

BEYOND

our
beyond
zero waste
strategy

2030

ZERO

The word 'ZERO' is rendered in large, white-outlined letters. Inside the 'Z', there is a line-art illustration of a truck. Inside the 'E', there are two line-art illustrations of trash bins. Inside the 'R', there is a line-art illustration of a recycling symbol.

MORNINGTON
PENINSULA
Shire

Shire Educational Material

The Mornington Peninsula Shire's 6 Week Compost Challenge

Put me on your fridge!

The average Victorian household throws out approximately \$2,200 worth of food each year, that's \$42 per week! Use the food waste table to track how much food waste your household is throwing away.

Step 1 – Plan

- Choose what you will use to measure your food waste
- Write down the size of container/bin/bag

Step 2 – Track your waste

- Fill in this table with your data at the end of each week or online (emailed Week 2)
- Empty your container into your compost bin, worm farm or bokashi bin

SUP? single use plastic there's a better choice

DOB in a DUMPER

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Mornington Peninsula Shire acknowledges and pays respect to the elders, families and ancestors of the Bunurong/Boon Wurrung people, who have been the custodians of this land for many thousands of years. We acknowledge that the land on which we meet is the place of age-old ceremonies, celebrations, initiation and renewal; and that the Bunurong/Boon Wurrung peoples' living culture continues to have a unique role in the life of this region.



Disclaimer: This report has been prepared with the assistance of MRA Consulting Group with data available at the time and provides a snapshot of waste on the Mornington Peninsula. Although all care has been taken to ensure that the contents are accurate, the Mornington Peninsula Shire Council cannot guarantee that this report is without flaw and therefore disclaims all liabilities for any error, loss or other consequences which may arise from you relying on any information in this report.

Our Councillors

Port Phillip

Briars
 Cr Rosie Clark 0437 152 991
 Cr Bev Colomb 0418 506 638
 Cr Sam Hearn 0437 170 083

Watson
 Cr Julie Morris 0437 156 531

Seawinds
 Cr Simon Brooks 0437 174 486
 Cr Antonella Celi 0408 974 143
 Cr Frank Martin 0437 153 578

Nepean
 Cr Hugh Fraser 0428 258 354
 Cr Bryan Payne 0437 193 039

Red Hill
 Cr David Gill 0437 129 016

Cerberus
 Cr Kate Roper 0437 134 168

Executive Summary

“Working in partnership to achieve zero waste and to build a culture that prevents waste impacting the environment, by first avoiding waste and then transforming it as a resource back into the local economy.”

Mornington Peninsula Shire Council (the Shire) is adopting an ambitious target to send zero waste directly to landfill by 2030. Following extensive consultation, the Shire has developed a Beyond Zero Waste Strategy (the Strategy) that contains actions across the next ten years to support a circular economy and meet the Shire’s annual greenhouse gas emission reductions target.

In the circular economy of the future, waste will be avoided, and products, processes and supply chains will be designed to maximise resources. Climate change and material use are linked, as moving to a circular economy builds regenerative systems that reduce greenhouse gas emissions and responds to the climate emergency.

The Strategy will provide innovative, cost effective and accessible waste and litter management services that achieve maximum landfill diversion, support community groups, and achieve a high level of community satisfaction across the Peninsula.

Building on existing policies and community feedback, the guiding principles that have shaped this Strategy include:

1. Waste hierarchy – to inform and prioritise decision making;
2. Informed decision making – based on the examination of arising options within the industry and not confined to the Shire’s geographic boundaries;
3. Best value – considering quality and cost, community needs and continual improvement in resource recovery outcomes;
4. Sustainability – considering economic, environmental and social benefits;
5. Carbon footprint – considering the Shire’s commitment to carbon neutrality and addressing the climate emergency; and
6. Shared responsibility – engaging community in participating, education and behavioural change.

Currently 46% of the materials generated by the average Peninsula household is disposed in landfill. Whilst waste generation is on an upwards trend, the Strategy will implement programs and initiatives that maximise opportunities to reduce, reuse, recover or sustainably treat waste, and prevent it harming the environment.

For example, the Shire will work to improve resource recovery systems by assisting the community to divert 12% of potentially recyclable materials that are currently disposed in household garbage bins, and a further 40% through the introduction of a combined food and garden organics kerbside service.

Behaviour change supported through education, infrastructure and enforcement will help build community capacity and achieve a vision of zero waste. In addition, the Shire will adopt sustainable procurement policies that involve offsetting the volume of municipal waste disposed at an Alternative Waste Treatment facility through the purchase of an equivalent volume of recycled materials in Shire projects and activities such as civil works and road construction.

By 2030 we want to achieve the following targets:

- Annual reduction of 1.7% per person in waste related greenhouse gas emissions;
- 20% reduction in household waste;
- Divert 100% of household waste from landfill;
- 50% reduction in litter and 30% increase in illegal dumping incidents investigated;
- Recover 100% of non-kerbside recyclable materials from landfill; and
- Use at least 22,829 tonnes of recycle content in construction and civil works

The Strategy comprises of the following six strategic objectives and associated actions and activities that will be delivered across the next ten years through partnership with the community.

