



# TOWN OF VICTORIA PARK

## STRATEGIC WASTE MANAGEMENT PLAN 2018 TO 2023 (December 2021 Review)



**Prepared for**

**TOWN OF VICTORIA PARK**

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## Executive Summary

In 2008, the Town of Victoria Park (ToVP), in conjunction with the Mindarie Regional Council (MRC), developed a strategic waste management plan (*Strategic Waste Minimisation Plan 2008-2013, MRC 2008*). The 2008 SWMP set out a range of waste management related activities for the period 2008 through to 2013. The intention of this current SWMP is to review the ToVP progress since 2008 and set the strategic waste management direction and propose actions for the Town for the next five years (2018 to 2023).

As part of the ongoing management of waste within the ToVP, this SWMP is required to be reviewed and where necessary update during its validity period (2018 to 2023) to ensure that the Plan remains relevant to the current direction of waste management within the State, MRC and the ToVP. In December 2021 this SWMP underwent a review which is effectively a mid-term review of the July 2018 SWMP.

It is important to note that the ToVP is financed by the community and represents the community needs and aspirations. Waste is every person's responsibility, not just the responsibility of the Town. On an individual basis, we created the waste by our consumption so it is our responsibility to own it and to do something about it.

Waste management at a strategic level is about identifying and determining desirable outcomes, which can be achieved in a sustainable manner. Sustainability is a function of social, environmental and financial responsibility. The order of precedents of each of these sustainability factors varies depending on the waste management activity being considered.

From a strategic point of view, the ToVP, as with all local governments, has a relatively fixed financial ability within which to undertake all of its waste management activities. It is for the Town to achieve the maximum waste management efficiency and output within its financial ability. Ultimately, it is the financial sustainability that will influence the majority of the Town's waste management decision making.

At a national level, there is a National Waste Policy: *Less waste, more resources*, which was agreed by Australia environmental ministers in November 2009 and undated in 2018, including a National Action Plan published in 2019, sets Australia's waste management and resource recovery direction to 2030. While strategic direction in waste management at a State level is primarily determined by the Waste Authority, through the Minister for Environment.

Of the numerous Waste Authority initiatives set out in its annual Business Plans, there are many that are relevant to the ToVP and are consistent with the direction that the ToVP needs to progress in order to reduce the quantity of waste ending up in landfill. In addition, there are extensive opportunities for local community groups to access funding for the implementation of waste reduction programs. These become substantially more achievable if the community groups are actively supported by the ToVP.

The waste hierarchy is a means of ranking waste management options in order of their general environmental desirability. The *Waste Avoidance and Resource Recovery Act 2007* (WARR Act) includes a recommended waste hierarchy as a decision-making tool in formulating sound waste management strategies. There is however, no single waste management approach that is suitable for managing all waste streams in all circumstances. The ToVP is to be mindful of the waste hierarchy when considering various waste management systems and potential outcomes thereof.

With regards to the Town's past successes, the previous Strategic Waste Management Plan (2008 to 2013) identified 61 actions to be progressed during the five-year validity period of the plan. The majority of these actions were heavily reliant on the MRC, State Government and to a lesser degree industry; hence, beyond the direct control of the ToVP. The ToVP has achieved substantial gains in the quantity of waste material being recycled in comparison to its 2008 level of recycling. This has predominantly been in kerbside recycling and the processing of organic material from the green wheelie bins.

Going forward, there is an opportunity to achieve real improvements in the recycling of bulk waste, as there are existing commercial systems in place to undertake this activity. Beyond that, typically the large successes have been achieved and any further improvements in waste diversion will be more gradual and likely take greater effort and expense. Effectively, the "low hanging fruit" has been picked. As at the commencement of this current Strategic Waste Management Plan (2018 to 2023), the ToVP had achieved a recycling rate of 43.8%, this being the benchmark for the measurement of success going forward.

In late 2017 and early 2018, the Mindarie Regional Council (MRC) undertook a waste characterisation study across the region. This study concentrated on the content of the green bin in an attempt to identify the breakdown of the general waste so that future recycling activities could be focused on identified recyclable components within the general waste stream.

The waste audit results indicate that the ToVP has approximately 50% organic material within the general waste. Defining this as a recyclable material results in there being approximately 80% recyclable material in the Town's green wheelie bins and 20% non-recyclable material. Based on the MRC audit information, the Waste Authority Target of 65% recycling of municipal solid waste in the Perth Metropolitan area is an achievable outcome; however, this will take time to achieve.

In August 2021, the MRC ceased operation of the Neerabup Resource Recovery Facility, with all waste being diverted to landfill, which has significantly impacted on the ToVP ability to divert waste from landfill. Consequently, there is an urgent need for the implementation of an alternative solution for the processing of organic waste material.

There are a number of considerations within the waste management industry that have the potential to impact on the ToVP's progression towards improved waste diversion from landfill. Some of these are directly within the Town's control, while others are highly dependent on higher order authorities or other local government participation. The Plan covers a number of waste management considerations ranging from the ToVP involvement in the Mindarie Regional Councils, changes in waste collection systems, the impact of waste to energy through to community engagement.

In determining the waste management strategy for the Town, there is a need to consider the drivers that influence the decision-making process. Depending on the waste management initiatives being considered by the Town, the different drivers will have differing levels of importance when determining the benefit of each initiative. For the Town to plan its long-term strategic waste management initiatives, there needs to be a relatively firm overall direction established to guide decision-making. Over time, this overall direction will be subject to change as there are changes within the waste industry, such as Government direction and funding initiatives, new technology or new waste processing facilities.

Following the review of the previous strategic waste management plan, the degree of success in achieving the previously proposed activities, discussions with the ToVP, community consultation and based on an understanding of the requirements within the Town, the Plan lists a range of proposed activities for the period 2018 to 2023.

The proposed activities have been listed in order of priority; however, to provide some guidance on the potential timing of the proposed activities, they have been split into the first four years of the five-year plan, with the last year being available for the development of the new Strategic Waste Management Plan for the next five years, implementation of projects identified or partly completed in the previous years, continuous improvement and to undertake any activities that have been delayed or are lagging behind the proposed timeline.

In order to achieve success with regards to the proposed activities, it is essential that this Strategic Waste Management Plan be regularly reviewed. The review is primarily to gauge the Town's actual achievements against the proposed activities and to provide direction as to where the necessary effort is required in order to achieve the desired outcomes by the end of the Plan validity period. A secondary component of the review is to assess the validity of the Strategic Waste Management Plan direction in comparison to the Town's and the Waste Authority's direction. It is acknowledged that during the five-year validity period of this Plan, there is the possibility that some aspects of this Plan may lose relevance and may need to be amended to suit the latest Town or Waste Authority direction.

## 1. Introduction

The Town of Victoria Park (ToVP) has a population of approximately 37,000 people (MyCouncil website), covers an area of approximately 1,792 hectares or 17.92 km<sup>2</sup> and is located within the central Perth Metropolitan area. The ToVP is a participating member of the Mindarie Regional Council (MRC), a regional council consisting of seven participant local governments set up primarily to manage its participant's waste management requirements. Waste management has and continues to be a major focus for the ToVP, with this focus being on sustainable waste management practises.

In 2008, the ToVP, in conjunction with the MRC, developed a strategic waste management plan (*Strategic Waste Minimisation Plan 2008-2013, MRC 2008*). The 2008 SWMP set out a range of waste management related activities for the period 2008 through to 2013. The intention of this current SWMP is to review the ToVP progress since 2008 and set the strategic waste management direction and propose actions for the Town for the next five years (2018 to 2023).

It is important to note that the ToVP is financed by the community and represents the community needs and aspirations. Waste is every person's responsibility, not just the responsibility of the Town. On an individual basis, we create the waste by our consumption, so it is our responsibility to own it and to do something about it.

As part of the ongoing management of waste within the ToVP, this SWMP is required to be reviewed and where necessary update during its validity period (2018 to 2023) to ensure that the Plan remains relevant to the current direction of waste management within the State, MRC and the ToVP. This December 2021 review is effectively a mid-term review of the July 2018 SWMP.

## 2. Strategic Waste Planning

Strategic planning should ideally incorporate the following activities:

- Determine where the ToVP and the MRC are currently – Current competencies;
- Identify what is important – Priority areas;
- Define what the ToVP and ideally the MRC must achieve – Objectives to address priority issues;
- Define who is accountable – How the ToVP and/or the MRC is going to get to where the ToVP wants to go; and,
- Review, review, review – Regular formal reviews to assess progress.

This document follows these fundamental strategic steps to identify the Town's strategic direction.



### 3. Strategic Waste Management

Waste management at a strategic level is about identifying and determining desirable outcomes, which can be achieved in a sustainable manner. Sustainability is a function of social, environmental and financial responsibility. The order of precedents of each of these sustainability factors varies depending on the waste management activity being considered.

Socially, there is a community expectation that the ToVP operates its waste management services in an environmentally responsible and sustainable manner; however, there is a limit to the financial burden that the community is prepared to bear in order to attain environmental excellence. The extent of social responsibility within waste management is to a greater extent a discretionary activity, albeit a politically sensitive one.

Environmental waste management strategy is typically managed at higher level by the state environmental regulators (Environmental Protection Authority and the Department of Water and Environmental Regulation), whereby the more hazardous waste materials are regulated and require particular management to reduce potential environmental harm, such as lined landfills, controlled waste management including specific asbestos handling. These waste management activities are mandatory and allow very little discretion at local government/waste generator level. Where there is significant discretion relating to waste management environmental responsibility is when the ToVP considers waste reduction and recycling activities, where different activities have different levels of environmental impact (benefit or dis-benefit).

Financial sustainability is all about obtaining the maximum efficiency in environmental and socially responsible waste management activities within the ToVP. Ultimately there is a limit to the financial capacity within the Town to undertake waste management activities and hence, prioritising these activities is an essential undertaking. The ToVP has a mandatory obligation to provide its residents with an appropriate waste disposal option, this being the kerbside green wheelie bin service. All other waste management services and activities provided by the Town are deemed discretionary, with the ToVP selecting the various discretionary services and activities based on social, environmental and financial considerations. Although social and environmental considerations are important, ultimately the financial capacity of the Town will be the sustainability factor that has the most significant influence.

From a strategic point of view, the ToVP, as with all local governments, has a relatively fixed financial ability within which to undertake all of its waste management activities. It is for the Town to achieve the maximum waste management efficiency and output within its financial ability. Ultimately, it is the financial sustainability that will influence the majority of the Town's waste management decision making.

## 4. National Waste Strategy

The National Waste Policy provides a national framework for waste and resource recovery in Australia. It also highlights the importance of working together and outlines the roles and responsibilities for everyone, including businesses, governments, communities and individuals.

The policy outlines the five key principles for waste management that will enable Australia to transition to a circular economy, including:

- Avoid waste;
- Improve resource recovery;
- Increase use of recycled material and build demand and markets for recycled products;
- Better manage material flows to benefit human health, the environment and the economy; and,
- Improve information to support innovation, guide investment and enable informed consumer decisions

The first National Waste Policy *Less waste, more resources* was published in 2009. An updated National Waste Policy was published in 2018 and a National Action Plan published in 2019.

The *2019 National Action Plan*, prepared by the Australian Government, state and territory governments and the Australian Local Government Association, drives implementation of seven ambitious targets, including:

- Regulate waste exports;
- Reduce total waste generated by 10% per person by 2030;
- Recover 80% of all waste by 2030;
- Significantly increase the use of recycled content by governments and industry;
- Phase out problematic and unnecessary plastics by 2025;
- Halve the amount of organic waste sent to landfill by 2030; and,
- Provide data to support better decisions.

The *2019 National Action Plan* presents targets and actions to implement the *2018 National Waste Policy* to guide investment and national efforts to 2030 and beyond. The action plan also aims to address impediments to a circular economy for waste in Australia, to support businesses and households realise the full value of recyclable materials and work towards more sustainable resource use.

The national strategic direction provides guidance to the individual state governments in developing their own state waste strategic initiatives.

## 5. State Waste Strategy

### 5.1. Strategic Direction

Strategic direction in waste management at a State level is primarily determined by the Waste Authority, through the Minister for Environment. The Waste Authority was established under the *Waste Avoidance and Resource Recovery Act 2007* (WARR Act). It is an agent of the State and its role is to provide advice and recommendations in relation to waste matters in accordance with the WARR Act.

In February 2019, the Minister for Environment launched the WA Waste Strategy: *West Australian Waste Avoidance and Resource Recovery Strategy 2030*. This waste Strategy sets targets through to 2030.

The Waste Strategy outlines the State waste management vision of:

*“Western Australia will become a sustainable, low-waste circular economy in which human health and the environment are protected from the impacts of waste.”*

The State Waste Strategy vision is supported by the three objectives which reflect the waste hierarchy, whereby waste avoidance is the most preferred outcome and disposal is the least preferred:

- Avoid – Western Australians generate less waste;
- Recover – Western Australians recover more value and resources from waste; and,
- Protect – Western Australians protect the environment by managing waste responsibly.

The Waste Authority’s objectives and priorities align directly with the objectives of the Waste Strategy and are guided by annual Action Plans which focuses on the highest priority strategies.

### 5.2. Waste Strategy 2030

The *Waste Avoidance and Resource Recovery 2030* uses 2014/15 national waste data as the baseline for the comparison of achievements during the waste strategy validity period, this being the most recent comprehensive set of waste data available at the time of establishing the waste strategy.

The waste strategy contains three Objectives to guide the West Australian community and enable the development of a sustainable, low-waste and circular economy:

1. Avoid – West Australians to generate less waste;
2. Recover - West Australians to recover more value and resources from waste; and,
3. Protect - West Australians to protect the environment by managing waste responsibly.

The waste strategy includes targets for waste avoidance, resource recovery and environmental protection, including the diversion of waste disposed to landfill:

1. Avoid:

- 2025 – 10% reduction in waste generation per capita from 2014/15 national levels;
- 2030 - 20% reduction in waste generation per capita from 2014/15 national levels;
  - Community:
    - 2025 – reduction in municipal solid waste (MSW) generation per capita by 5%;
    - 2030 - reduction in MSW generation per capita by 10%;
  - Government & Industry:
    - Reduction in C&D waste generation per capita by 15 % by 2025 and 30% by 2030;
    - Reduction in C&I waste generation per capita by 5 % by 2025 and 10% by 2030;
  - Waste Industry – all waste is managed and /or disposed using better practice approaches.

2. Recover:

- 2025 – increase material recovery to 70%;
- 2025 – all local governments in the Perth and Peel regions to provide consistent three-bin kerbside collection systems that include separation of FOGO from other waste categories;
- 2030 – increase material recovery to 75%;
- From 2020 – recover energy only from residual waste;
  - Community:
    - 2020 – increase MSW material recovery to 65% in the Perth and Peel regions and 50% in major regional centres;
    - 2025 - increase MSW material recovery to 67% in the Perth and Peel regions and 55% in major regional centres;
    - 2030 - increase MSW material recovery to 70% in the Perth and Peel regions and 60% in major regional centres;
  - Government and Industry:
    - C&I sector – increase material recovery to 70% by 2020, 75% by 2025 and 80% by 2030;
    - C&D sector – increase material recovery by 75% by 2020, 77% by 2025 and 80% by 2030;
  - Waste Industry:
    - 2030 – all waste facilities adopt resource recovery better practice.

### 3. Protect:

- 2030 – no more than 15% of waste generated in Perth and Peel regions is landfilled;
- 2030 – all waste is managed and/or disposed to better practice facilities;
  - Community:
    - 2030 – move towards zero illegal dumping;
    - 2030 – move towards zero littering;
  - Government and Industry:
    - 2030 – move towards zero illegal dumping;
  - Waste Industry:
    - 2030 – no more than 15% of Perth and Peel Regions' waste is disposed to landfill; and,
    - 2030 – all waste facilities adopt environmental protection better practice.

The waste strategy sets relatively aggressive targets and if achieved, will establish WA as one of the leading states in achieving substantial waste diversion from landfill. The current development of two waste to energy (WtE) facilities in Perth provides a substantial opportunity for the Perth and Peel regions to strive towards and potentially achieve the recovery and protection targets; however, the avoidance target will not be impacted by WtE and will require substantial commitment and effort from local government and the community in order to achieve this.

Although WtE will have a significant impact on waste management within the Perth and Peel regions, it will only lift waste management solutions one level above landfill in the waste hierarchy; hence, there will remain a need for continuous improvement in moving recyclable materials further up the waste hierarchy to more preferred waste management solutions.

