consideration of public health issues are incorporated into the Waste Assessment and WMMP.

The Waste Assessment notes that there was an increase in material discarded to landfill, with growth of 12% from 11,167 tonnes in 2015/2016 to 12,557 tonnes in 2019/20. While still meeting the target set in 2017, of 351kg per person by 2022, the waste per capita has been increasing. It is disappointing that the amount of diverted material has declined over the same period. We note the impact that COVID-19 may have had on waste diversion volumes over the past year.

We recognise MPDC's desire to improve its capacity to divert waste away from landfill. We support activities that may help with this, such as comprehensive diversion facilities being



available at all transfer stations as well as reuse shops. We support the MPDC objective to remove or reduce barriers that are preventing the community to make best use of services.

The Waste Assessment has identified that organic materials are a major contributor of waste to landfill in Matamata-Piako, with a large proportion of this being made up of kitchen/food waste. Currently there is no district infrastructure to recover kitchen and food waste. While there was not a strong support for a food scrap bin, we encourage this as a useful option to decrease the impact of contamination in the recycling bins. If introduced, it would be important that bin lids are able to be kept secure.

The Waste Assessment mentions anecdotal reports that many rural property owners make their own arrangements for waste disposal because the kerbside service is not readily available. These arrangements may include the use of farm landfills, or burning of waste. There is no further information presented about the amount of disposal of waste on farms. Poor disposal practices can lead to contamination of the environment from hazardous waste, with associated health risks. It is pleasing to see the recommendation for a proactive and collaborative approach to deal with farm waste management, working with Federated Farmers and Waikato Regional Council, among others. We encourage MPDC to actively seek information about rural farm waste streams, and to actively engage with farmers to identify and remove barriers to appropriate waste disposal.

It is pleasing to see an increase in the volume of hazardous material disposed of safely in 2019 and again in 2020. However, the Waste Assessment also notes that hazardous waste facilities located at MPDC Refuse Transfer Stations are not well used. We support further investigation into where the hazardous waste in MPDC is going. Contamination of land and water by unsafe disposal of hazardous waste poses a risk to public health.

We commend the Solid Waste Bylaw for the protection of the health and safety of waste collectors, waste operators and the public.

We acknowledge that consumer behaviour is a key driver for household waste generation. We support MPDC's waste minimisation education programmes to help reduce waste generation.

Once again, thank you for the opportunity to comment. The Waikato Public Health Unit recognises that effective waste management contributes to better health outcomes for the community. I hope that these comments will add to the utility of the Waste Assessment and be helpful in further development of the WMMP.

Kind regards,



Dr Richard Wall
Medical Officer of Health

Appendix B Legislation

The Waste Minimisation Act (WMA) 2008

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

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

Central Government has a waste programme to drive national waste sector improvements. Consultation is underway regarding priority products, and an increase in the Waste Disposal Levy and Emission Trading Scheme (ETS). Work is also underway to design a national Container Return Scheme and standardising kerbside collections in conjunction with national investment plans. The impact of these changes on future demand for waste services is discussed in Chapter 5.

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

Climate Change Response Act 2002 and the Climate Change Response (Zero Carbon) Amendment 2019

The Climate Change Response Act 2002 and 2019 amendment provides the basis for a New Zealand Greenhouse Gas Emission Trading Scheme (ETS). The Act requires landfill owners to purchase emission trading units to cover methane emissions generated from their landfill. Should any future solid waste incineration plants be constructed, the Act would also require emission trading units to be purchased to cover carbon dioxide, methane, and nitrous oxide emissions from the incineration of household wastes.

The legislative framework in relation to climate change continues to evolve with new legislation introduced in 2019. The impact of increased charges is covered in Chapter 5.

The Local Government Act 2002 (LGA 2002)

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

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

The LGA 2002 (Part 6, section 77) refers to legislative requirements for Territorial Authority decision-making,

including consideration of the benefits and costs of different options in terms of the present and future social, economic, environmental and cultural wellbeing of the district. Schedule 10 of the Act also includes requirements for information to be included in a Long Term Plan (LTP), including summary information about their WMMP.

The Resource Management Act 1991 (RMA)

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

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

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

In addition, the RMA provides for the development of national policy statements and for the setting of National Environmental Standards (NES). There is now a National Policy Statement on Renewable Electricity Generation, which is defined as 'generation of electricity from solar, wind, hydro, geothermal, biomass, tidal, wave, or ocean currents resources. This is also relevant to the Waste Assessment as organic and green waste can be defined as forms of biomass, and therefore a source of renewable electricity generation.

There is currently one enacted NES that directly influences the management of waste in New Zealand – the Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins, and Other Toxics) Regulations 2004 (the NES for Air Quality). 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 a source of energy. The result is increased infrastructure and operational costs for qualifying landfills, although with costs potentially offset by the harnessing of captured emissions for energy generation.

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

Other legislation

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

The Hazardous Substances and New Organisms Act 1996 (HSNO Act)

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

Hazardous substances may be explosive, flammable, have the capacity to oxidise, be toxic to humans and/or the environment, corrosive, or have the ability to develop any of these properties when in contact with air or water. Depending on the amount of a hazardous substance on site, the 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 councils include used oil, 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 district council or Territorial Authority may set more stringent controls relating to the use of land for storing, using, disposing of or transporting hazardous substances.

The Health Act 1956

The Health Act 1956 places obligations on Territorial Authorities (if required by the Minister of Health) to provide sanitary works for the collection and disposal of refuse, for the purpose of public health protection (Part 2 – Powers and duties of local authorities, s 25). It specifically identifies certain waste management practices as nuisances (s 29) and offensive trades (Third Schedule). The Health Act enables Territorial Authorities to raise loans for certain sanitary works and/or to receive government grants and subsidies, where available.

The Health Act provisions for the removal of 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 Litter Act 1979

The Litter Act provides Territorial Authorities with powers to create Litter Enforcement Officers or Litter Control Officers who have powers to issue infringement notices with fines for those who have committed a littering offence.

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

Councils use the Litter Act as a method for regulating litter and illegal dumping although the enforcement process is difficult and often unsuccessful. There have been very few successful prosecutions in New Zealand

under the Litter Act.

It is accepted that prosecuting litter offenders through the courts is not the most efficient way of dealing the litter problem as the fines imposed are not high enough to act as a deterrent and full costs are usually not recovered.

The Health and Safety at Work Act 2015 (HSWA)

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

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

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

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

Biosecurity Act 1993

The Biosecurity Act is administered by the Ministry of Primary Industries (MPI) and provides a legal basis for excluding, eradicating and effectively managing pests and unwanted organisms. The Act's powers can be used by MPI, other government agencies, regional councils, and pest management agencies, providing a range of functions, powers and options for managing risk organisms.

Civil Defence Emergency Management Act 2002

The Act encourages the coordination of emergency management, planning, and activities related to civil defence emergency management across the wide range of agencies and organisations preventing or managing emergencies under the Act. The Act is to improve and promote the sustainable management of hazards. Solid waste services need to be considered when planning and responding to an emergency.