Our Waste Goal 1 – An empowered community

- 1.1 Demonstrate leadership resource recovery.
- 1.2 Design targeted programs and explore partnerships with the community to reduce waste generation and promote reuse initiatives.
- 1.3 Phase out single-use plastics on the Peninsula

Our Waste Goal 2 – Net zero emissions

- 2.1 Reduce and prevent food waste from landfill
- 2.2 Close and remediate Rye Landfill
- 2.3 Increase gas capture at the Rye landfill
- 2.4 Establish an AWT plant and adopt energy from waste practices for residual waste

Our Waste Goal 3 – Recover waste prior to landfill

- 3.1. Implement recycling contamination protocols and improve kerbside recycling services.
- 3.2 Increase recovery of problem household wastes and other recyclables at Resource Recovery Centres.
- 3.3 Improve accessibility of the collection network for non-kerbside recyclable items
- 3.4 Embed Sustainable Procurement and Environmentally Sustainable Design policies across the Shire

Our Waste Goal 4 – A clean and healthy Peninsula

- 4.1 Improve waste collection and resource recovery in public places
- 4.2 Deliver anti-litter behaviour change campaigns
- 4.3 Providing community engagement programs to encourage behaviour change regarding illegal dumping
- 4.4 Adopt proactive prevention model that demonstrates best practice in illegal dumping compliance and enforcement

Our Waste Goal 5 – Data driven decisions

- 5.1 Improve reporting on material that is reused, recycled and disposed to inform continual improvement
- 5.2 Provide regular report cards that update the community on Shire progress towards targets

Our Waste Goal 6 – An innovative and vocal Peninsula

- 6.1 Enabling and supporting strategic partnerships
- 6.2 Implement funding mechanisms to support local waste initiatives
- 6.3 Advocate on behalf of the community to State and Federal government members of parliament on matters of policy and funding

“Currently 46% of the materials generated by the average Peninsula household is disposed in landfill”

Contents

Executive Summary	III		
1 Introduction	1	5.2 GOAL 2.	
1.1 Purpose and Scope	1	Net zero emissions	20
		Organic waste	20
2 Where are we now?	2	Landfill	22
2.1 Demographics	2	5.3 GOAL 3.	
2.2 A Snapshot of Waste on the Peninsula	3	Recover waste prior to landfill	22
2.2.1 What's in our bins?	4	Contamination	22
2.2.2 Our Waste Services	6	Non-kerbside recyclables	23
2.2.3 How we compare to other Councils	7	Sustainable Procurement	24
3 Drivers for change	8	5.4 GOAL 4.	
3.1 Climate Change	8	A clean and healthy Peninsula	25
3.2 Resource Recovery Markets	8	Litter	25
3.3 Policy and Regulation	8	Illegal Dumping	26
3.4 Alternative Waste Treatment	8	5.5 GOAL 5.	
3.5 Community expectations	9	Data driven decisions	28
4 Beyond Zero Waste to Landfill by 2030	10	5.6 GOAL 6.	
4.1 What we heard	12	An innovative and vocal Peninsula	28
4.2 Areas of Influence	13	6 Monitoring and Evaluation	29
4.3 Our Targets	15	6.1 Evaluation Framework	29
4.4 Our Pathway	15	6.2 Strategy Evaluation	29
4.5 Landfill offsets	15	Appendix A – Implementation Plan 2020 – 2025	30
5 Our Waste Goals	18	Appendix B – Evaluation metrics	41
5.1 GOAL 1.		Appendix C – Policies and Regulation	42
An empowered community	18	Appendix D – Strategic Prioritisation	44
Leadership	18	Abbreviations	47
Education	18		
Single-use plastics	20		

List of Tables

Table 1:	
Annual average kerbside waste generated (kg per household)	4
Table 2:	
Average kerbside recycling (kg per household)	5
Table 3:	
Average household green waste collected by kg	5
Table 4:	
Summary of community survey results	12
Table 5:	
Waste Strategy 2025 and 2030 targets	17
Table 6:	
FOGO implementation plan	20
Table 7:	
Public bin infrastructure decision factors	26
Table 9:	
Governance alignment criteria	45
Table 10:	
Broader economic benefits criteria	45
Table 11:	
Social criteria	45
Table 12:	
Environmental criteria	46

List of Figures

Figure 1:	
Mornington Peninsula Shire Council Area	3
Figure 2:	
Total annual tonnages kerbside waste per stream	4
Figure 3:	
Household waste audit by weight (2019)	5
Figure 4:	
Household recycling audit by weight (2019)	5
Figure 5:	
Kerbside waste diverted from council (knowyourcouncil.vic.gov.au)	7
Figure 6:	
Cost of kerbside rubbish per bin (knowyourcouncil.vic.gov.au)	7
Figure 7:	
Cost of kerbside recycling per bin (knowyourcouncil.vic.gov.au)	7
Figure 8:	
Waste strategies and policies framework	9
Figure 9:	
A circular economy framework for the Mornington Peninsula	11
Figure 10:	
Waste hierarchy (EPA Victoria)	11
Figure 11:	
The Shire's area of influence	14
Figure 12:	
Potential waste diversion pathway towards zero waste	16
Figure 13:	
Zero waste diversion of kerbside general waste from landfill	16
Figure 14:	
Victoria's priorities to realise an integrated waste and resource recovery system	44

Mayor's Message

The waste industry is undergoing extensive change and which has presented Council and the community with opportunities to restructure how waste is managed on the Peninsula. The world and the Peninsula is shifting towards a circular economy, where waste is redefined as a resource and product use is maximised through reuse, repair and recycling. In this new waste world, waste is avoided and our natural resources are conserved through prioritising recycled products.