Striving towards a circular economy, where materials are sorted and retained in the economy for as long as possible is the preferred outcome. This is achieved by the promotion of behavioural change within local government and the broader community, the provision of infrastructure and programs to enable the implementation of improved waste management practices and incentivising the community to encourage active participation.

The waste strategy also identifies focus materials, which will be the focus of actions and measurements. These focus materials include:

- Construction & Demolition (C&D) waste - by far, the greatest waste stream generated;
- Organic waste - food and garden waste;
- Metals - steel, non-ferrous metals, packaging and containers;
- Paper and Cardboard - office paper, newspaper and magazines;
- Glass - packaging and containers;
- Plastics - packaging and containers;
- Textiles - clothing and other fabric-base materials; and,
- Hazardous waste - household hazardous waste.

The above list represents the typical materials which should be targeted for continuous improvement in moving these recyclable materials further up the waste hierarchy to more preferred waste management solutions other than landfill and/or WtE.

The Waste Strategy includes Foundation Strategies that apply to multiple objectives, these include:

- Information and data;
- Regulation and policy;
- Education; and,
- Planning.

The waste levy will continue to play a key role by providing a disincentive to dispose of waste to landfill and by generating revenue to fund programs which support the waste strategy.

The Waste Strategy is supported by the following documents:

- WARR Strategy 2030 Action Plan;
- Waste Authority Position and Guidance Statements;
- Better Practice Guidelines;
- State Waste Infrastructure Plan;
- Annual Business Plan;
- Annual Action Plan; and,
- Waste Data Strategy.

These documents have and will continue to be developed during the Waste Strategy validity period to formalise the Waste Authority view on various aspects of the Waste Strategy and to inform decision making within the waste industry.

The implementation of the Strategy is supported by funding from the Waste Avoidance and Resource Recovery Account, and initiatives and actions funded under the Strategy are contained in the Waste Authority's annual Business Plan.

### **5.2.1. Waste Strategy Action Plans**

The release of the Waste Strategy included an Action Plan setting out the short-term actions identifying how the Waste Strategy is to be achieved. This Action Plan includes the following Priority Actions:

- Planning for the roll out of FOGO systems and updating the Better Bins funding program to support the roll out;
- Review of the State Supply Commission's Sustainable Procurement Policy and Disposal of Goods Policy to reduce waste generation and improve waste management;
- Pilot the use of recycled construction and demolition material as road base;
- Local governments to develop Waste Plans;
- Maintain, update and review the Own Your Impact initiative relating to improved household behaviour;

- Review the scope of the application of the waste levy to ensure it meets the objectives of the Waste Strategy;
- Establish a schedule of future waste levy rate increases;
- Audit existing waste management infrastructure to determine future requirements;
- Develop a waste data strategy;
- Implement new waste data reporting requirements;
- Establish a recycling infrastructure support program; and,
- Identify, communicate and support better practice approaches to avoidance, recovery and disposal covering all waste generators and streams.

Along with these Priority Actions are lists of associated, individual actions on how to achieve each of these priorities.

Along with Annual Business Plans, Action Plans are released annually.

### 5.2.2. Impact on the Town of Victoria Park

The Waste Strategy and associated Business Plans and Action Plans is a State-wide strategy for improved waste management; hence, covers all regions within the State. As can be expected, the main concentration of focus is in those areas where the most waste is generated and consequently the implementation of the Strategy's initiatives will have the most impact. The focus areas are:

- The Perth Metropolitan Area;
- Major regional centres – Avon, Greater Bunbury, Albany, Geraldton, Kalgoorlie, Karratha, Peel and Busselton; and,
- All other areas within the State.

The ToVP falls within the Perth Metropolitan focus area. The consequence thereof is that there are specific *Municipal Solid Waste Sector Targets* for the Town. The Waste Authority Targets should be used as a guide to drive the Town to make reasonable changes and improvements to its current level of waste diversion and recycling. The targets are not mandatory or enforceable but are intended to be used as benchmarks against which local governments and the waste industry can measure their degree of success in achieving meaningful and sustainable waste management practises. The Waste Authority also has substantial funding available from the Metropolitan Waste Levy to encourage local government (and industry) to strive towards achieving the State Waste Strategy Targets.

The avoidance targets relating to the generation of less waste will need the ToVP to develop programs and then ramp up its community education to encourage the community to generate less waste, while implementing internal improvements within all of the Town's services to minimise the generation of waste. Effectively changing behaviours such as purchasing items that contain less packaging or have a longer product life.

The recovery target will require the ToVP to improve its waste recovery rates. With the Mindarie Regional Council Neerabup Resource Recovery Facility no longer processing waste (refer below for further details), the Town's recovery rate is going to decrease substantially. In reality, the only way that the ToVP is going to match its 2019-2020 recovery rate and possibly improve it in line with the Waste Strategy, is to implement significant change to its waste management activities, such as committing to a three-bin kerbside collection system and sending waste residue to WtE, with only minimal waste going to landfill.

The protection target relates predominantly to the improved control of illegal dumping and littering. The achievement of improvements in the control of illegal dumping will be a combination of improved and focused community education as well as increased enforcement. Littering will be partially improved by the ban on single use plastic bags and the implementation of the Container Deposit Scheme. There is also a groundswell of community support for further reductions in the use of single-use plastic items such as drinking straws and plastic knives and forks. The ToVP needs to actively support these state-wide (and national/international) programs to gain the most benefit from these external programs. Within the Town, there will again be a need for improved education to encourage the community to "do the right thing" in the appropriate disposal of waste items, but along with this, there should be an effort to encourage industry to offer products that reduce the amount of packaging and single use items.

The Foundation Strategies will require the ToVP to improve targeted waste data collection, increase community education and develop local laws and planning policies that provide guidance and enforcement capability to achieve improved waste management solutions.

Based on the direction set with the Priority Actions, the ToVP will be under pressure to implement a three-bin FOGO system.

The Priority Areas also indicate a need for improved data collection and reporting, primarily in the form of Waste Plans.

Overall, the Waste Strategy is likely to have the following impact on the Town:

- Put pressure on the ToVP and the MRC to achieve the stated targets by improving waste management activities;
- Require the ToVP to work closely with its community, being the residential and commercial community, to obtain buy-in into improved and new waste management activities;
- Require the ToVP to have consistent and transparent data collection systems in order to measure success against the targets;
- Require continuous improvement in current recycling solutions to comply with best practice waste management;
- Require continuous improvement in developing future recycling solutions to achieve best-practice reuse and recycling of resources;
- Require improved data collection and reporting; and,
- Opportunities to obtain funding to achieve the objectives and targets of the Waste Strategy.



### 5.3. Waste Authority Business Plan 2021/22

Although the Waste Authority Business Plan is developed annually, the annual Business Plans contain projections for the next four financial years; consequently, this provides guidance to the Town on the Waste Authority's likely direction over the short-term, which for the *Business Plan 2021/22*, provides guidance through to the end of the validity period for the Town's SWMP.

This is the third Business Plan since the release of the State Waste Strategy (February 2019) and builds on the foundation of the earlier plans and includes actions relevant to the key strategic objectives identified in the Waste Strategy (above). In addition, the Business Plan identifies a number of programs which the Waste Authority has identified as new initiatives to be supported in the future. Some of these new initiatives are directly or indirectly relevant to the ToVP and its desire to improve waste management activities within its local government area. By considering and potentially actioning some of these Waste Authority initiatives, there will be State level technical support for the Town, as well as potentially some funding to assist in the investigation and roll-out of related activities.

The waste strategy contains three Objectives to guide the West Australians community and enable the development of a sustainable, low-waste and circular economy, these are reflected in the Business Plan:

1. Avoid – West Australians to generate less waste;
2. Recover - West Australians to recover more value and resources from waste; and,
3. Protect - West Australians to protect the environment by managing waste responsibly.

The Waste Authority *Business Plan 2021/22* supports the *Action Plan 2021/22*. This business plan focuses on the actions and activities under each of the eight headline strategies that are funded through the WARR Account for the 2021/22 financial year. The business plan is supported by the Waste Data Strategy, various Waste Authority position and guidance statements and a series of Waste Authority programs and initiatives.

The business plan focuses on the improved compliance and enforcement mechanisms to reduce levy evasion, stockpiling of waste and illegal dumping. This involves a review and reform of the waste regulatory framework to create a reasonable risk of enforcement and ensure that compliant entities are not disadvantaged, including:

- Improvements to waste policy regulatory framework;
- Compliance and enforcements, including improved levy compliance and illegal dumping strategies; and,
- Improved compliance with the waste policy regulatory framework.

The waste strategy includes eight high-level headline strategies, which describe activities that need to be pursued to achieve the stated targets. The *Action Plan 2021/22* expands on each of these and highlights the specific priority actions for the current year.

Of the numerous Waste Authority initiatives set out in its business plan, there are many that are relevant to the ToVP and are consistent with the direction that the ToVP needs to progress in order to reduce the quantity of waste ending up in landfill. In addition, there are extensive opportunities for local community groups to access funding for the implementation of waste reduction programs. These become substantially more achievable if the community groups are actively supported by the ToVP.

#### **5.4. Action Plan 2021/22**

The waste strategy includes a number of high-level strategies to achieve these targets. This action plan clarifies the specific tasks, lead responsibilities and timelines that will be progressed over the next year.

The *Action Plan 2021/22* is the third annual action plan under the current waste strategy. This action plan is supported by an annual Waste Authority business plan which focuses on the actions and activities that are funded through the *Waste Avoidance and Resource Recovery Account (WARR Account)*.

The *Action Plan 2021/22* is aligned to the waste reform work underway by the DWER and the headline strategies included in the waste strategy: Waste reform: Policy and legislative reforms to improve the waste management framework in WA and support the implementation of the waste strategy.

Headline strategy 1: Develop Statewide communications to support consistent messaging on waste avoidance, resource recovery and appropriate waste disposal behaviours.

Headline strategy 2: A consistent three-bin kerbside collection system, which includes separation of food organics and garden organics from other waste categories, to be provided by all local governments in the Perth and Peel regions by 2025 and supported by the State Government through the application of financial mechanisms.

Headline strategy 3: Implement sustainable government procurement practices that encourage greater use of recycled products and support local market development.

Headline strategy 4: Implement local government waste plans, which align local government waste planning processes with the waste strategy.

Headline strategy 5: Review the scope and application of the waste levy to ensure it meets the objectives of the waste strategy and establish a schedule of future waste levy rates with the initial schedule providing a minimum five-year horizon.

Headline strategy 6: Undertake a strategic review of WA's waste infrastructure (including landfills) to guide future infrastructure development.

Headline strategy 7: Review and update data collection and reporting systems to allow waste generation, recovery and disposal performance to be assessed in a timely manner.

Headline strategy 8: Provide funding to promote the recovery of more value and resources from waste with an emphasis on focus materials.

The priority actions in this action plan are directly aligned with the eight headline strategies to progress and enhancement previous actions, consolidating and building on the strong foundations established in previous years.

Priority actions for the 2021/22 financial year include:

- Supporting a wide range of waste reforms including the review of the WARR Act and regulations, the Plan for Plastics to reduce single-use plastic use and the future schedule and conditions for the treatment of waste-derived materials and waste levy rates.
- Engaging with stakeholders to align WasteSorted messaging and maintain a range of effective communications strategies and events, including the WasteSorted website, the WasteSorted toolkit, social marketing, media, education and engagement mechanisms. This includes building on and providing support for consistent local government messaging for householders to ensure better practice kerbside recycling and reduced bin contamination, and supporting FOGO, implementation particularly in Perth and Peel.
- Continuing support of established programs including school and community education, Household Hazardous Waste (HHW) facilities, rebates for charities, research, and recognition of better practice waste management.
- Implementing the FOGO rollout plan, with support from the Waste Authority's FOGO Reference Group, with a focus on market development, processing capacity to keep pace with generation, engagement and education. The Better Bins Plus: Go FOGO funding program will continue to support local government participants to transition to three-bin FOGO systems by 2025.
- Finalising the state waste infrastructure audit and enhancing planning for the future.
- Supporting ongoing improvements in government procurement to reduce waste generation, increase recovery of materials and encourage purchase of locally produced recycled products. This includes a continued focus on the increased use of recycled C&D materials in road base and other projects through the Roads to Reuse program.
- Supporting local governments and regional councils in their five- year waste plan implementation and annual reporting.
- Providing guidance to liable entities required to report waste and recycling data under the Waste Avoidance and Resource Recovery Regulations (WARR Regulations), including through the online reporting system, to ensure accurate waste data collection and reporting to allow waste generation, recovery and disposal performance to be assessed in a timely manner.

- Facilitating new local infrastructure supported by grants provided by the State and Australian Governments for improved local processing and recycling of paper and cardboard, plastics, and tyres; and supporting further waste infrastructure improvements through WasteSorted grant funding.
- Working towards the 2024 e-waste landfill ban, including policy development, regulations, compliance resources and grant administration support for improved e-waste recycling facilities.
- Engaging with the waste and recycling sector and local governments to support the waste strategy targets.
- Supporting existing and emerging product stewardship schemes, including the state container deposit scheme, and national waste reforms and improvements.

## 5.5. Future Waste Authority Business Plans and Action Plans

Over the years, the Waste Authority business plans and subsequent action plans tend to follow similar patterns and typically follow the general guidance of the State Waste Strategy. Consequently, there is not usually a dramatic change in direction year-on-year, and as such, the guidance provided by the annual business plans and subsequent action plans should be relatively consistent throughout the duration of the ToVP's *Strategic Waste Management Plan (2018 to 2023)*; however, this needs to be monitored on the release of each annual business plan.

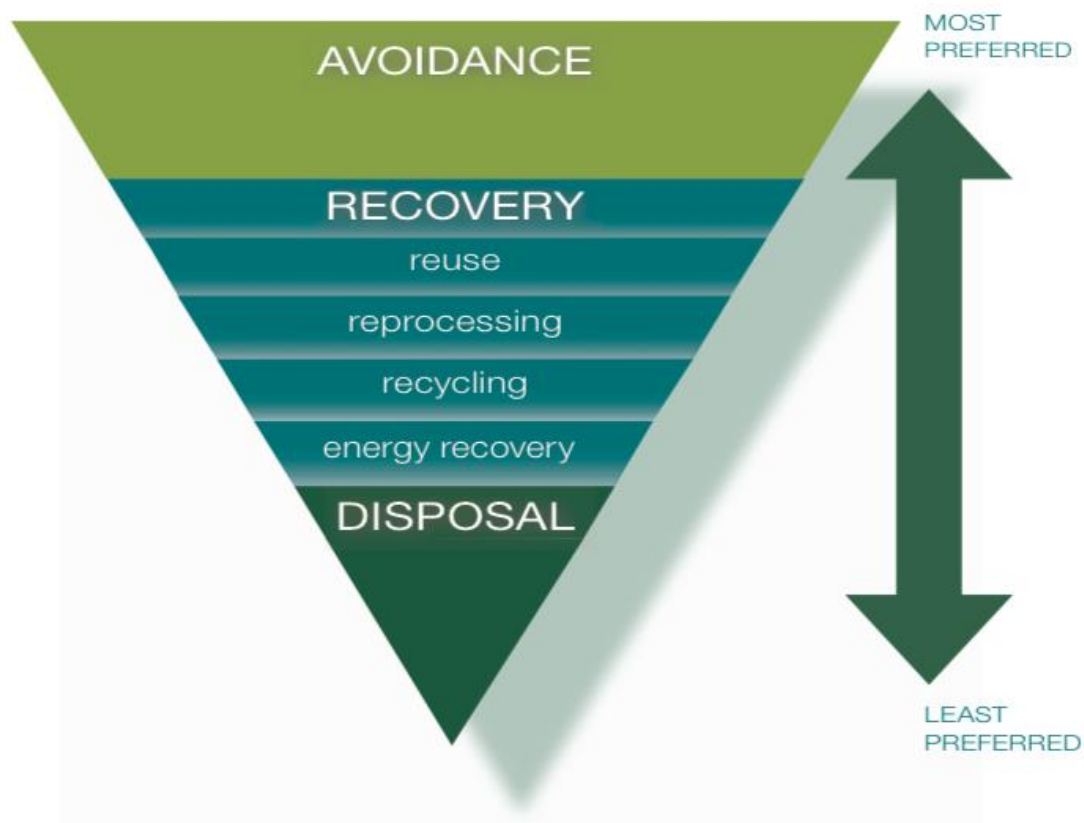
## 5.6. Waste Hierarchy

The waste hierarchy is a means of ranking waste management options in order of their general environmental desirability. The *Waste Avoidance and Resource Recovery Act 2007* (WARR Act) includes a recommended waste hierarchy as a decision-making tool in formulating sound waste management strategies.