To shift toward zero waste to landfill by 2030 and net zero emissions by 2040, we acknowledge that not one sole organisation can transform our systems. Change will need all parts of the community, political systems and business to come together so the natural resources we enjoy today are protected and available for current and future residents and visitors. Collectively, we can have a huge impact!

The community, education and climate emergency is at the heart of the Beyond Zero Waste Strategy. Council will continue to provide education to the community and lead by demonstrating zero waste principles.

All efforts will be made to prevent waste from being sent to landfill, by avoiding and reusing waste and improving how we sort our waste so that cleaner materials can be recycled. Residents will be able to put their food waste into the green bins and more community recycling hubs will enable us to increase our ability to repurpose our waste.

Council will investigate and trial advances in waste technology and possible incentives for households, business and the community to reduce their waste. We'll offset all residual waste sent to an Alternative Waste Treatment facility by ensuring that equal tonnage of recycled content is incorporated into our buildings, roads and construction.

We will continue to advocate on behalf of the community on local waste solutions that increases our ability to manage waste in Victoria and Australia.

Thank you to everyone for participating throughout the development of this strategy, and the community for their continued passion and advocacy for better waste systems; we are extremely proud to have so many active and committed community groups and individuals. We look forward to working with you all in the transformation of our waste systems.

**Mayor Sam Hearn,
Mornington Peninsula Shire Council**

“All efforts will be made to prevent waste from being sent to landfill...”

1

Introduction

Mornington Peninsula is a meeting ground where marine life from cooler regions of western Victoria mix with the warmer water from eastern Australia, creating unique coastal habitats recognised by UNESCO as a biosphere reserve. It is this unique natural environment that is highly valued as a place to live, work and visit. Minimising our waste impact will protect and conserve these ecosystems, with a future vision where the natural and built environment is respected and cared for, and services promote community wellbeing.

Mornington Peninsula Shire Council (The Shire) is embarking on a pathway to achieve zero waste to landfill by shifting waste management practices, services and initiatives towards a circular economy. Within a circular economy, more efficient production processes and product use, reduces the need to extract virgin materials and consume natural resources. The Shire declared a climate emergency on 13 August 2019, and this Strategy will contribute to local efforts to combat climate change.

To achieve zero waste, the Shire is focused on reducing, reusing, recovering and recycling materials, by treating waste as a resource and energy asset. The linear approach of “take, make, dispose” is no longer an option, and finding solutions to the separation and collection of food waste will form a key part of the transition to a circular economy.

The Shire must find new ways to plan and deliver services that promote sustainable growth and development. Strategic collaborations and partnerships with community, business and government will support the Shire to foster innovation and use resources wisely to meet communities' needs and expectations.

The performance of our waste and resource management system relies on everyone understanding the role they play in waste and resource recovery. This requires effective education to provide an understanding of the systems and processes behind waste management and the behaviours that support waste services and infrastructure to function properly.

1.1 Purpose and Scope

The following Beyond Zero Waste Strategy (the Strategy) outlines the Shire's approach for achieving zero waste on the Peninsula across the next 10 years. The Strategy focuses on waste services provided by the Shire to the community.

The Strategy includes a description of existing waste management facilities and services provided or supported by the Shire, to minimise waste generation and support resource recovery. The Strategy has been informed by a comprehensive review of the Shire's waste management services and extensive community and staff engagement that provided input into the future direction for the region.

Where are we now?

2.1 Demographics

The Mornington Peninsula Shire is situated to the south of Melbourne and has 40 townships spread over 720 square kilometres of land (Figure 1). It has over 190 kilometres of coastline and there is a unique mix of coastal, urban residential and rural development throughout the Shire with a 70% rural and 30% urban split. The region has a complex geography with a diverse socio-economic base.

The population of the Mornington Peninsula is 165,633 and is forecast to grow by 9.34% to 181,097 by 2036. The proportion of residents aged 60 years and over (29%), is higher than that of Melbourne and Victoria (20%) .

The Shire is located between Port Phillip Bay and Western Port, and a short distance to Melbourne's south east commercial centres. The Mornington Peninsula economy is diverse with a value of \$6.3 billion in Gross Regional Product and is comprised of 13,825 businesses. The construction industry is the largest employer industry within the region.

Tourism is another important driver of economic activity for the Mornington Peninsula region. Although 14% of visitors are from interstate and 3% from international markets, the Victorian (especially Melbournians) self-driving, day-tripper visitors and short-stay market dominate the regional tourism industry.

Manufacturing is also a significant economic contributor, small scale and niche manufacturing provides real opportunities for growth. Agriculture has a rich history and connection with the Mornington Peninsula, and the industry provides high value and diversity into non-traditional agricultural activities.

47% of the Mornington Peninsula's workforce travel outside the municipality for employment. This highlights the connection between the local and regional economies

2.2 A Snapshot of Waste on the Peninsula

Three main sources of waste are generated within the Peninsula:

- Residential waste – often called municipal solid waste (MSW), most of this is collected via kerbside collections but also includes waste dropped off at a network of resource recovery centres and waste hoppers by residents.
- Commercial and industrial waste (C&I) is sourced from commercial and industrial enterprises. This waste can comprise one type of material (e.g. cardboard packaging from an electronics store) or mixed materials (e.g. food waste, packaging, plastics, papers etc from a restaurant).
- Construction and demolition waste (C&D) is primarily inert building waste, such as wood, bricks and concrete.

The Shire is primarily responsible for managing residential waste.

“Peninsula households produces an average of 64,867 tonnes of kerbside waste per annum over the last five years”

Mornington Peninsula Shire



Figure 1: Mornington Peninsula Shire Council Area

A Snapshot of Waste on the Peninsula

2.2.1 What's in our bins?

Household Waste Collection

The Shire collects bins from 85,236 urban properties, and 3,253 non-urban properties. Peninsula households produced an average of 64,867 tonnes of kerbside waste per annum over the last five years (Figure 2).

The region experiences seasonal peaks in waste generation across both recycling and general waste streams throughout the summer tourism season when the population exponentially increases.

General Rubbish

The 2019 waste audit found that the average household generates an average of 7.7 kilograms of residual waste per week that is sent to landfill. Compared to the annual Victorian state average per household, the Mornington Peninsula consistently creates less general waste (Table 1).

The average bin on the Peninsula is comprised of 51.1% of organic material (45.5% food waste & 5.6% green waste) and 12.3% of material which could be diverted to the comingled recycling bin (Figure 3). Around 1.5 % could be recovered by being dropped off at the Shire's Resource Recovery Centres and an additional 3.6% of soft plastics that could be potentially diverted through supermarket drop off schemes.

Year	Mornington Peninsula	Victoria
2016-17	351.8	462
2017-18	351	456
2018-19	340	Not available

Table 1: Annual average kerbside waste generated (kg per household)

Total annual tonnages kerbside waste per stream

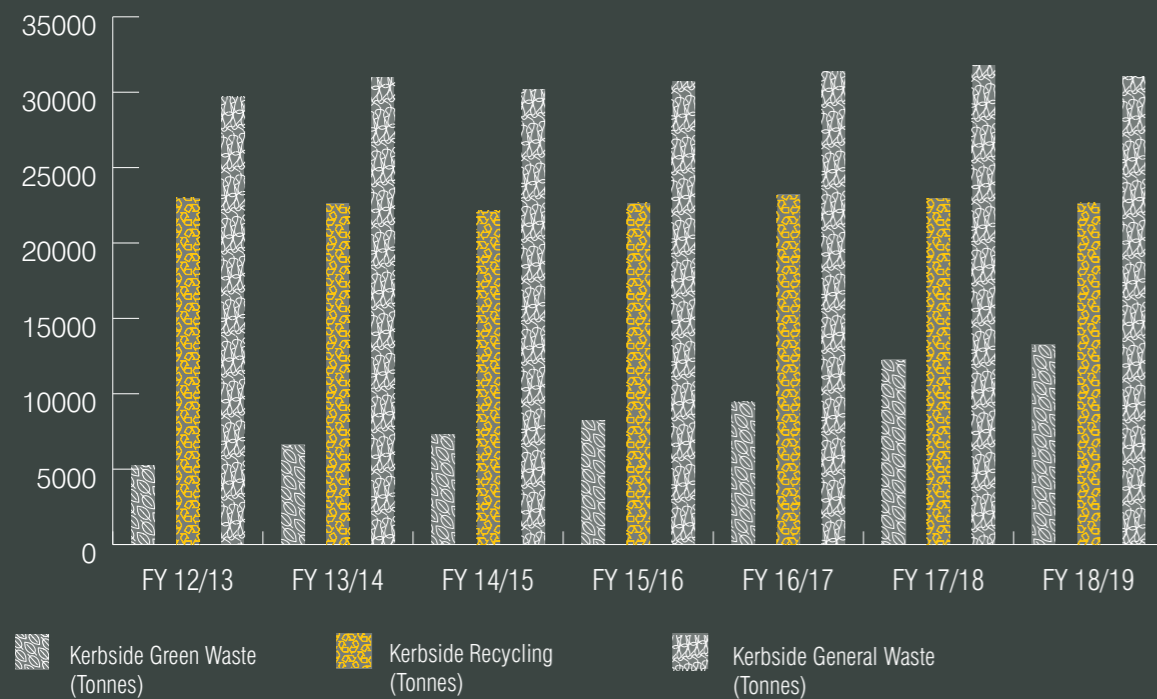


Figure 2: Total annual tonnages kerbside waste per stream

Figure 3: 2019 Household waste audit by weight (2019)