No single waste management approach is suitable for managing all waste streams in all circumstances. In order to meet the Waste Authority's objectives and the associated State Waste Strategy, there is a need to use a number of approaches, processes and technologies along different points of the waste hierarchy.

**Figure 5.5 – Waste Hierarchy** sets out the *WARR Act* waste hierarchy in order of preference.

**Figure 5.5 – Waste Hierarchy**



The ToVP is to be mindful of the waste hierarchy when considering various waste management systems and potential outcomes thereof. The preference is for the avoidance of waste generation; however, this is heavily reliant on consumerism and individual choice, of which the ToVP has little influence, other than community education. Ultimately, the ToVP will have more direct influence over the waste management practises dealing with recovery and disposal, these being the least preferred solution.

## 6. Review of SWMP 2008-2013

### 6.1. Overview

Although the Town's SWMP has a stated duration of 2008 through to 2013, in the absence of a subsequent SMWP beyond 2013, this original plan is considered as being the Town's primary strategic plan guiding waste management activities through to June 2018. Consequently, the review of the Town's waste management activities will extend from 2008 through to mid-2018.

During the period of review, there has been substantial change in the Town's waste management activities and consequently a significant improvement in the diversion of waste from landfill; however, this has come at a substantial increase in waste management costs to the Town and its community.

#### 6.1.1. Waste Management Changes

In July 2009 the MRC commenced the operation of the Neerabup Resource Recovery Facility, which enabled the MRC to process approximately 100,000 tonnes of green wheelie bin waste to produce an organic soil conditioner. This facility resulted in the diversion of approximately 50,000 tonnes of organic material that was previously disposed of to landfill. Through its involvement with the MRC, the ToVP shared in this waste diversion achievement.

Also, in 2009, the ToVP converted its kerbside recycling system from a crate-based system to a wheelie bin-based system. This resulted in a substantial increase in the quantity of recyclable material being collected and hence diverted from landfill.

The Town also entered a partnership with the City of South Perth to allow ToVP residents to drop and range of recyclable material (E-waste, cardboard, used motor oil, scrap metal, fluoro globes/tubes, batteries, mobile phones, ink cartridges and polystyrene) at the South Perth Recycling Centre at no charge.

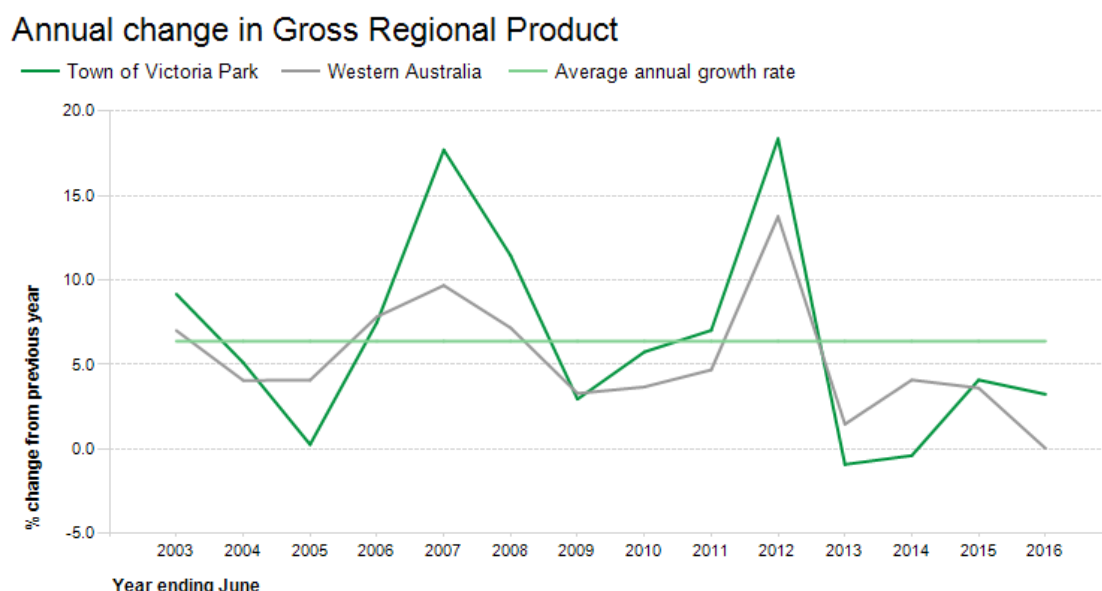
All of the above activities have resulted in increased waste diversion from landfill since the commencement of the 2008 SWMP.

### 6.1.2. Economic Activity

Economic activity is a substantial driver for the generation of waste material. The stronger the economy, the more waste that the community and industry produce and vice versa. In 2008, the impact of the Global Financial Crisis was really taking effect, with a substantial slowdown in the state and local economy. This effect lasted through to 2011, beyond that, there was a spike in the economy which lasted from 2011 through to 2012. From 2012, the economy again went through a dramatic downturn and has remained as such with only minimal improvement in recent times.

**Figure 6.1 – Annual Change in Gross Regional Product** provides a graph of the fluctuations in the state and the ToVP’s Gross Regional Product.

**Figure 6.1 – Annual Change in Gross Regional Product**



Source: National Institute of Economic and Industry Research (NIEIR) ©2016  
Compiled and presented in economy.id by .id the population experts



\* The Gross Regional Product of an area is the equivalent of Gross Domestic Product, but for a smaller area. It is the amount of the nation’s wealth which is generated by businesses, organisations and individuals working in the area. This dataset is derived from the National Economics microsimulation model, and is a broad indicator of the growth or decline of the local economy over time.

Consequently, there have been substantial economic drivers that have influenced the generation of waste in the Town, which have been beyond the influence of the ToVP. These fluctuations in the quantity of waste being generated impact on the waste collection data independently of any waste minimisation activity implemented by the Town.

### 6.1.3. Waste Management Costs

Since the commencement of the SWMP through to the present, the Town's waste management costs increased from approximately \$85/capita to the current \$140/capita. This represents a 65% increase in waste management costs over a ten-year period. The increase in costs are associated with the following activities and events:

- General cost increases over past ten years (CPI);
- Change from crate to wheelie bin recycling; however, the change, resulted in a substantial increase in the quantity of material being recycled;
- Commissioning of the MRC RRF resulted in an increase in waste handling costs, but did enable the recycling of organic waste from the green wheelie bins; and,
- Increase in the landfill levy from \$28/t of waste landfilled to \$70/t (250% increase).

Cost increases as a result of increased recycling activity is a natural consequence; however, the recent dramatic increase in the landfill levy to \$70/tonne has artificially increase the cost of landfilling and hence provided an incentive to the waste industry to improve recycling efforts, with the first \$70/t of recycling costs having no competitive impact, as this cost is currently being artificially incurred by all landfilled waste. Typically, a large scale, well managed, lined landfill costs in the order of \$45/t to \$55/t to operate. Consequently, stand-alone landfill charges for waste generated in the Metropolitan area, which includes the landfill levy are in the order of \$115/t to \$125/t, for larger committed volumes, discounts of up to \$10/t are potentially available. The location of the landfill is another influencing factor, with waste transfer and transport costs being incurred for the more distant facilities. As a rule of thumb, a Metropolitan general waste disposal rate is in the order of \$140/t to \$150/t, depending on committed volume. In addition to the waste disposal cost, there is also a need to consider the waste collection and transport cost to get the waste to the point of disposal. This cost being substantially influenced by the distance from the waste generator to the waste disposal location.

Any recycling option which had a cost equal to or less than the collection, transport and typical Metropolitan landfill disposal cost (combined landfill waste disposal cost) will be advantageous to the ToVP. Any recycling cost in excess of this combined landfill waste disposal cost effectively becomes a recycling subsidy paid by the community for the environmental and social benefit of recycling. The extent to which the community is prepared to subsidise the recycling effort is the balance that needs to be determined by the ToVP.



Although an overall waste management cost for the ToVP can relatively accurately be determined and hence, based on the overall percentage of recycling, an overall recycling cost determined, the actual cost of each individual recycling activity is less simple to determine. Ideally, the ToVP should know the cost of each recycling activity to be in a position to assess the true cost of each of these activities and be able to compare this to the landfill waste disposal option and hence determine the financial, social and environmental benefit of each activity. All recycling activities that are more cost effective than the combined landfill waste disposal cost are financially, socially and environmentally sustainable. In the situation where there is an additional cost being incurred by the recycling effort, this financial “subsidy” should be directed to those waste materials that generate the greatest landfill waste volume reduction and/or the removal of the most harmful materials from the landfill waste stream.

## 6.2. Waste Quantities

The original SWMP 2018-2023 contained data sets for the estimated waste and recyclable quantities as at 30 June 2017. These have been compared to the most recent data sets as at 30 June 2020 in order to assess the degree of success in waste diversion from landfill.

**Table 6.1 – Waste Quantity Comparison** provides the comparison between the quantity of waste in 2017 and 2020.

**Table 6.1 – Waste Quantity Comparison**

<b>Total Residential Waste Generation</b>				
<b>Period Ending</b>	<b>30/06/07</b>		<b>30/06/17</b>	
	<b>Recycled</b>	<b>Landfilled</b>	<b>Recycled</b>	<b>Landfilled</b>
Household Waste (green wheelie bin)	0t	10,176t	*3,395t	8,687t
Household Recyclables (yellow wheelie bin)	2,353t	214t	2,802t	249t
Vergeside Greenwaste	1,107t	0t	920t	0t
Vergeside Bulk Waste	0t	907t	499t	582t
Non-green wheelie bin waste to Tamala Park	0t	0t	0t	246t
Hazardous Household Waste Drop-off	0t	0t	2t	0t
Self-Haul to Drop-off Stations	unknown	unknown	unknown	unknown
<b>Sub-Total</b>	<b>3,460t</b>	<b>11,297t</b>	<b>7,618t</b>	<b>9,764t</b>
<b>Total Generation</b>	<b>14,757t</b>		<b>17,382t</b>	
<b>Percentage Recycled</b>	<b>23.4%</b>		<b>43.8%</b>	
<b>Total Residential Waste Generation</b>				

\* The percentage of recycling of green wheelie bin waste is the overall MRC recycling percentage of green wheelie bin waste received from all of its member councils, which is a combination of processing approximately 100,000 t/yr at the RRF and the remainder being landfilled and not the specific recycling percentage of the ToVP wheelie bin waste. For the 2016/2017 financial year, this was 28.1%.

### 6.3. Activities and Achievements

The Town's SWMP identified 61 Actions to be progressed during the five-year validity period of the SWMP. The majority of these Actions were heavily reliant on the MRC, State Government and to a lesser degree industry; hence, beyond the direct control of the ToVP.

A large portion of the proposed Actions related to lobbying and promotion of ideas for improved waste management generally and not specifically relating to the ToVP. Typically, with the ToVP being a relatively small local government, there was to be heavy reliance on support from other local governments in order to gain critical mass to achieve meaningful change in the waste management industry.

One area where the ToVP is able to influence a third party into achieving meaningful gain is working with the local community groups to encourage and assist the community to implement programs of local interest.

In summary, the following are the major successes that were achieved since the commencement of the SWMP:

- MRC commissioning of the Neerabup Resource Recovery Facility, which enabled a substantial quantity of the ToVP organic waste to be processed and hence diverted from landfill;
- Conversion from a crate-based kerbside recycling system to a wheelie bin-based system, which simplified the handling of recycling for residents, increased the range of materials that was able to be recycled and also dramatically increased the quantity of material recycled. Being a more efficient collection system, the cost per tonne of recycling also decreased;
- Partnership with the CoSouth Perth to enable ToVP residents to drop off a range of recyclable materials for free;
- Continued active involvement with the MRC in assessing large scale waste diversion options, including waste to energy, bulk waste recycling and greenwaste processing; and,
- Improved community group engagement to encourage community participation in waste management activities and to promote further community involvement in town life.

## 6.4. Commentary on Achievements

The ToVP has achieved substantial gains in the quantity of waste material being recycled in comparison to its 2008 level of recycling. This has predominantly been in kerbside recycling and the processing of organic material from the green wheelie bins.

The original SWMP contained a large number of actions that related to lobbying of State and Federal Government to achieve improved recycling or waste avoidance outcomes. These actions, although warranted, are heavily dependent on the enthusiasm of the higher order organisations and hence, the ToVP has limited ability to apply any real and meaningful pressure on these organisations; consequently, it is not possible to judge the level of success that the ToVP has had in these pursuits.

Where the ToVP has been successful with third-party involvement has been in its dealings with the local community groups, which in recent times has included the Evolve process of community workshops, surveys and activities to assist in the development of the Town's Strategic Community Plan. There is a strong link and respect between the ToVP and numerous community groups, including Victoria Park Collective and Enkel. This involvement goes beyond simply waste management, but also extends into all of life aspects within the town.

Going forward, there is an opportunity to achieve real improvements in the recycling of bulk waste, as there are existing commercial systems in place to undertake this activity. Beyond that, typically the large successes have been achieved and any further improvements in waste diversion will be more gradual and likely take greater effort and expense. Effectively, the "low hanging fruit" has been picked.

## 7. Waste and Recycling Quantities

The ToVP obtains its waste data from a range of sources, primarily from the MRC and its waste and recycling collection contractors. This data is accumulated and is provided to the Department of Water and Environmental Regulation (DWER) as part of the annual Local Government Waste and Recycling Census.

**Table 7.1 – Waste and Recycling Quantities** provides a summary of the available data from the Town’s *2016/2017 Waste Census* and the *MRC 2016/2017 Annual Report* and a comparison with similar data for the 2019/20 period.

**Table 7.1 – Waste and Recycling Quantities.**

<b>Total Residential Waste Generation</b>				
<b>Period Ending</b>	<b>30/06/17</b>		<b>30/06/20</b>	
	<b>Recycled</b>	<b>Landfilled</b>	<b>Recycled</b>	<b>Landfilled</b>
Household Waste (green wheelie bin)	*3,395t (28%)	8,687t	3,901t	7,391t
Household Recyclables (yellow wheelie bin)	2,802t (91%)	249t	2,799t	601t
Vergeside Greenwaste	920t (100%)	0t	1,260t	0t
Vergeside Bulk Waste	499t (46%)	582t	471t	874t
Non-green wheelie bin waste to Tamala Park	0t (0%)	246t	0t	433t
Hazardous Household Waste Drop-off	2t	0t	0t	0t
Self-Haul to Drop-off Stations	unknown	unknown	unknown	unknown
<b>Sub-Total</b>	<b>7,618t</b>	<b>9,764t</b>	<b>8,431t</b>	<b>9,299t</b>
<b>Total Generation</b>	<b>17,382t</b>		<b>17,730t</b>	
<b>Percentage Recycled</b>	<b>43.8%</b>		<b>47.6%</b>	

\* The percentage of recycling of green wheelie bin waste is the overall MRC recycling percentage of green wheelie bin waste received from all of its member councils, which is a combination of processing approximately 100,000 t/yr at the RRF and the remainder being landfilled and not the specific recycling percentage of the ToVP wheelie bin waste. For the 2016/2017 financial year, this was 28.1% and 23% for the 2019/2020 financial year.

It is noted that the Neerabup RRF was still operation during the 2019/20 period; hence, the above data include the impact of the RRF. In consideration of the above data, with the MRC receiving more green wheelie bin waste than could be processed at the RRF, there is a component of this waste stream that is recycled and a component that is sent directly to landfill. As instructed by the MRC, some of the member councils send some of their waste to the RRF and others send all of their waste to the Tamala Park landfill. Consequently, when reporting the percentage of green wheelie bin waste that is recycled, it is only reasonable and equitable that all member councils should report the MRC recycling percentage for this waste stream and not the actual recycling percentage that the individual member councils achieve, as some member councils will have the benefit of a high recycling percentage, while others will have zero.

For the 2016/2017 financial year, the MRC received 196,767 tonnes of Processable Waste (green wheelie bin waste) and the RRF diverted 55,329 tonnes of this from landfill, which resulted in a recycling percentage of 28.1% (*MRC Annual Report 2017*). For the 2019/2020 financial year the values were 202,078 tonnes received, 46,430 tonnes diverted and a recycling percentage of 23%. The decrease in the diversion rate was as a result of more member councils adopting the three-bin system and hence diverting more organic material away from the MRC's RRF. Ultimately, with the implementation of the three-bin system, the organic material is still being diverted from landfill; however, not through the RRF, but through the individual member council waste management systems. With the ToVP having not implemented a three-bin system, and continuing to deliver its waste to the RRF, its individual diversion rate for the kerbside waste bin would not have changed; however, because the diversion rate is a rolled-up MRC diversion rate, there is a lower diversion rate recorded for the 2019/20 period than the previously 2016/17 period. This is simply a statistical anomaly and not a change in actual waste diversion rate.