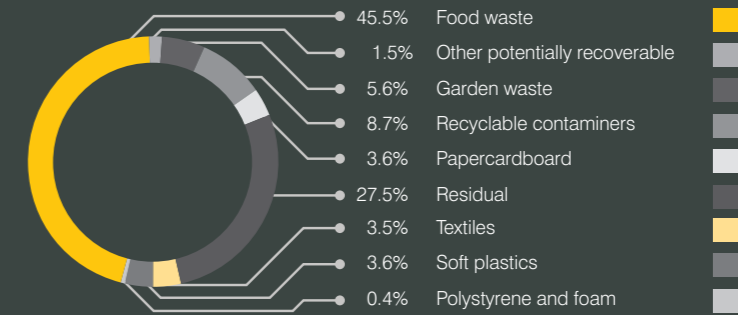
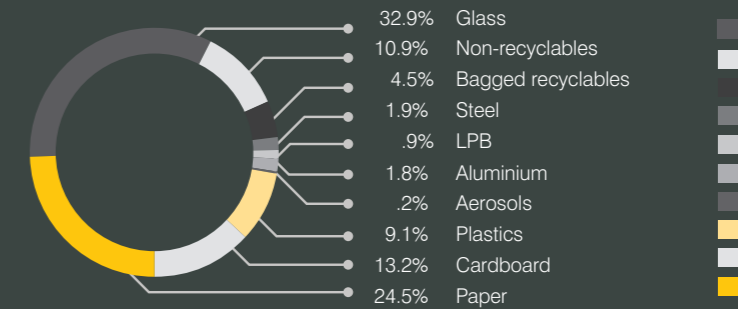


Figure 4: Household recycling audit by weight (2019)



Recycling

The Shire offers a fortnightly collection for the majority of the year, and weekly recycling collection over the peak summer period (7 weeks). Residential properties can apply for extra capacity recycling bins for an additional one-off fee. On average, households on the Peninsula recycle more than Victorian households (Table 2).

Year	Mornington Peninsula	Victoria
2016-17	259	233.5
2017-18	254	230
2018-19	248	Not available

Table 2: Average kerbside recycling (kg per household)

The 2019 waste audit found that the average household produces 9.2 kilograms of recycling per fortnight, with glass and recyclable paper being the most prevalent materials by weight. Cardboard and plastics were the most prevalent materials by volume. Contamination was found to be 15.4% by weight (Figure 4), which is two and a half times higher since the 2013 audit and the state average of 10.4%. This could potentially be the result of negative reporting and media coverage of SKM

facility closures and China National Sword policies upon public attitudes and confidence in recycling systems. It is acknowledged that work is needed to regain public trust in the recycling system.

Green Waste

Residents living within the Mornington Peninsula's urban growth boundary can sign up to receive a 240L green waste bin for an annual fee. Around 40% of households in the urban growth boundary have opted in for a green waste bin. The average household generates less than half of a Victorian household, this may be attributed to the opt-in nature of the green waste service and the ineligibility of households in the green wedge area (Table 3). Mulch and compost products can be purchased back by residents through the Resource Recovery Centres.

Year	Mornington Peninsula	Victoria
2016-17	106	310.6
2017-18	134.7	310
2018-19	144.8	Not available

Table 3: Average household green waste collected by kg per household

A Snapshot of Waste on the Peninsula (cont.)

2.2.2 Our Waste Services

The Shire offers a wide range of services and infrastructure to manage waste, rescue bulky waste and recycle non-kerbside materials.

Rye Landfill

The Shire disposes municipal waste from household garbage bins to the Rye landfill, located on Truemans Road, Fingal. It is estimated that the present cell at Rye landfill will be full within the next 4 years, at which point the Shire will need an alternative method of managing household waste.

Municipal waste disposed to landfill over the last 5 years has been generally consistent at around 33,000 tonnes, although commercial volumes have reduced by almost three times to approximately 3000 tonnes. The decreased tonnages could be due to an annual increase in the gate fee for C&I compared with alternative landfills.

Given that the development of a regional Alternative Waste Treatment (AWT) solution by the Metropolitan Waste and Resource Recovery Group (MWRRG) is still at least 5 years away (2026), the Shire is considering short to medium term options for the management of general waste.

Resource Recovery Centres

The Shire has a network of three resource recovery centres: Mornington, Rye and Tyabb. The facilities receive a range of household waste at a cost and select recycling items at no charge.

Variable charges have been set for residents, non-residents and commercial users for general household waste and green waste.

Only one of the Resource Recovery Centres in Mornington has a resale shop. The shop is managed by a social enterprise which resales or recycles many of the items or components dropped off including electronic waste (e-waste), metals and plastics. The Shire hasn't developed reuse shops at Rye and Tyabb due to site constraints at Rye and low volumes of material at Tyabb. Suitable items recovered at Rye or Tyabb is transferred to the reuse shop in Mornington.

Hopper Network

The Shire operates three hoppers (small waste centres) at Dromana, Sorrento and Flinders. Variable charges have been set for residents, non-resident and commercial users for general household waste (green waste accepted at Flinders Hopper only).

Hard and Green Waste Collection and Voucher System

All ratepayers receive three waste vouchers with their annual rates notice to assist with the management of hard and green waste at their properties. The waste vouchers can be used for the booked kerbside collection service, or for disposal of green waste or hard waste at the Resource Recovery Centres.

No Charge Green Waste Events

The Shire offers two 'no charge' garden waste events per year during which residents can dispose of garden waste at the Shire's Resource Recovery Centres.

Public Place Waste Management and Litter Prevention

The Shire has a comprehensive public place and litter prevention program, which is designed to deal with challenges associated with managing high visitor rates throughout summer months.

The Shire faces continued challenges around foreshore areas during the peak tourism summer period. General litter bins can overflow, which increases the risk of contamination in recycling bins. Additionally, public members commonly leave large discarded beach and recreational materials inside or next to the public bins. Large items can block the bins and piles can attract additional illegal dumping around bin areas.

The Shire has recently revised the public place collection contracts for the foreshore area and introduced changes that included: increasing service frequency, installing additional bins and optimising bin locations.