As an individual member council, in 2016/17, the ToVP generated 12,082 tonnes of green wheelie bin waste, 5,578 tonnes of which was sent to the RRF, with 2,900 tonnes being recycled. This represents an individual recycling rate of 24%.

In 2019/20, the ToVP generated 11,725 tonnes of green wheelie bin waste, 10,511 tonnes of which was sent to the RRF, with 2,418 tonnes being recycled (23% of RRF delivered tonnes). This represents an individual recycling rate of 20.6% for the ToVP. Again, the decrease in recycling rate is a function of the MRF rolled-up average rate.

The *MyCouncil* website, amongst other data, provides waste and recycling data for the ToVP.

**Table 7.2 – MyCouncil Summary Data** provides a comparison of summary data between the 2016/2017 period and the 2019/2020 period.

**Table 7.2 – MyCouncil Summary Data**

Service	Recovery Rates	
	2016/2017	2019/2020
All Services	33%	34%
Kerbside Services	29%	28%
Kerbside General Waste to Landfill	0%	0%
Kerbside General Waste to AWT	12%	12%
Kerbside Co-mingled Recycling	91%	82%
Kerbside Garden Organics or FOGO	0%	0%
Vergeside Bulk Waste	12%	35%
Vergeside Bulk Garden Organics	100%	100%

As can be seen from **Table 7.1 – Waste and Recycling Quantities**, that for the 2016/17 period there is 28% and 46% of the Kerbside General Waste to AWT and Vergeside Bulk Waste recovered respectively; however, **Table 7.2 – MyCouncil Summary Data** only states 12% for each of these services. Consequently, it can be seen that there is significant discrepancy in the State data accumulation system. This is something that the ToVP is currently investigating, in order to ensure that future data sets are collected, reported and recorded correctly.

From the Waste Authority summary report on *the 2016/17 Local Government Waste and Recycling Census*, there was an average recovery rate of 40% for all Perth and Peel region local governments; hence, the ToVP recover rate of 43.8% was slightly above the Metropolitan average.

From the Waste Authority summary report *Waste and Recycling in Western Australia 2019/20*, there was an average recovery rate of 31% for all Perth and Peel region local governments; hence, the ToVP recover rate of 47.6% is significantly above the Metropolitan average. With a significant change in the Perth and Peel average recover rate between 2016/17 and 2019/20 (40% to 31%), without there being any major change in waste management over this period, again, this demonstrates the inaccuracies in the regional reporting data; consequently, the ToVP is better off making annual comparisons of its own waste management data in order to assess the effectiveness of its waste management services, as opposed to a comparison to Metropolitan averages.

## 8. Waste Characterisation

In late 2017 and early 2018, the MRC undertook a waste characterisation study of the content of the green wheelie bin waste across the region. This study concentrated on the content of the green bin in an attempt to identify the breakdown of the general waste so that future recycling activities could be focused on identified recyclable components within the general waste stream.

**Table 8.1 – Waste Characterisation Audit – Winter** provides a summary of the waste audit carried out by the MRC in October 2017.

**Table 8.1 – Waste Characterisation Audit – Winter**

Mindarie MSW Audit Analysis				
	Town of Victoria Park		Total All MRC Councils	
Summary	Weight	%	Weight	%
<b>Total Recyclables</b>	1,207.8 kg	26.3%	18,318.3 kg	29.4%
<b>Total Non-Recyclables</b>	3,382.5 kg	73.7%	44,031.9 kg	70.6%
<b>Total</b>	<b>4,590.4 kg</b>	<b>100%</b>	<b>62,350.3 kg</b>	<b>100%</b>

Source: MRC Waste Audit Report 2018 – 19 July 2018 – Southern Metropolitan Regional Council

**Table 8.2 – Waste Characterisation Audit - Summer** provides a summary of the waste audit carried out by the MRC in February 2018.

**Table 8.2 – Waste Characterisation Audit - Summer**

Mindarie MSW Audit Analysis				
	Town of Victoria Park		Total All MRC Councils	
Summary	Weight	%	Weight	%
<b>Total Recyclables</b>	1,229.1 kg	30.1%	17,534.6 kg	30.3 %
<b>Total Non-Recyclables</b>	2,850.4 kg	69.9%	40,350.2 kg	69.7 %
<b>Total</b>	<b>4,079.5 kg</b>	<b>100%</b>	<b>57,884.8 kg</b>	<b>100%</b>

Source: MRC Waste Audit Report 2018 – 19 July 2018 – Southern Metropolitan Regional Council

The key findings of the MRC audit concluded that, at a regional level, “*waste sample material was composed of 29.8% recyclables, 49.2% Organic in nature (Food and Green Waste, Wood, Straw and Other Putrescible) and the remaining 21% of Pathogenic Infectious 5.52%, Earth 8.89%, Miscellaneous 0.92%, Hazardous 0.92%, Textiles 3.68%, Other 0.98%, and Medical 0.1%*”. The ToVP waste material is of similar characteristics.

Refer to the MRC Waste Audit Report for more detail on the breakdown of the waste characterisation audit results.

As can be seen, there is minimal difference between the Town’s winter and the summer audits. From a review of the detailed reports, the main difference being the quantity of inert material (Dust ‘n’ Dirt ‘n’ Rock ‘n’ Inert) being received. At a regional level, there was typically 30% recyclable materials and 70% non-recyclable materials in the green wheelie bin waste. This is consistent with the ToVP summer audit results. The ToVP winter audit recording a 26%/74% split, this mainly being attributed to the higher quantity of inert material being recorded. With inert material having a relatively high density, a small quantity of this material type can have a disproportionately large impact the audit results.

The MRC waste audit report defines organic material as non-recyclable, which is not technically correct as the MRC currently recycles a large portion of the region’s organic material through the Neerabup RRF. In addition, a number of the MRC member councils have implemented an organics bin collection system, which further improves the recycling of organic material from the general waste stream.

The waste audit results indicate that the ToVP has approximately 50% organic material within the general waste. Defining this as a recyclable material results in there being approximately 80% recyclable material in the Town’s green wheelie bins and 20% non-recyclable material. Industry standards for non-recyclable material presented in the yellow wheelie bins is in the order of 15% to 20%, which is relatively similar to the ratio on the green wheelie bins. It is pointed out that some of the non-recyclable material in the yellow wheelie bins would be deemed recyclable if presented in the green wheelie bins (organic material). Based on the MRC audit information, the Waste Authority Target of 65% recycling of municipal solid waste in the Perth Metropolitan area is an achievable outcome; however, at what cost to the community.

**Table 8.3 – Typical Waste Characterisation Breakdown** provides a high-level summary of the MRC waste characterisation audit.

**Table 8.3 – Typical Waste Characterisation Breakdown**

<b>Item Description</b>	<b>Percentage</b>
<b>Recyclable Material</b>	30%
<b>Organic Material</b>	50%
<b>Other Material</b>	20%
<b>Total</b>	100%



## 9. Available Waste Management Infrastructure

The following is a list of available waste management infrastructure to the ToVP and its residents.

**Table 9.1 – Waste Management Infrastructure**

Name/Location	Ownership/Control	Current Status/Comment
<b>Class II Landfills</b>		
Tamala Park	MRC	Operational. Approximately 5 years of remaining life
Numerous	Local government and commercial	Available should Tamala Park no longer be available to the MRC or ToVP.
<b>Waste Transfer Stations</b>		
Tamala Park	MRC	Operational, 84 km round trip for residents.
Recycling Centre of Balcatta	City of Stirling (MRC member council)	Operational, 38 km round trip for residents.
South Perth Recycling Centre	City of South Perth (partnership with ToVP)	Operational, close proximity.
<b>Recycling/Hazardous Household Waste Drop-Off Facilities</b>		
Tamala Park – Recycling and HHW	MRC	Operational, 84 km round trip for residents.
Recycling Centre of Balcatta – Recycling and HHW	City of Stirling (MRC member council)	Operational, 38 km round trip for residents.
South Perth Recycling Centre – Recycling (limited range)	City of South Perth (partnership with ToVP)	Operational, close proximity.
ToVP Administration Office – HHW (limited range)	Town of Victoria Park	Operational. Available any day during office hours.
ToVP Works Depot. Welshpool - HHW	Town of Victoria Park	2 Drop-offs per year.
<b>Materials Recycling/Processing Facilities</b>		
Neerabup – Green Wheelie Bin Organics Processing	MRC	Operations ceased 31 August 2021.
Numerous – Recycling Sorting	Commercial	Associated with commercial recycling collection contractors.
<b>Reuse Facility/Tip Shop</b>		
Tamala Park	MRC	Operational, 84 km round trip for residents.
Recycling Centre of Balcatta	City of Stirling (MRC member council)	Operational, 38 km round trip for residents.

## 10. Available Waste Management Services

The following is a list of available waste management services provided by the ToVP:

- Kerbside Waste Collection, including wet cell batteries and used motor oil - Weekly;
- Kerbside Recycling Collection - Fortnightly;
- Vergeside Bulk Waste Collection – Twice per year;
- Vergeside Greenwaste Collection – Three times per year;
- Hazardous Household Waste drop-off – Once per year; and,
- Dry cell battery and fluorescent globe drop-off – Permanent opportunity.

In addition to the above, there are a range of charitable organisations that will collect or receive reusable materials.

The ToVP residential community and to a lesser degree the commercial properties have a comprehensive level of waste management services available to them. The range of services provide ample opportunity to reuse and recycle a substantial portion of the waste material being generated within the Town. The degree of participation in the available reuse and recycling services is a function of individual motivation and simplicity of service provided.

Of all waste material generated by the residential community, building material, including sand is the one waste type that is not services by the ToVP. Residents are expected to drop off this material at the appropriate facility. It can be anticipated that small quantity of building material ends up in the general waste bin; however, larger quantities of this material would be dropped off by the waste generator.

The vast majority of these services are contracted out to commercial waste management contractors. There is no strategic waste management benefit or dis-benefit to operating services in-house or contracting them out. The main considerations are cost and efficiency. So long as the service mechanism delivers the least cost and most effective (compliant/satisfactory) solution, then this is the best service mechanism to be adopted.

Prior to the tendering out of future waste management services, the ToVP should review the service and consider strategic changes to the service to better suit the Town's needs and strategic direction. Consideration should be given to combining services to potentially achieve more competitive pricing or opening the service to a wider range of service providers. Combining services could also extend to joint tendering with neighbouring local governments, be they members of the MRC or not.

## 11. Available Recyclable Material Solutions

**Table 11.1 – Recyclable Material Solutions** provides a list of typical recyclable materials and the existing services through which they can be managed.

**Table 11.1 – Recyclable Material Solutions**

Material	Kerbside Waste	Kerbside Recycling	Vergeside Bulk Waste	Vergeside Greenwaste	*Recycling Drop-off	HHW Drop-off	**Waste Transfer Station
Aerosol cans	x	✓	x	x	✓	x	x
Aluminium - cans	x	✓	x	x	✓	x	x
Aluminium – toasters and kettles	x	✓	x	x	✓	x	x
Aluminium - foil	x	✓	x	x	✓	x	x
Cardboard	✓	✓	x	x	✓	x	x
Cartridges, printer & photocopier	x	x	x	x	✓	x	x
Ceramic – pieces (not terracotta)	x	✓	x	x	x	x	x
E-waste	x	x	x	x	✓	✓	x
EPIRB's (emergency position beacons)	x	x	x	x	✓	✓	x
Fire alarms	x	x	x	x	✓	✓	x
Fire extinguishers	x	x	x	x	✓	✓	x
Flares	x	x	x	x	✓	✓	x
Gas bottles	x	x	x	x	✓	✓	x
Glass - containers	x	✓	x	x	✓	x	x
Glass - plate, pieces	x	✓	x	x	✓	x	x
Greenwaste	✓	x	x	✓	✓	x	x
<u>Hazardous Household Waste</u>							
Acids	x	x	x	x	✓	✓	x
Alkalis	x	x	x	x	✓	✓	x
Batteries, dry cell	x	x	x	x	✓	✓	x
Batteries, wet cell	✓	x	x	x	✓	✓	x
Flammable liquids	x	x	x	x	✓	✓	x
Herbicides	x	x	x	x	✓	✓	x
Light globes, fluorescent	x	x	x	x	✓	✓	x
Paint	x	x	x	x	✓	✓	x
Pesticides	x	x	x	x	✓	✓	x
Solvents	x	x	x	x	✓	✓	x
Liquid paperboard	✓	✓	x	x	✓	x	x
Mattresses (separated for disposal)	x	x	✓	x	x	x	x

Material	Kerbside Waste	Kerbside Recycling	Vergeside Bulk Waste	Vergeside Greenwaste	*Recycling Drop-off	HHW Drop-off	**Waste Transfer Station
Medicine - expired, excess	x	x	x	x	x	✓	x
Metal - cans	x	✓	x	x	✓	x	x
Metal – pots & pans	x	✓	x	x	✓	x	x
Metal – cutlery	x	x	x	x	✓	x	x
Metal – scrap	x	x	✓	x	✓	x	x
Metal – white goods	x	x	✓	x	✓	x	x
Mobile phones & accessories	x	x	x	x	✓	x	x
Oil - used engine	✓	x	x	x	✓	✓	x
Organics	✓	x	x	x	x	x	x
Paper - books and magazines	✓	✓	x	x	✓	x	x
Paper - clean	✓	✓	x	x	✓	x	x
Paper - newspaper	✓	✓	x	x	✓	x	x
Plastic – drink, ice cream, butter containers	x	✓	x	x	✓	x	x
Plastic - plant pots	x	x	x	x	✓	x	x
Plastic - mixed	x	x	x	x	✓	x	x
Plastic - wrapping	x	x	x	x	✓	x	x
Polystyrene foam	x	x	x	x	✓	x	x
Sanitary products, nappies & doggie bags	✓	x	x	x	x	x	x
Tyres - used vehicle	x	x	x	x	✓	x	x

\* The larger the recycling centre, the larger the range of materials accepted. Tamala Park and Recycling Centre of Balcatta take the largest range of materials.

\*\* Tamala Park waste transfer station receives a range of recyclable materials, but at a fee. The same materials can be disposed of at no charge at the recycling centre.

✓ Recyclable option – preferred solution

✓ Lower order recyclable option – not the preferred solution

x Not recyclable

The above list represents a broad range of “recyclable” materials that are currently being generated within the Town. Some of these materials are not recycled, such as fire alarms and flares, but are disposed of safely as opposed to being sent directly to landfill. Asbestos is accepted at the ToVP HHW drop-off facility; however, this material ultimately ends up in landfill; hence, not considered as being recycled, but is handled in a safe manner and encourages the community to remove asbestos materials from the general waste stream.

The greater the range of items that can be recycled, the greater that quantity of waste that can be diverted from landfill. The ToVP is to concentrate on increasing the range of materials that can be recycled, as well as increasing the participation rate within existing systems to maximise the quantity of material being diverted from landfill. The starting point should be those materials that are likely to cause environmental harm if disposed of to landfill and larger quantity materials within the general waste stream such as carpets and textiles.

## 12. Waste Management Considerations

There are a number of considerations within the waste management industry that have the potential to impact on the ToVP's progression towards improved waste diversion from landfill. Some of these are directly within the Town's control, while others are highly dependent on higher order authorities or other local government participation.

### 12.1. Mindarie Regional Council

The MRC is a regional council that was set up primarily as a waste management organisation and has the following member councils:

- Town of Victoria Park;
- City of Perth;
- City of Vincent;
- Town of Cambridge;
- City of Stirling;
- City of Joondalup; and,
- City of Wanneroo.

The ToVP has a 1/12<sup>th</sup> ownership and voting right within the MRC; consequently, it is highly dependent on the other member councils in order to influence change within the organisation; however, has the ability to participate in large scale waste management activities, albeit as a minor partner.

The MRC provides the ToVP with substantial critical mass for the progression of major waste management initiatives that would normally be well beyond the ability of the Town to undertake in its own rights. These include:

- The Tamala Park landfill;
- The Neerabup Resource Recovery Facility (RRF), which ceased operation on 31 August 2021;
- Joint waste characterisation audits;
- Joint tendering for greenwaste collection and processing services;
- Participation in the recent waste to energy tender process with the Eastern Metropolitan Regional Council;
- Access to substantial funding from the Waste Authority as a result of the large Metropolitan population represented by the MRC;

- Considering of:
  - The development of a future landfill facility beyond the life of Tamala Park;
  - Bulk waste sorting facility;
  - Materials Recovery Facility (sorting of yellow bin recyclable materials); and,
  - Joint tendering of kerbside recycling collection services.

The MRC has traditionally managed the waste disposal activities for its member councils, with the individual member councils typically managing their own recycling activities. With the development of the Neerabup RRF in 2009, the MRC became directly involved in the processing of organic waste on behalf of its member councils. Since then, the MRC has continued to look into and offer its member councils a range of waste management recycling activities as an alternative to landfill disposal. Ultimately the implementation of these opportunities needs substantial support from all of the member councils in order to progress to the development stage. The larger the proposed development, the greater the costs involved and hence, understandably, the more conservative the approach by the member councils; consequently, there has been minimal progression of largescale activities within the MRC in recent times.

The development of the Neerabup RRF resulted in the cost of waste processing/disposal increasing substantially and in conjunction with the recent increases in the landfill levy, the cost of waste management to the MRC member councils has become a major component of the member council annual budgets in comparison to what it was historically. Consequently, there is intense focus within the member councils on any waste management cost increases that may be proposed. In addition, the member councils look at ways of minimising their individual waste management budgets, which in some circumstances, may be detrimental to the other MRC member councils. This individual inward-looking is potential destructive to the group cooperation model of regional councils.

Ultimately, the MRC has been a substantial contributor to the ToVP recycling effort and has the potential to continue to be, provided that the member councils can agree to the progression of other major non-landfill initiatives. Unfortunately, this has been a slow process and, in all likelihood, will continue to be. It is for the ToVP to actively participate in MRC projects; however, also maintain an individual approach to smaller-scale recycling projects and initiatives which are manageable for a relatively small local government.

The MRC was initially set up to provide a landfill waste disposal solution for its member councils. In the 1990's, local government was the only provider of landfill services and hence the need for the establishment of the MRC. Since then, the landfill industry has changed dramatically, with numerous commercial landfill options being readily available to local government; consequently, there is no essential need for local government to own and operate its own landfill facilities. Competition in the industry means that a relatively small local government such as the ToVP has a reasonable negotiating power to obtain a competitive landfill disposal rate. Hence, in comparison to the 1990's, there is now less need for a purely landfill disposal regional council. If the MRC does not continue to progress with large-scale recycling developments/opportunities on behalf of its member councils, in all likelihood, its usefulness to its member councils will decline to a point where it is no longer needed.

From the ToVP point of view, its future involvement in the MRC is primarily as a conduit into large-scale recycling projects, ideally at a competitive cost. Without these projects, and there being readily available alternative landfill disposal options, there is little benefit to the ToVP residents in remaining within the regional council structure.

The critical turning point for the MRC and hence the ToVP will be when the Tamala Park landfill reaches its maximum capacity, which is forecast for 2025 (*MRC website*). At this point, the MRC will need to have sourced an alternative landfill disposal option for its member councils. Based on the difficulty of developing a new landfill and the fact that there are numerous alternative waste disposal options available within the Perth Metropolitan area (landfills and waste transfer stations), it is likely that the MRC may opt to simply contract out its landfill disposal requirements, especially as its member councils are actively striving to reduce their quantity of waste going to landfill; hence, the need for landfill should theoretically reduce over time.

There are currently numerous landfills and waste transfer stations in the Metropolitan area that have a waste disposal fee in the order of \$140 to \$150/t (excluding GST). The current MRC member council disposal rate is \$162.50/t; however, this is a blended rate that covers other MRC waste management activities and its corporate structure.

In August 2021, the Neerabup RRF ceased operations and hence no longer receives kerbside collected waste. This waste is currently being disposed of to landfill while the MRC develops alternative solutions for the processing of this waste stream.

With the MRC member councils looking internally to generate savings in waste management costs, it is possible that in the near future, the member councils, predominantly the larger ones, will be questioning the overall benefit of their involvement in the MRC.

Should the future of the MRC be questioned and subsequently ceases to exist, the impact on the ToVP would be highly dependent on the timing of when the MRC involvement ended. There are a number of scenarios that could be involved, which would result in significantly different consequences to the ToVP.

### Scenario 1 – Immediate MRC Closure

The impact to the ToVP will include:

- Wrapping up the MRC structure and staffing commitments – a financial cost to the ToVP;
- Sale of the Neerabup RRF property – a reasonable financial gain for the ToVP;
- Shutting down the Tamala Park recycling centre – nil impact to the ToVP, as this facility is too far away for its residents to regularly use;
- Sale of the remaining landfill asset value in the Tamala Park landfill - a possible financial gain for the ToVP, dependent on the facility environmental liabilities verses remaining available landfill airspace;
- Sale of remaining land holding at Tamala Park – limited to no value to the ToVP as the majority of the property is classified as BushForever and the minimum 30-year landfill closure period;
- ToVP to arrange an alternative waste disposal option – numerous available within the Metropolitan area, at a decreased disposal rate and potentially at a decreased transport cost, depending on the location of the alternative disposal location;
- ToVP to pursue alternative waste recycling options as an individual local government; hence, minimal opportunity for large-scale solutions;
- The ToVP will be locked into the higher waste management costs within the MRC for the shortest period (in comparison to the other scenarios);
- The ToVP no longer reliant on the MRC decision making structure in order to progress waste disposal and recycling options; and,
- Going forward, once the net cost/gain of the above items have been resolved, it is likely that the ToVP will be able to reduce its waste management cost, but this is likely to come at the expense of a decreased recycling rate. To achieve a similar recycling rate to what is currently being achieved would likely cost more. The degree of cost increase will be proportional to the degree of improved recycling effort.

There are many financial implications to the ToVP of the closure of the MRC. At a higher level of consideration, it is possible that there could be a net cost to the ToVP, in wrapping up the existing business activities; however, over time, there would be savings in comparable waste management services to the ToVP, as the MRC corporate and structural costs would no longer be incurred.

In considering the “triple bottom line” impact of the closure of the MRC, there are also the environmental and social consequences to be considered. Environmentally, there could be a reduction in the quantity of waste being recycled and more organic material going to landfill, which would be a reduced environmental outcome. Socially, there would be a portion of the community that would be disappointed at the reduction in recycling being achieved by the ToVP; however, there is likely to be a far greater portion of the population that would welcome a saving in waste management costs if this were the eventual outcome. If there was a decrease in recycling and an increase



in waste management costs, then there would be a distinct lack of community support for this scenario.

Ultimately, it is unlikely that the MRC would cease if the outcome to its member councils was a decrease in recycling and an increase in future waste management costs. Consequently, it can be presumed that this scenario would only occur if there was to be a reasonable, eventual financial gain for the MRC member councils.

#### Scenario 2 – MRC Closure in 2025 – Post Tamala Park Landfill

For this scenario, the majority of the Scenario 1 consequences will remain; however, there will be some changes to a few of the above implications:

- The ToVP will have the benefit of advanced warning of the MRC imminent closure and hence more time to plan for the impacts thereof;
- There will be no remaining asset value in the Tamala Park landfill; hence, reduced potential financial gain;
- The ToVP will be locked into the higher waste management costs within the MRC for a longer period; and,
- The ToVP will retain the benefit of possibly a higher recycling rate for a longer period.

With more time to plan for the future it is likely that the transition from a MRC structure to an individual local government structure will be smoother. The net financial impact on the Town would be a function of the change in values of the Tamala Park landfill and Neerabup site assets, as well as the extended period of higher waste management costs associated with the MRC.

## **12.2. Waste Levy**

Estimated Revenue from Waste Levy, as stated by the Waste Authority, the Waste Levy revenue for the period 2018/19 through to 2022/23 is estimated to remain constant at \$83.7M per year. There was no levy increase for the 2019/20 and 2020/21 financial years; however, there are likely to be further changes to the levy rate beyond this period.

The waste levy is charged on all waste generated or landfilled in the Metropolitan area. Currently the levy is \$70/t. The Waste Authority is currently reviewing the levy structure and is in the process of providing the Minister for Environment with recommendations for the future application and increase of the waste levy. Although this waste levy review has been ongoing for a number of years, at this stage, there is still no information available on the future increases in the waste levy; however, there has been no increase in the waste levy for the past three years, being the 2019/20 to 2021/22 financial years. The *Business Plan 2021/22* states that the waste levy revenue is estimated to remain constant at \$83M in each of the next five years. The Headline Strategy 5 involves the review of the scope and application of the waste levy, with a schedule of future waste levy rates for a minimum five-year period. The State Government is due to consider the waste levy review in 2021/22, with the DWER to implement the decisions from the review.

The Waste Authority is encouraging local governments to embrace the Better Bin system of having a third organics bin for GO and ultimately FOGO. The implementation of a third bin is gradually gathering momentum with Perth Metropolitan local governments, with most converting to a GO system; however, there are a number of councils that are opting for a FOGO system. Typically, a GO system will divert between 15% and 20% of the general waste from kerbside collections away from landfill and a FOGO system 30% to 40%. The *Local Government Waste Census 2015/16* and *2016/17* reports produced by the Waste Authority indicate 381,476 tonnes and 353,307 tonnes respectively of kerbside general waste having been collected each year (average 367,391 tonnes). If there is conservatively a 10% reduction in kerbside general waste being landfilled (36,739 tonnes) in the next two of years, then at \$70/t, this equates to approximately \$2.5M.

With the two WtE facilities planned to commence operation in late-2022, there will be up to 700,000 tpa of waste diverted from landfill annually. At \$70/t, this equates to a loss of revenue of \$49M. Hence, by the time the next levy increase(s) come into effect (anticipated to be July 2022), there will potentially be a \$50M annual hole in the Waste Authority estimated waste levy revenue. This equates to a 60% decrease in waste levy revenue.

The Waste Authority, through the Waste Strategy 2030 has a target of all Perth Metropolitan local governments implementing a third bin FOGO system by 2025. Should this be achieved, then there would be an anticipated 30% to 40% (average 35%) reduction in the quantity of kerbside general waste going to landfill, which, based on 2015/16 and 2016/17 waste quantities, equates to 128,587 tonnes. Again, at \$70/t, this equates to a loss of \$9M

Hence, within a relatively short period, there could reasonably be a \$60M deficit in the Waste Authority estimated waste levy annual revenue, which equates to a 72% reduction in annual estimated waste levy revenue. The State Government receives 75% of this revenue as consolidated revenue and the remaining 25% is used for waste management related applications, of which a substantial portion goes towards paying for some DWER activities; hence, saving the State Government from having to fund these activities. Ultimately, the State Government is heavily reliant on the waste levy to support its annual budget; hence, there will be substantial pressure on the waste industry to at worst maintain the waste levy revenue, but ideally to increase the annual revenue.

Based on the above likely decline in the annual waste levy revenue and that fact that the waste levy is becoming highly successful in substantially reducing the quantity of waste going to landfill, the State Government will be looking at different methods of managing the waste levy revenue to, as a minimum, maintain current revenue levels, as stated in the *Business Plan 2021/22*. The options available to the State Government are as follows:

- Waste levy remains only applicable to Perth Metropolitan waste and the rate increased. To maintain the same level of annual revenue, the current rate of \$70/t would need to increase by 72% or to \$120/t
- Waste levy remains only applicable to Perth Metropolitan waste; however, the levy is also applied to waste going to WtE facilities, being the next lower preference on the waste hierarchy and also being a large receiver of waste quantity. Potentially there could be a sliding-scale of applicable waste levy rates at the WtE facilities depending on the degree of pre-sorting that has occurred before the waste is processed through the WtE facility. It is unlikely that the WtE facilities will be levied at the same rate as landfill; however, to maintain the waste levy revenue, the levy (sliding-scale) will need to be relatively substantial, being at least in the order of 50% of the current levy rate of \$70/t.
- The waste levy could be expanded into major regional centres. This is seen as a politically sensitive more and should this be implemented, it is highly likely that the levy will initially be low, with gradual future increases. In any event, there are relatively small quantities of waste landfilled in these major centres in comparison to the waste tonnage generated within the Perth Metropolitan area. Consequently, this “fix” is not going to raise substantial revenue in comparison to the forecast levy revenue decrease over the next few years.
- The most likely scenario is that all of the above options will be implemented, either all at once or progressively over the next few years. This will share the levy load over a broader waste market and hence, reduce the negative impact on a single waste market.

For the ToVP, the likely impact will be pressure to implement a third bin FOGO kerbside collection system. Then, should the Town opt to dispose of its residual waste at one of the WtE facilities, it will pay the lowest WtE levy rate possible.

The impact of possible changes in the waste levy on the Tamala Park landfill facility will be an increase in disposal fees to the MRC member councils, which will translate to increased waste disposal costs to the community.

The primary way to reduce the levy impost on the community is for the community and the Town to reduce waste generation; however, this is an ongoing challenge in its own right.

In the absence of any firm direction from the Waste Authority or State Government, the above is all based on hypothetical scenarios. There have been some hints in recent time from the Waste Authority and the DWER about the levy being applied to major regional centres and also to WtE facilities; consequently, the above scenario represents real possibilities to the Town.

Based on past experience and information from the Eastern States, it is likely that the levy will increase in the future, ideally in relatively small increments so that the waste industry can more easily accommodate the increases, as opposed to one large, stepped increase as has previously occurred. With the long-term Consumer Price Index running at typically 2% to 3% per year, this represents a \$1.40 to \$2.10 increase on a \$70 levy. Hence, it is likely that the minimum annual levy increase will be in the order of \$5/t; however, it could be that the Minister imposes a greater annual levy increase and/or a one-off large increase to generate more State Government revenue (the State receives 75% of the levy as consolidated revenue) and also to encourage greater waste recovery by artificially increasing landfill disposal costs.

For future planning, the ToVP should work on a long-term annual waste levy increase in the range of \$5/ to \$10/t, backdated to 2018/19, when the last levy increase was implemented. This should give a reasonable upper and lower range within which financial modelling can occur. However, if the State Government attempts to maintain the same annual levy revenue when the WtE facility commences operation, there may be substantially higher levies applied to the Metropolitan waste industry.

### 12.3. Organics Bin Kerbside Collection

In the past few years, there has been substantial promotion and encouragement by the Waste Authority for local governments to implement a “third bin” system to collect kerbside organic materials (*Better Bin – Kerbside Collection Guideline – Waste Authority September 2016, Position Statement on FOGO, FOGO Rollout Plans*). The intent being that this is an easy and efficient mechanism of diverting organic material away from landfill. The system can cater for both greenwaste and food waste. The collected material is diverted to an organics processing facility where a quality compost product can be produced. For local governments where the material collected in the green wheelie bin is disposed of directly to landfill, this third bin system is a justifiable, financially, social and environmentally sustainable option that should be seriously considered.

The gradual conversion of the MRC member councils to a three-bin system has resulted in the reduced efficiency and increased processing costs at the Neerabup RRF and consequently the decision by the MRC to prematurely shut down the facility.

Without the RRF as the alternative comparison to the processing of organic materials, the ToVP is left with the option of either landfilling the organic material that the RRF used to recycle or implement an alternative organics separation and processing solution. At present, the only readily available organics system is the third bin system promoted by the Waste Authority.

Within the context of the MRC Constitution, if the organic fraction is separated from the general waste at the kerbside, then it is considered as being a recyclable material and is not required to be managed through the MRC; consequently, the ToVP is able to implement a third bin organics collection without the consideration of the other members of the MRC.

When considering the implementation of an organics bin, there is the option of commencing with the easier Garden Organics (GO) system and then in time, if deemed beneficial, progressing to the full FOGO system. The GO bin is the easier system, as it is simply garden organics, which has a low odour potential and can be collected on a fortnightly basis. However, with FOGO and the inclusion of the food waste into this bin, the odour potential increases dramatically and hence the bin would be required to be collected weekly; however, the general waste bin then becomes the fortnightly collected bin (as it should no longer contain food waste). Ultimately, the Waste Authority is pushing for the implementation of full FOGO systems in all Metropolitan and Peel region local governments by the end of the 2025 financial year.

The vast majority of the MRC members councils have implemented a third bin organics collection system, predominantly for GO, with only the City of Vincent opting to go straight into a FOGO system.

To simplify and encourage local government to implement FOGO systems, the Waste Authority has released a range of documents providing information on FOGO, including:

- Better Bin – Kerbside Collection Guideline – September 2016;
- Position Statement on FOGO Collection Systems – August 2020;
- FOGO Rollout Plan 2020-21 Report; and,
- Plan for Three-Bin FOGO System Rollout: 2021-22.

These documents are regularly reviewed and updated, typically annually as more information becomes available.

To further encourage and assist local governments in the implementation of a FOGO system, the Waste Authority makes available significant funding for the rollout of a FOGO system. This funding is typically seed funding to get the new system up and running, thereafter, it is up to the individual local governments to pay for the ongoing management of the collection system.