Education activities and community engagement activities have included supporting volunteer Beach patrol groups who perform regular beach clean-up events across 6 locations.

Illegal Dumping

Illegal dumping varies from small bags to unwanted beach items dumped along foreshore bin areas, to large scale dumping of waste materials such as mulch in isolated areas such as parkland and bush reserves. It predominantly occurs at the end of peak holiday events and periods such as summer holidays and the labour day weekend.

In late 2018 the Shire launched Dob in a Dumper, which included posters displayed in all Shire customer service offices, social media, paid advertising in local papers and media release. It has focused on encouraging the community to report illegal dumping and support increased enforcement activities. The Shire has increased installation of covert and overt cameras and is investigating all cases of identifiable dumped waste.

Waste Contracts

The Shire manages a range of waste contracts: kerbside collection, public litter bin collection, booked hard/green waste collection, illegal dumping collection, street sweeping, and mechanical beach cleans, and management of the Resource Recovery Centres and the Rye landfill. The competitive tender process for these contracts has enabled the Shire to deliver cost effective and responsive waste collection. Each iteration of these contracts will also enable Council to incorporate new advances in waste technologies that will improve waste separation and disposal.

2.2.3 How we compare to other Councils

The Victorian Government conducts annual reviews and comparisons of local councils. For 2018-19, the Shire outperformed similar councils in waste diversion (Figure 5) and continues to provide value to residents, kerbside collection service cost below similar councils and the Victorian council average (6 and 7).

How we compare

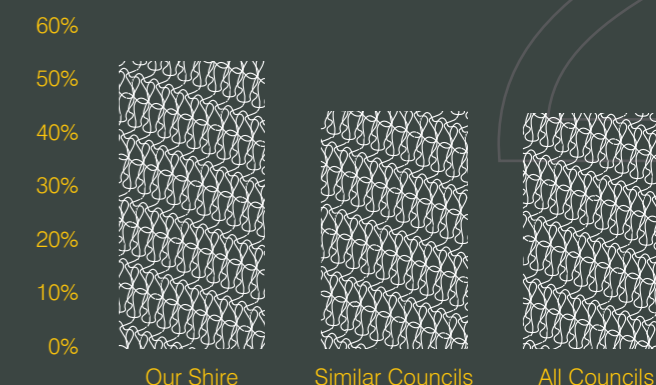


Figure 5: Kerbside waste diverted from council 2018-19 (knowyourcouncil.vic.gov.au)



Figure 6: Cost of kerbside rubbish per bin 2018-19 (knowyourcouncil.vic.gov.au)



Figure 7: Cost of kerbside recycling per bin 2018-19 (knowyourcouncil.vic.gov.au)

Drivers for change

The 2015 Waste Strategy focused on mitigating risks from the impending closure of the Rye Landfill and facilitating future options for AWT infrastructure.

The recycling and resource recovery sector in Victoria and globally have since undergone significant changes. The Shire needs to respond to these new challenges and opportunities that relate to waste avoidance, resource recovery and environmental protection, including the circular economy and diversion of waste from landfill.

3.1 Climate Change

The Shire adopted a Carbon Neutral Policy in 2016, which articulates a comprehensive approach to achieve carbon neutrality for Shire operations by 2021. Currently, the Shire offsets all emissions associated with kerbside collection services and promotes waste diversion alongside food waste minimisation as a key strategy for carbon reduction. This Policy strongly supports community and stakeholder engagement on climate change to enhance community resilience and support community led initiatives that work towards carbon neutrality.

In 2018 the Shire adopted a Climate Change Community Engagement Strategy. That Strategy set an emissions reduction target of 2.9% per annum for community emissions. This is derived from the global carbon budget that can be emitted to keep global warming well below 2 degrees, determined by the Paris Agreement. It is expected that this target will be strengthened following the adoption of the Climate Emergency Plan.

Building on public momentum and previous policies, on 13 August 2019 the Shire declared a Climate Emergency and called for immediate and urgent action to reverse climate change. The Shire joined 840 local governments across 18 countries that have made the declaration and called for Australian State and Federal governments to follow suit and implement supportive legislative programs. The Shire's Climate Emergency Plan outlines how the Shire will take action.

3.2 Resource Recovery Markets

In April 2018, China announced that it would stop importing scrap paper and plastic. China had been the largest global importer of scrap plastic and fibre. The policy had an enormous impact on international commodity markets and has since triggered both instability and opportunities for local recycling and reprocessing markets. The Victorian Government's Recycling Industry Strategic Plan and other initiatives have been developed to provide short, mid and long-term solutions for the recycling industry, to help deliver a safer, more robust and resilient recycling sector.

As the recycling industry builds resilience, councils continue to improve the quality of recycled materials through improving collection systems and educating the community about recycling. Recent developments have also included strengthening local markets through preferencing recycled content in civil construction projects and supply contracts.

3.3 Policy and Regulation

This strategy is supported by various Federal and State policies, plans and regulations (Figure 8). Details of each of these can be found in Appendix C. Aligning with Federal and State plans will ensure that Shire is contributing to a Victoria that avoids waste, values resources and enable us all to make meaningful contributions towards the Australia's circular economy.

3.4 Alternative Waste Treatment

AWT processing solutions usually involve complex, heavily automated and technology intensive processes that aim to divert waste from landfill and recover valuable resources.