## **12.4. Bulk Bin Vergeside Waste Collection**

Currently the ToVP operates a traditional vergeside waste collection system with the residents stockpiling waste on the verge, which is then collected by contractor and taken to a sorting facility where recyclable materials are separated, and the remaining residue is sent to landfill. Residents get two services annually, with no limit to the quantity of material that can be placed out on the verge. There is however a maximum size of item that can be discarded. The ToVP 2019/2020 Waste Census reports a recycling rate for this type of material of 35%.

During the bulk waste verge collections there are many “scavengers” that drive around the suburbs picking up reusable items before the waste collection occurs. This is casual reuse/recycling and results in a further reduction in the volume of waste ultimately being collected from the vergeside by the collection contractor. Due to the nature of this casual system, it is not possible to quantify the amount of reusable or recyclable material that is removed from this waste management system; however, anecdotal evidence of vergeside scavenging would indicate that this is a real component of recycling, removing some large items from the waste stream and in addition, occurs at no cost to the ToVP. Material reuse is at the top of the waste management hierarchy and hence, should be encouraged wherever possible.

Due to the substantial increase in landfill disposal fees, mainly attributed to the dramatic increase in the Metropolitan waste levy, many local governments have been looking for alternative solutions to the traditional vergeside waste collection. In recent years a number of local governments have changed their vergeside bulk waste collection system from residents stockpiling materials on the verge to an on-demand bulk bin system, where residents order bulk bins on an as required basis.

The benefit of the new bulk bin system includes:

- On-demand service so residents can order a bin when it suits their domestic arrangements;
- Cleaner and neater streets;
- Easier system for the local governments to manage as the bin ordering is usually contracted out to bin collection company;
- Less waste being handled resulting in lower operating costs for the local government; and,
- Material not damaged as much in comparison to the traditional rear lift collections and hence more opportunity to recycle some items.

The disadvantage of the new bulk bin system includes:

- Requires residents to order a bin, with suspected slow community uptake and hence stockpiling of waste materials within the household, which will eventually emerge once the community get accustomed to the system;
- Some community dissatisfaction, which is predominately a change management issue;
- Some residents struggle to lift the material into the bulk bins;
- Limited number of bins per year, which limits the volume of waste that can be disposed of;
- Limited bin volume, requires careful packing to optimise the bin capacity;
- Larger items unable to fit into the bin or a single item (lounge suite) fills the bin;
- Minimal vergeside reuse by “scavengers”; and,
- Collection and handling costs per unit weight are greater than the traditional vergeside collection system, but due to the lesser quantity of material being handled, the overall system costs are lower. However, if a similar quantity of waste was handled on the verge, the system cost would be greater than the traditional methodology.

Effectively the bulk bin system works because residents are limited to a set number of bins (usually one per year) and hence have a defined quantity of waste that can be disposed of.

Ultimately the greatest success to local government in implementing a bin collection methodology is the reduced cost of operating the system. However, with the suspicion that the change of collection system does not reduce the quantity of waste being generated, but simply results in stockpiling of waste in the household and that this waste will eventually emerge on the vergeside, by greater participation in the system, or being slowly included into the kerbside general waste bin, it is possible that this collection system may ultimately cost more than the ToVP current system.

The bulk bin vergeside waste collection system has been positively embraced by a number of local governments and is something that the ToVP should seriously consider. As part of this consideration, the ToVP needs to monitor the degree of household participation in these existing bulk bin collection systems to assess how successful they are in sustainable waste quantity reduction. In conjunction with this consideration, the ToVP should encourage the local community groups to coordinate vergeside recycling days to enable “scavenging” of reusable items and promote the involvement of charity groups in collecting reusable items from householders before they order bulk bins. Both of these activities will promote a higher order of waste recycling hierarchy, while reducing the quantity of waste being presented for the ToVP to manage.

## 12.5. Contingency Planning

With the ToVP contracting out the vast majority of its waste management services, there is essentially highly reliant on others for the continuous operation of its waste management services to the community. There should be consideration for contingency planning in the event that one or more of its contracted service is unable to operate or operate at lower production levels, either in the short or long-term.

There will be variable impacts on the ToVP and its residents, dependent on the service that is affected. It is those services that directly interact with the residents that will result in the most community impact, such as kerbside and vergeside collections. The loss of a disposal location (landfill or recycling facility) will have no direct impact on the community; however, the ToVP may need to source an alternative solution.

Contingency planning needs to assess the range of waste management services, the likelihood and consequence of an event occurring that would influence the continuity of the waste management service and then what contingency measures are available to the service provider and the ToVP to resolve the situation as rapidly as possible.

## 12.6. Container Deposit Scheme

The State Government implemented a Container Deposit Scheme (CDS) on 1 October 2020. This scheme is primarily to reduce littering and targets beverage containers that are commonly found in the litter waste stream. The scheme does not target beverage containers that are typically consumed at home, as these are not likely to be littered. The following are examples of beverage containers eligible for the 10c refund:

- Soft drink cans and bottles;
- Bottled waters;
- Small flavoured milk drinks;
- Beer and cider cans and bottles;
- Sports drinks and spirit-based mixed drinks; and,
- Most containers between 150 mm and 3L.

The impact of the CDS on the ToVP includes the following:

- Reduced littering – reduced clean-up costs, but minimal reduced disposal cost as this recyclable material consists of light weight items;
- Reduced quantity of waste collected in street bins – minor reduction in waste mass as recyclable containers are generally light weight items;
- Reduced quantity of recyclable packaging materials in the yellow recycling bin:
  - Slight efficiency in collection volume – more collections will fit into a single vehicle resulting in less vehicle movements;
  - Increased revenue for the collection/sorting contractor from the remaining CDS packaging in the recycled material;
  - Revenue sharing between the ToVP and the collection/sorting contractor; and,
- Less material being presented for recycling; hence, a reduction in the Town's annual recycling percentage due to the removal of previously fully recycled component of the waste stream.

Few of the above potential impacts are seen as significant to the ToVP, other than the revenue sharing component.

The primary benefit will be environmental and social acceptance as a result of the decrease in the quantity of litter being generated within the Town. This benefit does however come at a marginal cost to the community by a slight increase in the beverage cost as a result of the implementation of the CDS. This cost increase will not have an impact on the ToVP.



## 12.7. Ban of Single Use Plastic Bags

The State Government has banned the majority of single use plastic bags. The ban came into effect on 1 July 2018. This ban has no material effect on the quantity (tonnage) of waste material managed by the ToVP, as the single use bags are an extremely light-weight item and hence, even a massive reduction in the number of these items in the waste stream will not be noticeable. Where there is a benefit to the ToVP is the reduction in littering and hence the associated cost of litter collection. In conjunction with the Container Deposit Scheme, there is likely to be a noticeable reduction in litter generation within the ToVP.

## 12.8. Recyclable Material Market

The cost of recycling is substantially dependent on the revenue that recyclers receive for the recycled materials. This market has proven to be highly volatile over time. During the Global Financial Crisis (2007 to 2008) there was a dramatic reduction in the price that recyclers received for recycled materials. This extended right through the recycling industry from paper, cardboard, plastics to scrap metal. In more recent times, China (Chinese National Sword program – Quality First) has banned the importation of some 24 categories of solid waste including certain types of plastics, paper and textiles. In addition, the quality of recyclable materials that are accepted in China has increased, requiring more sorting at the recyclable facilities to remove contaminants and waste residue before the material can be exported to China.

The Chinese ban on some recyclables has been a relatively dramatic impact to the recycling industry, as China is by far the greatest importer of recycled materials and the ban was announced and implemented within six months (July 2017 to January 2018). This gave the recycling industry little time to source alternative recycling disposal locations, in addition, this was a worldwide ban by China, so the worldwide recycling industry has been impacted and not just the Australian recycling industry. As a consequence, there has been massive competition amongst recyclers worldwide to source alternative disposal locations, these typically being in India and Asia. This is the environment within which the recycling industry has to operate.

This volatility in the recycling market has a direct impact on the cost of recycling and hence the cost that the ToVP pays its recycling contractors. Volatility in the recycling market has always been a factor that the industry has had to deal with; however, the Global Financial Crisis and more recently the Chinese National Sword program has emphasised the vulnerability of the recycling industry pricing model and the risks associated with the material disposal costs. These risks are typically passed on to the customer (ToVP) through a higher recycling cost to cover the likelihood of fluctuations in the commodity markets during the duration of the waste collection and recycling contract. The conditions within the contract between the local government and the recycler will determine whether there is an opportunity for the recycler to recoup some of its additional costs incurred in the event of a dramatic change in the commodity price or material disposal availability.

The Chinese National Sword program has once again brought to the surface the vulnerability of the recycling industry to the fluctuations in the recycling commodity price. Going forward, it is anticipated that the recycling industry will be more risk averse when it comes to predicting recycling material revenues, which will lead to an increase in recycling costs to local government. The degree of cost increase will be a function of competitiveness and the level of risk aversion within the recycling industry.

Typically, local government contracts are generally risk averse, with a preference to lock in a known cost, often at a higher rate, with the contractor taking the risk on price fluctuations, as opposed to a risk sharing arrangement, whereby the principal and the contractor share the risks within the contract. Due to the increased level of risk in the recycling industry, the ToVP should consider a risk sharing arrangement in future recycling contracts, where the contract allows for variation in commodity price and hence reduces the contractor's risk and consequently, there should be a proportional reduction in cost of the recycling contract to the principal. There is however, the potential that, during the life of the contract, that the contractor could be entitled to a cost increase in the event that there was a dramatic change in the commodity price for recyclable materials. Effectively, the ToVP will be taking on some of the risk in commodity price fluctuations. The degree of saving on recycling costs versus the perceived risk would need to be weighed up in order to determine the ToVP appetite to take on the risk.

In future recycling tenders, it is recommended that the ToVP include options within the pricing structure whereby the tenderers provide an all-in price for the delivery of the recycling service and takes all risk of commodity price fluctuation and an alternative price whereby there is a variable recycling cost based on the fluctuation in recycling commodity costs. The ToVP then has the discretion during tender assessment to determine if it has the appetite to take on the risk of recycling commodity prices based on the level of saving offered by the various tenderers in a highly competitive environment. Care must be taken to establish a clear price variation mechanism so that the principal and the tenderers are fully aware of the level of risk being shared and should this mechanism be adopted in the final contract, that there is a clear mechanism during the contract duration whereby prices can transparently be varied. It is advisable to undertake discussions with the main recyclers in the industry to determine the best risk sharing model, which is ideally suitable and beneficial for all parties. Ultimately, the more risk that the ToVP takes on, the lower should be the recycling costs to the Town.

As a result of the difficulty in sourcing downstream recyclable material markets and the international reliance on China, there has been a paradigm shift at Federal Government level, whereby there is now substantial funding available for the development of local recycling infrastructure for the processing of some recyclable material. Along with this funding there are also bans on the exporting of some waste material to support the development of local recycling facilities. The impact to the ToVP will be a more reliable, local downstream market; however, the local solutions came at increased processing costs and hence, these costs will be passed on, to eventually be paid for by the local community.

## 12.9. Waste to Energy

Waste to energy (WtE) is something that the West Australian waste industry has been considering for many years. Large scale WtE solutions have been an important component of the worldwide waste and recycling industry for many generations and two facilities are currently under construction in Kwinana and East Rockingham, with current indications being that operations at both facilities are due to commence in late 2022.

The ToVP, through its involvement in the MRC, has been involved in a tender process for the development of a WtE contract with potential suppliers. Ultimately, the MRC opted not to progress down this path at that point in time; however, with the recent closure of the Neerabup RRF, there is now a greater need for large-scale, non-landfill disposal solutions within the MRC. The MRC, through the appropriate legal advice, has determined that the management of WtE type waste is a residual disposal solution and hence, based on the MRC Constitution, this waste stream needs to be managed by the MRC and not by the individual member councils. Consequently, the ToVP is tied to any future MRC WtE solution(s).

From the MRC point of view, within the limitations of the *Local Government Act*, there are a number of possible WtE solutions that could be pursued, these include:

- A standalone contract with one or both of the WtE facilities;
- Biggy-backing on the EMRC WtE contract that was signed with the East Rockingham WtE facility following its tender process that the MRC was involved in, but declined to participate in the final agreement; and,
- Contracting with another local government(s) to provide suitable waste within the other local government's contractual arrangements with one of the WtE facilities. The main opportunity being the Rivers Regional Council member councils that have set waste delivery commitments to the Kwinana WtE facility that requires the member councils to pay if the waste delivery is below the committed quantity.

In the event that the MRC was wound up and waste disposal becomes a ToVP responsibility, the same options above would be available to the Town, however, with far less waste quantity in comparison to the MRC quantity, the economy of scale would not be there and hence, the WtE disposal rate may not be as low as what could be achieved with a larger MRC critical mass.

With the ToVP being located in the Perth southern corridor, there is minimal difference between the delivery of waste to Tamala Park (40 km) and the delivery of waste to the WtE facilities (Kwinana 38 km, East Rockingham 45 km); hence, there will be minimal change in the Town's transport cost. The difference in disposal cost between Tamala Park and the WtE facility will determine if there is a cost advantage or disadvantage between the two disposal options. The environmental and likely social (community acceptance) of the WtE solution would be the advantageous, as opposed to landfill disposal.

WtE has the potential to be a significant “game changer” within the waste industry, as it provides a recycling disposal option for a wide range of materials, as opposed to the more traditional recycling options, which target a specific material type or range of materials. This “catch-all” type of recycling solution is; however, only one level above landfilling in the waste hierarchy.

The ability of WtE facilities to receive a wide range of waste materials means that a large portion of the ToVP waste stream could be diverted to one of these facilities and as a consequence, the ToVP would see a dramatic improvement in its recycling rate, potentially above the Waste Authority 2025 waste diversion target of 67% and 2030 target of 70%, albeit achieved via only one step up the waste hierarchy ladder.

At present, the great unknown is the gate fee to be charged at the WtE facilities. Values in the low \$120/tonne have been mentioned in the waste industry; however, the true long-term sustainable cost is yet to be established. This will only be known once a WtE facilities have been operational for a number of years. As the MRC has discovered through the Neerabup RRF, it takes a few years of operation for a complexed facility to determine its true cost of operation. This is ultimately the actual cost of operation and a reasonable profit margin that will have to be paid by the waste industry in order for the facilities to survive. It is not important what the introductory gate rate is, as this is typically a “honeymoon” rate to get the customer. No commercial operation can afford to subsidise its customers over the long-term and eventually, the gate fees have to increase to a level of sustainability for the WtE facilities. It is this sustainable gate rate that the waste industry is most interested in. This will ultimately determine the competitiveness of this technology and hence its long-term success in the waste industry.

A further consideration is that there is the potential that the waste levy could be charged on some waste being received at the WtE facility as an encouragement for the industry to pursue recycling options that are higher up the waste hierarchy and hence achieve an improved environmental outcome. The extent to which the levy may be applied is likely to be a function of the quality of waste being sent to WtE, this being a function of the degree of pre-processing or front-end sorting that the waste goes through before it ends up at the WtE facility.

Currently, a three-bin kerbside collection system incorporating GO is considered by the Waste Authority to be adequate “front-end” sorting such that the resultant waste is deemed as being waste residue that is suitable for disposal at a WtE facility. Those local governments that do not implement a three-bin collection system would likely incur a waste levy on disposed waste.

As has been seen in the landfill industry, the waste levy is a live tool for encouraging change in the waste industry; hence, it can be reasonably anticipated that, over time, the waste levy will be progressively applied to the WtE industry to ensure that waste recycling occurs as high up the waste hierarchy as is economically possible, this being seen as continuous improvement within the waste industry.

In summary, WtE has the potential to dramatically improve the ToVP's recycling rate, albeit at the lower end of the waste hierarchy; however, at this stage it is uncertain what the cost of disposal at a WtE facilities will be. This disposal rate will ultimately determine the success of this type of solution.

## **12.10. Sustainable Purchasing**

The ToVP has a responsibility to lead by example in sustainable waste management practises, this includes using the Town's substantial purchasing power to encourage the consumption of sustainable products. Ideally, this revolves around the purchasing of products that generate the least waste (waste avoidance), those items that are made of recyclable materials or materials that are easily recyclable (optimising recycling) and material that are locally manufactured from recyclable materials (supporting local recycling efforts).

The ToVP has a purchasing policy which includes Sustainable Procurement and Corporate Social Responsibility. This portion of the policy encourages the purchase of products that can be refurbished, reused, recycled and/or reclaimed.

As part of the Town's continuous improvement in sustainable waste management, the Sustainable Procurement and Corporate Social Responsibility should be actively encouraged and monitored to ensure that where possible, sustainable purchasing is undertaken.

## **12.11. Community Education**

Education of the community is a multi-faceted activity that needs to be undertaken in a structured and organised fashion. Education can revolve around influencing community purchasing habits to achieve optimum waste avoidance, being the highest level in the waste hierarchy, through to providing guidance on the preferred method of waste disposal to landfill, being the lowest level in the waste hierarchy. There is no limit to the type of education that can be offered to the community in order to influence waste management behaviours.

The ToVP needs to clearly identify the outcomes to be achieved by the proposed waste education effort and implement a program that delivers this in a simple and concise manner. The various aspects of the education strategy need to link together to form a unified message to the community. As an example, the implementation of organics bin systems by MRC member councils to divert greenwaste and food waste out of the general waste bin was counterproductive to the Neerabup RRF operations and ultimately resulted in its premature closure. These are numerous options for the management of domestic organic waste. Which is the option that the community members are to embrace and why? Community education needs to clearly address the desired outcomes, but also provide information as to the reasons why.

Community education is an ongoing activity, whereby the same message, or a slight variation thereof is regularly communicated to the community to reinforce and remind the community of the desired outcome. This can be an expensive and time-consuming activity; however, is essential in achieving the desired outcomes over the long-term. A one-off education campaign will have a one-off spike in success, with a rapid drop-off in interest to the vast majority of the community. Invariably, those members of the community that actively embrace community education are the converted 20% (if not less) of the community. It is the remaining 80% of the community that will have the most influence over what is trying to be conveyed and it is this portion of the community that needs the ongoing “subliminal” re-education in order to dramatically improve the success rate.

Unfortunately, the success of community education is often difficult to gauge and with the large cost associated with this ongoing process, it is sometimes difficult for the Town to justify the expense in lieu of other relevant local government activities.

Often, the message that is being communicated to the community is relevant to all Metropolitan local governments, if not all West Australian local governments. To this end, the ToVP should explore joint community education activities amongst other local governments. To a degree this is being achieved by the MRC; however, with more of a northern suburbs orientation due to the proximity of the MRC activities at Tamala Park and Neerabup, the affect thereof being somewhat minimal to the ToVP.

## **12.12. Community Involvement**

The vast majority of waste recycling activities cost more than a typical landfill disposal solution, even after the impact of the landfill levy. As the ToVP progresses with increased waste diversion from landfill and also strives to achieve an improved recycling hierarchy outcome, the cost of recycling will increase dramatically. To reduce the impact of this dramatic cost increase, the ToVP should encourage community participation in specific focused areas. This community involvement can vary from word-of-mouth education to direct involvement in managing and operating small-scale waste management activities. Community involvement is about tapping community enthusiasm and effort to further progress recycling and waste diversion activities within the Town at minimal direct cost and effort by the ToVP. The ToVP is to primarily provide a supporting role to facilitate the community involvement. It is not about the ToVP avoiding waste recycling costs and effort at the expense of the community, but more about the community assisting the ToVP to achieve a higher waste recycling outcome by joint involvement in the overall recycling activities within the Town.

Typically, community groups are well suited to provide small-scale services to others in the community. This could involve the operation of a permanent reuse shop and targeted recycling activities at a convenient local venue, the promotion and managing of a temporary community swap meet in shopping centre parking lots or sports fields through to the holding of community education workshops to further educate the wider community on the “dos and don’ts” of recycling within the Town. All of these activities should be run and managed by the community with overarching support from the ToVP. For the activities to be self-sustaining, there is a need that the community be actively supportive, involved and see the ultimate benefit of the effort in advancing waste diversion and recycling. If there is some net revenue gained from the community activities, this should be returned to the community, ideally to further the recycling activities or to implement additional recycling activities.

The extent of involvement of the ToVP in these community activities should ideally be at a level of facilitating meetings and providing venues to encourage the community to conceptualise activities and to then take the lead in implementing the solutions. If the ToVP needs to be extensively involved in the initial development process, then it is likely that there will be insufficient community enthusiasm to carry forward the project over the long-term and hence, the ToVP will need to have a permanent role in managing or operating the particular activity.

Ideally, the community only get involved in activities that they are willing and able to manage and operate, with the ToVP only providing a supporting role. With the ToVP providing this supporting role, there is significantly more opportunity for the community to access funding for various projects than would be the case if the ToVP was not involved.

The Waste Authority and other State, Federal and private organisations provide funding opportunities for community groups to support a wide range of waste diversion and recycling activities. Typically, these activities need to be aligned with the specific strategic direction promoted by the funding organisation in order to receive funding.

Waste management related community activities could also be combined with other broader community involvement within the ToVP. This increases the exposure of the recycling activity and potentially feeds into existing community activities, which lessens the organisational effort for the waste management activity.

An additional aspect of community involvement that the ToVP may consider is a model whereby the ToVP identifies a specific recycling need or opportunity and takes the lead in developing the solution; however, there is a role for the community as the operator or part-operator of the solution. An example may be where the ToVP sets up a swap/reuse shop, provides the location, covers the running cost and promotes the activity to the residents of the Town, while the community runs the facility with only minimal involvement of the ToVP. This is seen as more of a cooperative arrangement, whereby the ToVP provides the foundation for the activity, while the community provide the manpower. The benefit to the ToVP is that it is able to shape operations in a direction that reduces its effort in particular waste management activities or achieves a preferred waste recycling hierarchy outcome, that being reduced bulk verge waste to be collected and the material being reused by the community – a win-win situation.

### **12.13. Funding**

There are numerous sources of funding to support a wide range of waste management activities. Funding is available for the ToVP as well as local community groups, typically, funding is directed to encourage the desired outcomes sought by the fund provider, with the extent of funding proportional to the desired outcome.

The ToVP is to monitor the availability of funding sources and the outcomes sought by the funding suppliers. Should the ToVP and the local community's waste management direction align with the outcome of the available funding, then there is a substantial opportunity to obtain some funding to assist in a range of waste management activities.

The ToVP is to be aware that generally funding is seen as “seed funding”, whereby the fund provider hopes to encourage the establishment of an activity and in time, the activity operator, be it the ToVP and/or the community takes over the cost of operating the activity, or in the rare circumstance, the activity becomes self-funding or profitable.

The Waste Authority is the primary source of funding and sets out an annual business plan which provides insight into the direction that the funding is likely to be focused.



## 13. Waste Minimisation Strategy

### 13.1. Strategy Drivers

In determining the most suitable waste management strategy for the Town, there is a need to consider the drivers that influence the decision-making process; these include:

- Federal and State Government direction;
- Essential services;
- Community needs and aspirations;
- Environmental considerations; and,
- Financial implications.

Of all of the above drivers, only the provision of a general waste disposal service to the community is a mandatory activity that the ToVP is required to provide. All other waste management activities are discretionary. Consequently, it is for the ToVP to determine which drivers influence the direction taken in future strategic waste management.

Depending on the waste management initiatives being considered by the Town, the different drivers will have differing levels of importance when determining the benefit of each initiative. In some instances, community acceptance will be the primary driver, while in others, the Town's ability to afford the implementation and operational cost will be the determining factor. To a lesser degree environmental considerations will be the major driver, as typically, the management of waste streams that have a high potential for environmental harm are regulated at State Government level and the management thereof prescribed and consequently non-discretionary.

Ultimately the Town has a finite financial ability to pay for all waste management activities. Once the essential services are covered, discretionary spending can be considered.

### 13.2. Strategic Direction

For the Town to plan its long-term strategic waste management initiatives, there needs to be relatively firm overall direction established to guide decision-making. Over time, this overall direction will be subject to change as there are changes within the waste industry, such as Government direction and funding initiatives, new technology or new waste processing facilities.

Although the State Waste Strategy sets 67% waste diversion from landfill by the end of June 2025 and 70% by the end of June 2030 as the ultimate targets, this is not a regulatory target, simply an aspiration. Many local governments within the Perth Metropolitan area have adopted this as the benchmark of success. This is seen as a reasonable position for the ToVP to adopt as its primary motivation towards improved waste management within the town. Community involvement and satisfaction being another important consideration.

### 13.3. Strategic Success

Having a finite waste diversion target (currently 67% by end of June 2025) provides a solid and easily defined benchmark from which to gauge the success of past waste management activities and to guide future activities.

Gauging the success of community involvement and satisfaction with past (and proposed) waste management activities is less easily determined; however, this can be assessed through interest in activities requiring active community participation and through community surveys. Care is to be taken to ensure that the waste strategy achieves broader community involvement and satisfaction and not simply that of a small group of waste management activists.

Financial success is measured by the cost of achieving the above successes. It is not about saving money, but spending available resources to achieve the maximum success.

## 14. Proposed Activities

### 14.1. Proposed Activity Descriptions

Following the review of the previous strategic waste management plan, the degree of success in achieving the previously proposed activities, discussions with the ToVP, community consultation and based on an understanding of the requirements within the Town, the Proposed Activities for the period 2018 to 2023 are presented in the order of priority.

**Table 14.1 – Proposed Activities – 2018 to 2023** provides the table of Proposed Activities in the order of priority, including related details and comments.

**Table 14.1 – Proposed Activities – 2018 to 2023**

No.	Activity	Details/Comment
<b>Year 1 - 2018 – 2019 Financial Year</b>		
1.1	Appoint a responsible Council Officer as the custodian of the SWMP.	<p>Formalise the appointment of a Council Officer as the custodian of the SWMP. The typical role of the officer would be to manage the implementation of the SWMP to ensure that, as best possible, the proposed activities are actioned in a timely and efficient manner. The responsible officer would ideally be at management level and be in a position to allocate sufficient resources to undertake the various waste management activities, ensure that the activities are carried out and then report to Council on a regular basis.</p> <p>Achievement as of December 2021 – Work in progress</p>
1.2	Develop a clear policy statement on the drivers that influence waste management decision-making to increase waste diversion within the ToVP and establish relevant benchmark targets against which achievements can be gauged.	<p>Typically, local governments use the State Waste Strategy Targets against which to benchmark success. This is a reasonable starting point; however, there also needs to be consideration for community involvement and satisfaction. Once the decision-making drivers have been agreed by Council, these drivers will provide the Council Officers with a framework around which to investigate and recommend future waste minimisation activities.</p> <p>Achievement as of December 2021 – Work in progress</p>
1.3	Develop a comprehensive community education strategy.	<p>Once the waste minimisation decision-making drivers have been agreed by Council, the ToVP should then develop a comprehensive community education strategy, in conjunction with community input. The strategy should relate to the overall method of community education, not the specific message relating to a particular activity. Typically, the strategy would identify aspects such as general education (eg. Annual Waste Guide, waste education courses such as WASTEless) and also the project specific education (eg. the rollout of an organics bin collection with an initial, intensive education campaign and then subsequent smaller “top-up” education campaigns reaffirming the message and providing an update of success).</p> <p>Along with the development of the community education strategy, there is a need to identify the conceptual budget costs associated with these activities, not the dollar values, but possibly a percentage of the annual waste management budget for general education and a percentage of the annual project cost for the project specific education process. The project specific percentage will</p>

No.	Activity	Details/Comment
		<p>vary depending on the complexity of the proposed project and the degree of community involvement required.</p> <p>The strategy should also consider how to gauge the success of the community education effort (education cost) versus the results achieved (cost reduction due to effective community participation). This is not necessarily an easy exercise and will generally only be identified by trend changes monitored over time; typically, annual trends.</p> <p>Achievement as of December 2021 – The ToVP has progressed an Earthcarers program to inform the community on how to reduce waste generation, improve waste diversion from landfill and to optimise existing recycling systems. In conjunction with the Eastern Metropolitan Regional Council, the Town is also planning pop-up stalls providing information on the proposed roll-out of the GO bin in August 2022. Cleanaway, as the Town’s yellow bin collection and sorting contractor, carries out a community education program emphasising the benefits of kerbside recycling and providing information on what and what not to put in the yellow bin.</p>
1.4	<p>Detailed investigation of bulk bin vergeside collection or other system changes to improve vergeside recycling and potentially reduce costs and then if deemed advantageous, implement the system(s).</p>	<p>Liaise with other local governments that have implemented an on-demand bulk bin verge waste collection service to gauge the relevant success of this system. Success being primarily an assessment of the associated cost in comparison to the local government’s costs prior to the implementation of the new system. The cost should be broken down into the collection/sorting cost and the residual disposal cost. A further determining factor being the change in waste quantity being collected (presumed reduction). This may be as a result of stockpiling of waste by residents who are yet to embrace the new system and in time, this waste will be presented and hence the Town will ultimately incur the waste handling cost. Another consideration is the potential reduction in vergeside “scavenging” opportunity which will reduce the reuse component of this waste stream and result in more waste going to landfill.</p> <p>Other considerations are to retain the current collection method; however, pursue improved sorting and recycling opportunities for the waste stream prior to going to landfill.</p> <p>Achievement as of December 2021 – Work in progress</p>
1.5	<p>Work with community groups and charity organisations to identify opportunities to extract reusable items from the bulk verge waste prior to collection.</p>	<p>Reuse of materials is preferred to recycling; hence, prior to bulk verge waste being collected and sent to a sorting facility, it is preferable that as much reusable material as possible has been removed from the waste stream before collection. Historically, kerbside “scavenging” has resulted in the removal of some reusable materials. With increased community and/or charity organisation involvement more</p>

No.	Activity	Details/Comment
		<p>can be done to remove reusable materials. This activity becomes more important if the ToVP opts to implement an on-demand bulk bin service to replace its current vergeside collection service. The ToVP can play a coordination and community education role in improving the diversion of reusable material from the vergeside bulk waste. The ToVP would then have the benefit of reduced waste generation and an associated reduction in collection, sorting and disposal costs.</p> <p>Achievement as of December 2021 – Work in progress</p>
1.6	<p>Assess the State Waste Strategy review outcome and the possible impact to the ToVP.</p>	<p>The State Waste Strategy is currently under review, with the outcome anticipated to be announced in late 2018. The ToVP should assess the outcome of the review to confirm whether there are any changes required to this SWMP.</p> <p>Achievement as at December 2021 – In February 2019, the Minister for Environment launched the WA Waste Strategy: <i>West Australian Waste Avoidance and Resource Recovery Strategy 2030</i>. This waste Strategy set priorities and targets through to 2030. These new priorities and targets were similar to the previous 2020 State Waste Strategy and consequently, there was no need to amend the Town's Strategic Waste Management Plan. There was however a need for the Town to further increase waste diversion from landfill to meet the increased waste diversion targets set in the new State Waste Strategy.</p> <p>Activity completed.</p>
<b>Year 2 - 2019 – 2020 Financial Year</b>		
2.1	<p>Serious discussion with MRC member councils about the potential dramatic impact of the kerbside organics bin on the RRF and the eventual future of the MRC and the possible impact on the ToVP future waste and recycling strategy.</p>	<p>With the larger MRC member councils opting to embrace the kerbside organics bin system, which will ultimately result in the Neerabup RRF becoming less efficient and significantly more expensive to operate, there is little benefit in the ToVP not following suit. The MRC is now put in a situation where there is potentially a need to reinvent its benefit to its member councils (as is currently occurring with the Southern Metropolitan Regional Council). This is an ideal opportunity for the member councils to have a constructive discussion on the future of the MRC, with each member council considering the individual and communal benefit of the MRC. In these considerations, the ToVP should assess the possible impact on its future waste and recycling strategy and ability to achieve its stated Strategic Policy.</p> <p>Achievement as of December 2021 – The MRC and its member councils have considered the financial and environmental impact of the implementation of organics bin collection systems on the RRF and have agreed to shut down the facility. The RRF ceased operations on 31 August 2021.</p>