The MWRRG conducted a formal market sounding exercise in October 2018 to understand the capacity and capability of the industry to establish AWT processing solutions that could service Melbourne councils. In July 2019, Infrastructure Victoria commissioned further research into attitudes and perceptions of Victorian households towards waste sorting

practices, and their willingness to change their behaviour. It found that 92% of Victorians supported building Waste to Energy plants ².

In 2019, MWRRG completed a business case for AWT infrastructure and identified options that involves combing AWT with improved kerbside recycling for food organics and comingled recycling. The MWRRG multi-staged process to establish new processing solutions for residual waste in the region will take at least five to seven years, from procurement through to construction and commissioning. The Shire is currently participating in this process to establish an AWT facility to service the South East Metropolitan area.

3.5 Community expectations

Community awareness of the problems associated with single use plastics and available alternatives is growing. This awareness was heightened during the 2018/19 recycling crisis when vulnerabilities to global resource recovery market was exposed. In 2017/18, the Victorian Government received more than 8,000 submissions to a public consultation on plastic pollution. These responses informed a ban on lightweight plastic shopping bags with a thickness of 35 microns or less from 1 November 2019. Additionally, strong community support led to the elimination of problematic single-use plastics at all Shire run events, Shire owned or managed land and Shire operations (e.g. tenders, leases and contracts).

Federal	National Waste Policy 2018		National Food Waste Strategy
	National Waste Export Bans	National Packaging Targets	
State	Recycling VIC A new economy	Victoria's Recycling Infrastructure Plan*	Environmental Protection Amendment Act 2018
Regional	Metropolitan Waste and Resource Recovery Implementation Plan 2016		Draft Metropolitan Regional Litter Plan (2019 – 2024)
Local	Our Peninsula 2021. Council Plan (2017 – 2021)	Health & Wellbeing Plan (2017 – 2021)	Health & Wellbeing Plan (2017 – 2021)

*Formally known as The State-wide Waste and Resource Recovery Infrastructure Plan

Figure 8: Waste strategies and policies framework

² Infrastructure Victoria (2019), Waste Advice Research. infrastructurevictoria.com.au

Beyond Zero Waste to Landfill by 2030

The next 10 years are critical for shifting the way the community thinks and acts towards waste, and transitioning services and infrastructure models towards achieving zero waste within a circular economy (Figure 9)

Zero waste requires a change in paradigm and moving towards the reduction of material and energy use associated with production, consumption and disposal patterns.

To realise these goals, the Shire commits to:

“Working in partnership to achieve zero waste and to build a culture that prevents waste impacting the environment, by avoiding waste and transforming it as a resource back into the local economy”

Transitioning to a circular economy will be key in achieving our Vision by:

- Designing out waste and pollution;
- Keeping products and material in use; and
- Regenerating natural systems.

The guiding principles for the Strategy include:

1. **Waste hierarchy** – to inform and prioritise decision making;
2. **Informed decision making** – based on examination of arising options within the industry and not confined to the Shire’s geographic boundaries;
3. **Best value** – considering quality and cost, community needs and continual improvement in resource recovery outcomes;
4. **Sustainability** – considering economic, environmental and social benefits;
5. **Carbon footprint** – considering the Shire’s commitment to carbon neutrality and addressing the climate emergency; and
6. **Shared responsibility** – engaging community in education and behavioural change.

The wastes hierarchy (Figure 10) is one of eleven principles of environment protection contained in the Environment Protection Act 1970, and are applied in an integrated manner to the Strategy.

The wastes hierarchy is an order of preference and states that waste should be managed in accordance with the hierarchy, with avoidance being the most preferred option, and disposal being the least.

The following elements will guide future direction and decision making:

- **Shire Leadership:** Take the lead to avoid and reduce waste generated across The Shire operations and services, deliver carbon neutral, environmentally responsible and cost effective services focused on minimising waste generation, increasing resource recovery and achieving carbon neutrality;
- **Sustainable Community:** Build capacity and partnerships with community and business to reduce, reuse, recycle and achieve a clean environment; promote the circular economy within the region through support of local end markets and innovative business models; and
- **Collaboration:** Work in regional partnerships, and advocate to other levels of government.