No.	Activity	Details/Comment
		<p>With the shutting down of the RRF, the ToVP has opted to implement a three-bin kerbside collection system incorporating a GO bin, with roll-out of the system to commence in August 2022.</p> <p>With the implementation of the GO bin, the ToVP will reduce the vergeside bulk greenwaste collections from three to two per year and in time, possibly reduce this down to one collection per year.</p>
2.2	<p>Detailed investigation of the option of a kerbside organics bins and then if deemed advantageous, implement the system.</p>	<p>With the larger MRC member councils opting to embrace the kerbside organics bin system, which will ultimately result in the Neerabup RRF becoming less efficient and significantly more expensive to operate, there is little benefit in the ToVP not following suit. Based on information available from those local governments that have implemented or are in the process of implementing a kerbside organics bin system, there appears to be some financial benefit to the ToVP in following suit. The Town should liaise with these local governments to gauge the relevant success of this system. Success being primarily an assessment of the associated cost in comparison to the local government's costs prior to the implementation of the new system (green bin vs red bin and lime green bin). A further determining factor being the potential negative impact on the Neerabup RRF and the subsequent increase in the RRF operating cost, which the ToVP will have to share with the other MRC member councils.</p> <p>Ultimately, the impact of the relatively low waste tonnage generated by the ToVP in comparison to the overall tonnage that the RRF processes, will mean that the implementation of a kerbside organics bin service by the ToVP will have minimal impact on the RRF gate fee; however, the ToVP will still have to contribute to the change in RRF gate fee due to other member councils changing to an organics bin service. Effectively, the ToVP should make its determination based on cost, as the Town has minimal ability to sustain the RRF operating efficiency by not pursuing the organics bin service option.</p> <p>Achievement as of December 2021 – With the shutting down of the RRF, the ToVP has opted to implement a three-bin kerbside collection system incorporating a GO bin, with roll-out of the system to commence in August 2022.</p> <p>With the implementation of the GO bin, the ToVP will reduce the vergeside bulk greenwaste collections from three to two per year and in time, possibly reduce this down to one collection per year.</p>
2.3	<p>Increase participation in existing recycling systems.</p>	<p>Improving the efficiency or expanding the coverage of existing systems is a highly cost-effective means of increasing waste diversion from landfill. This can incorporate discussion/agreement with</p>

No.	Activity	Details/Comment
		<p>existing service providers to increase the range or scale of the existing service and/or community education to better utilise the existing services. Examples being:</p> <ul style="list-style-type: none"> <li>• Ensuring that the appropriate material is placed in the green bin and the yellow bin. That is to reduce the residual content in the yellow bin and to remove recyclable packaging material from the green bin;</li> <li>• Encouraging residents to use larger yellow bins (360 L) if needed as opposed to placing recyclable in the green bin once the yellow bin is full;</li> <li>• Increased promotion of Hazardous Household Waste collection days and locations; and,</li> <li>• Install additional small item recycling stations at public places such as shopping centres, swimming pool, post offices, police stations and larger office complexes etc. (batteries, fluoro globes, mobile phones, ink cartridges and other small items).</li> </ul> <p>Achievement as of December 2021 – Work in progress</p>
2.4	Discussion with the City of South Perth about increasing the range of waste diversion activities at the South Perth Recycling Centre.	<p>The ToVP residents are able to utilise the City of Perth waste transfer station. There is an opportunity to increase the range of waste diversion activities at this facility, which would benefit both the ToVP and the City of South Perth. The Town should discuss opportunities for an expanded range of waste diversion activities at this facility. Typically, these could include household hazardous waste, used paint, gas bottles, fire extinguishers etc.).</p> <p>Achievement as of December 2021 – Work in progress</p>
2.5	Data collection refinement.	<p>The ToVP currently collects data on its waste management achievements from a range of sources, mainly the MRC and its waste collection contractors. In order to better understand the current position and to identify potential future waste minimisation improvements and initiatives, the ToVP should refine its data collection system to gather more information on the type and quantity of waste going to landfill. This includes the green wheelie bin (MRC waste audits have assisted in this), residue from the yellow bin, residue from the vergeside bulk waste system and self-haul waste to drop-off facilities. Ideally there should be some liaison with the MRC and its individual member councils to try and develop a consistent data reporting system.</p> <p>Achievement as of December 2021 – Work in progress</p>

No.	Activity	Details/Comment
2.6	Consider the impact of any changes to the State Waste Strategy Targets (current targets end on 30 June 2020).	<p>The State Waste Strategy period of currency ends on 30 June 2020, as does the National Waste Policy. Prior to this date, it is anticipated that the State Government would issue an updated or new State Waste Strategy for a further five-year period, which is likely to be guided by changes at national level. Once this has been announced, the Town is to review the new State Waste Strategy to determine if the Town's current waste management strategy and/or direction remains relevant. If necessary, this Strategic Waste Management Plan may need to be amended to cater for the new State strategic direction.</p> <p>Achievement as of December 2021 – In February 2019, the Minister for Environment launched the WA Waste Strategy: <i>West Australian Waste Avoidance and Resource Recovery Strategy 2030</i>. This waste Strategy set priorities and targets through to 2030. These new priorities and targets were similar to the previous 2020 State Waste Strategy and consequently, there was no need to amend the Town's Strategic Waste Management Plan. There was however a need for the Town to further increase waste diversion from landfill to meet the increased waste diversion targets set in the new State Waste Strategy.</p> <p>Activity completed.</p>
<b>Year 3 - 2020 – 2021 Financial Year</b>		
3.1	Assess the impact of the introduction of the Container Deposit Scheme on waste management systems and costs.	<p>Based on the assumption that the Container Deposit Scheme will be introduced in early 2019, once it has been in operation for a minimum of one year, the Town should undertake an investigation to assess the impact of the Container Deposit Scheme on the type and quantity of materials presented in the yellow bin and the potential cost impact to the Town (change in processing cost, up or down). The kerbside collection contractor would assist in this regard. The Town should also liaise with other local governments to compare statistics to gain a more aggregated view across the Metropolitan area. Based on the outcomes of the investigation, there may be a need to implement some changes to the Town's waste management activities or to undertake some community education to improve system efficiencies.</p> <p>Achievement as of December 2021 – With the implementation of the Container Deposit Scheme (CDS) in October 2020, there was a comprehensive audit of the content of the yellow wheeling bin undertaken at State level to determine the typical content of CDS containers in the yellow bin waste stream. The result of this audit was that the sorting facilities receive the deposit for the assessed typical quantity of CDS containers in the waste stream. There was then a "profit share" system set up</p>



No.	Activity	Details/Comment
		<p>whereby local government receives a portion of the CDS deposit revenue from the sorting facilities. The ToVP receives part of the CDS revenue from its yellow bin collection and sorting contractor. Action completed.</p>
3.2	<p>Consider the development of a reuse shop, possibly in conjunction with the MRC, City of Perth and/or the City of South Perth, ideally operated by an active community group.</p>	<p>The MRC and the City of Stirling both operate successful reuse and recycling facilities. The Town should investigate the possibility of developing a reuse and recycling shop in conjunction with other neighbouring local governments or the southern MRC member councils. The most obvious candidate being the City of South Perth at its South Perth Recycling Centre, as this is an existing waste management facility and in close proximity to the ToVP. Ideally, once set up, the facility could be operated by a local community group. This reduces the facility operating cost, provides a facility for the community to be actively involved in waste minimisation and provides an opportunity for knowledge sharing amongst the community (operators and customers). The MRC would likely be willing to assist in the establishment of the facility and possibly contribute to the facility operating cost. Achievement as of December 2021 – Work in progress</p>
3.3	<p>Optimise community involvement in local small-scale recycling solutions and initiatives.</p>	<p>There are a range of relatively simple, small-scale activities that the community can get involved in that would divert waste from landfill or increase the opportunity/efficiency of recycling. The ToVP should liaise with the various active community groups within the Town to identify where there are opportunities, these being improvements to existing activities or the implementation of new activities. Through the Town's involvement, there will be more encouragement for the community to get involved and also the opportunity to obtain some funding from the Waste Authority or other sources for the implementation of recycling activities.</p> <p>Typically, these small-scale recycling solutions could include:</p> <ul style="list-style-type: none"> <li>• Worm farms and backyard composting. Organic materials are currently being processed at the Neerabup RRF and potentially through a future kerbside organics service; hence community education and the cost benefit of this type of solution needs to be considered;</li> <li>• Increased number of drop-off facilities at community locations for small recyclable items such as batteries, fluoro globes/tubes, mobile phones, ink cartridges and other small items. This could be expanded to larger items such as E-waste, wet cell batteries etc. at some locations. The collection and appropriate handling of the material needs to be considered;</li> </ul>

No.	Activity	Details/Comment
		<ul style="list-style-type: none"> <li>• Working with community groups to expand knowledge base, improve community involvement, get ideas, promote community education from within. Use current momentum of the recent plastic bag ban to increase waste minimisation awareness. With the impending introduction of a container deposit scheme, there will presumably be significant state-wide community education, this is again an opportunity to increase waste minimisation awareness; and,</li> <li>• With the immanent implementation of the Container Deposit Scheme (early 2019) there is an opportunity to develop improved small-item recycling drop-off stations in close proximity to the container return stations.</li> </ul> <p>Achievement as of December 2021 – Work in progress</p>
3.4	Increased community education about what can be placed in the yellow bin (and lime green bin if the organics bin option has been implemented).	<p>There is currently approximately 15% to 20% waste residue in the yellow bin (typical Metropolitan wide average) and approximately 30% recyclable materials in the green bin (MRC waste audits). With some dedicated community education, the percentage of waste going to landfill could be easily reduced below current levels in both the yellow and green bins. This improvement in waste diversion would be achieved without any need to change waste services, simply get the community to use the existing systems more correctly. The cost of the community education campaigns (this would need to be an ongoing process) would be compared to the reduction in landfill waste disposal cost to assess the net financial benefit of this activity. Again, the recycling benefit is not to be ignored. This activity is to include the organics bin if it has been implemented.</p> <p>Achievement as of December 2021 – Planning for the August 2022 roll-out of a GO bin. Working with the EMRC.</p>
<b>Year 4 - 2021 – 2022 Financial Year</b>		
4.1	Investigation of possible contingency planning to ensure continuous waste management services.	<p>Based on current waste management services, assess the possible impact to the Town of each of these services being suspended or ceased. If the consequence is deemed significant, then there is a need to consider possible contingency measures to best manage the consequence of this type of event occurring. The main services that would have a direct impact on the community would be the kerbside waste and recyclable collection services. These services have a collection component and a disposal component. Either of these components could potentially interrupt the service to the community. Typically, the collection component is the more challenging to replace with short notice, as there are not fleets of side-lift vehicles readily available to take up the additional workload (in 2014</p>

No.	Activity	Details/Comment
		<p>Cleanaway had its whole national fleet grounded; hence, this is a real consideration). The Town is to work with its service providers to develop contingency plans in the event that there is an interruption to one of its major waste management services.</p> <p>Achievement as of December 2021 – Work in progress</p>
4.2	<p>Work with the collection contractors to increase the range of materials that can be recycled.</p>	<p>The Town should discuss with the current recycling collection contractor the option of increasing the range of recyclable materials that can be placed in the yellow bin. If agreed, this will increase the quantity of material being recycled. There may be some resistance to change by the current collection contractor, unless the ToVP is prepared to cover any cost increases; however, moving forward, the Town should include in its future recycling collection tenders either the stipulation that the successful contractor must receive a specific, expanded range of materials or have a tender selection criterion whereby there is preference for a greater range of acceptable material types. Typically, the increase range of materials could include plastic film (plastic bags/wrap), polystyrene, small household appliances, crockery/cutlery, all plastics, ceramic and terracotta etc. In addition, It is to be noted that the green bin is processed through the Neerabup RRF, which only removes organic material; consequently, the more inorganic material that can be removed from the green bin, which has a processing cost in the order of \$250/t, and transferred to the yellow bin, which is processed for substantially less, would result in a cost saving to the Town, even though the inorganic material may not be recyclable and still end up in a landfill. If there is an increase in the quantity of residue being generated in the yellow bin, this will result in an increase in the sorting cost of the yellow bin material, which will be passed on to the Town. However, this increased sorting cost will still be substantially less than the RRF processing cost; hence, a net cost saving to the ToVP.</p> <p>With the bulk verge waste also being sorted before going to landfill, the same opportunity exists with this waste stream; however, the benchmark cost would be the landfill disposal cost in order to assess the net cost benefit. The recycling benefit is not to be ignored.</p> <p>Achievement as of December 2021 – Work in progress</p>
4.3	<p>Encourage and monitor sustainable purchasing within the ToVP.</p>	<p>Sustainable purchasing forms part of the Town's Sustainable Procurement and Corporate Social Responsibility policy. The implementation of this policy should be actively encouraged and monitored to ensure that where possible, sustainable purchasing is undertaken. In particular the use of recycled construction products and the use of soil conditioner produced by the Neerabup RRF should be encouraged. Monitoring of the range and quantity of sustainable products should be undertaken and</p>

No.	Activity	Details/Comment
		<p>an annual summary thereof produced. This should then be used as the benchmark as the minimum level of sustainable purchasing used for the following year. Continuous improvement will see the Town leading by example and demonstrating to the community that it is committed to waste minimisation.</p> <p>Achievement as of December 2021 – Work in progress</p>
4.4	Waste avoidance initiatives with other local governments.	<p>The vast majority of the Town's waste minimisation activities, challenges and opportunities are common to all Metropolitan local governments; consequently, there are similar solutions and community education requirements. The ToVP should work with other local governments to identify synergies between the organisations that could be developed to improve waste minimisation and/or reduce the cost of these activities to the individual organisations. In addition, there is the increased opportunity to obtain state funding for a wider range of waste minimisation activities if there is a greater population being served or the potential for a greater quantity of waste to be recycled. To a degree, the ToVP achieves this through the MRC; however, there are additional synergies that could be identified between some of the MRC member councils or some neighbouring councils outside of the MRC structure.</p> <p>Achievement as of December 2021 – Work in progress</p>
<b>Year 5 - 2022 – 2023 Financial Year</b>		
5.1	Continuation with carry-over activities from previous years.	Continue with previous years' activities as necessary.
5.2	Develop a new Strategic Waste Management Plan for the next five-year period.	Use this current SWMP (amended as applicable over the years) as the basis for the development of the new SWMP, which will be ready for implementation by 30 June 2023.
<b>General Items – Relevant to most years</b>		
1	Annual in-house review of this Strategic Waste Management Plan	Towards the end of the year or early in the following year, the Council Officer responsible for the custody of the SWMP is to undertake a review of the SWMP to assess its current relevance and to review the Town's waste management achievements against the Proposed Activities for the year and to assess the Proposed Activities for the following year, including if, who and how these future Proposed Activities are to be undertaken. Ideally this review will include a comparison of the current waste diversion percentage achieved against the previous year's achievement and the Town's strategic policy benchmark targets (State Waste Strategy target). Following this annual review, a brief

No.	Activity	Details/Comment
		<p>report should be presented to Council as an update to the ongoing waste management activities within the Town.</p> <p>Achievement as of December 2021 – Undertaken annually. This current December 2021 review is in addition to the ToVP annual in-house reviews.</p>
2	Allocated budgets for the implementation of identified activities.	
3	Continuous improvement of existing systems.	
4	Progress carry-over activities from previous years.	

## 14.2. Proposed Activity Timing

The proposed activities have been listed in order of priority; however, to provide some guidance on the potential timing of the proposed activities, they have been split into the first four years of the five-year plan, with the last year being available for the development of the new Strategic Waste Management Plan for the next five years, implementation of projects identified or partly completed in the previous years, continuous improvement and to undertake any activities that have been delayed or are lagging behind the proposed timeline.

The potential timing of the proposed activities is simply a guide to the Town. Following consideration of the proposed activities, the Town may change the timing of activities to suit its specific needs and changing waste management environment.

## 15. Review

This Strategic Waste Management Plan sets out the Town's proposed activities for the period 2018 to 2023. In order to achieve this, it is essential that this Strategic Waste Management Plan be regularly reviewed.

The review is primarily to gauge the Town's actual achievements against the proposed activities to provide direction as to where the necessary effort is required in order to achieve the desired outcomes by the end of the Plan validity period.

A secondary component of the review is to assess the validity of the Strategic Waste Management Plan direction in comparison to the Town's and the Waste Authority's direction. It is acknowledged that during the five-year validity period of this Plan, there is the possibility that some aspects of this Plan may lose relevance and may need to be amended to suit the latest Town or Waste Authority direction.

In the event that there is a major change in waste management direction, such as the establishment of a waste to energy facility or substantial change to the MRC structure, then the impact of the change on the ToVP should be considered and if necessary, this SWMP review and amended accordingly.

As a minimum, this Plan should be reviewed internally on an annual basis, with a summary review presented at a Council meeting.

Towards the end of the Plan validity period, the ToVP should develop a subsequent Strategic Waste Management Plan for the next five-year period. This current Plan would form the baseline against which the successes over the past five years can be gauged and be the basis for the development of the future plan.

Annually the ToVP has reviewed this SWMP for overall validity. As a result of these internal review, there have been no changes made to this Plan.

In December 2021, the ToVP commissioned an external review of this SWMP by *IW Projects* (the original Plan author), which resulted in the Plan being updated to reflect recent relevant change in the waste industry since July 2018. In addition, the Proposed Activities were reviewed to determine ongoing validity and achievement within the original timeframe.