Figure 9: A circular economy framework for the Mornington Peninsula

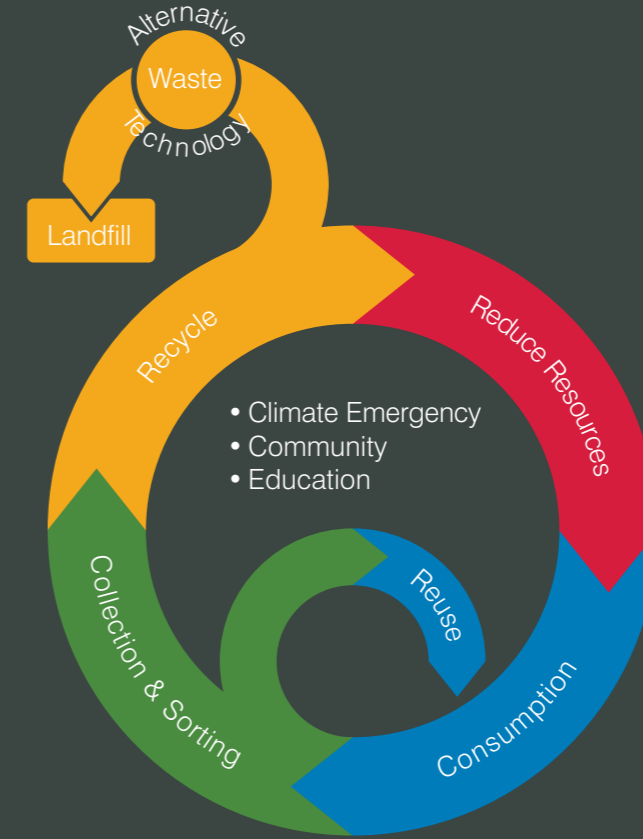
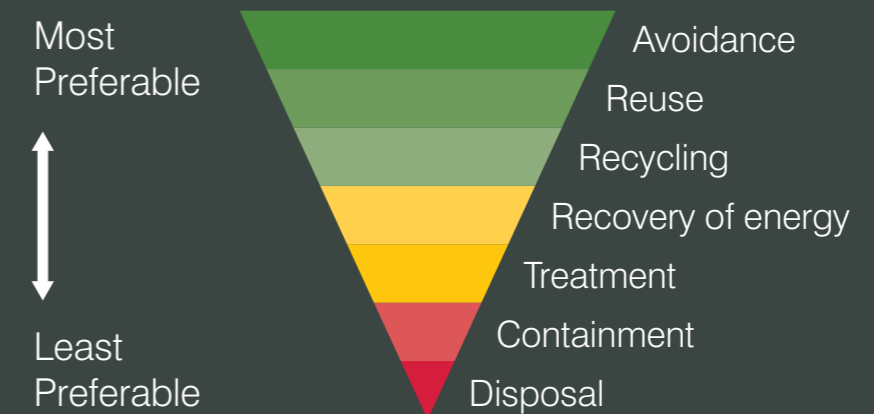


Figure 10: Waste hierarchy (EPA Victoria)



Beyond Zero Waste to Landfill by 2030 (cont.)

4.1 What we heard

The Shire conducted extensive consultation with the community. A series of face to face meetings, forums, workshops and community surveys were conducted to shape future directions for waste management and resource recovery. Table 4 below provides a summary of the feedback received.

Leadership	Level of uncertainty over what to recycle	Litter and illegal dumping
<p>Council to lead by example.</p> <p>Council to continue to advocate to State and Federal governments in</p> <ul style="list-style-type: none"> Product stewardship schemes Investing in local waste processing and recycling <p>Promote positive case studies and inspire the community</p> <p>Transparency and reporting how we are progressing towards our targets</p>	<p>47% were not sure what is recyclable or non-recyclable.</p> <p>Suggested ways to make it easier to recycle</p> <ul style="list-style-type: none"> Provide more education about waste disposal options More public place recycling bins Educate people on what can and can't go into the recycling bin More signage on recycling bins 	<p>Just over 50% of residents think financial penalties should apply for repeat offenders, and just under half support other types of consequences.</p> <p>Suggestions to prevent dumping include</p> <ul style="list-style-type: none"> Reducing cost to dispose of waste Increase community's awareness of financial impact of dumping Waste avoidance education
Best way to communicate	What is most valued?	Single-use Plastics
<p>Prefers method are in order of preference:</p> <ol style="list-style-type: none"> Email Letterbox drops Text messages Website Local paper Social media <p>Residents ages 25 – 39 years preferred email, and 70+ years preferred letterbox drops</p>	<p>84% of residents responded that the environment, was most important for them.</p> <p>59% valued convenience, and 13% valued low cost.</p>	<p>89% supported the single-use plastic policy</p> <p>90% expected single-use plastic free events within Shire buildings and land</p>
Food Waste	Waste Collection	Zero Waste to landfill
<p>55% of residents reported they currently dispose all or some of their food waste in their bins.</p> <p>51% said they compost at home and 12% use worm farms.</p> <p>85% of residents are supportive of having a food waste collection service.</p>	<p>Accessibility and cost were primary barriers. Improvement suggestions:</p> <ul style="list-style-type: none"> Build more collection points in the community for material not collected in kerbside bins Low or no cost waste disposal options (kerbside collections or at the tips/resource recovery centres) Discounts for low-income or pensioners 	<p>88% of residents are supportive of zero waste to landfill.</p> <p>75% said it was achievable in their household.</p> <p>47% were unsure what alternative waste technology involved.</p>

Table 4 Summary of community survey results

4.2 Areas of Influence

The waste sector has developed highly integrated systems that link global markets, community behaviour and infrastructure investment. The goal of achieving zero waste is a shared responsibility, and many interdependent actions must happen within partnerships to achieve the community wide change required for building a circular economy.

The Strategy includes activities within the areas listed below that either allow the Shire to directly control the outcomes while others enable the Shire to influence the outcomes (Figure 11). Using a combination of these will achieve the best results

- Service & Infrastructure Provision – The traditional way in which local government has directly sought to manage waste; providing services and infrastructure in a strategic way can influence improved waste avoidance and resource recovery.
- Engagement – The Shire can influence through engaging with strategic partners, community and service users, seeking to work cooperatively to achieve greater waste avoidance and resource recovery in the Shire.
- Advocacy – The Shire can advocate to other levels of government and industry on behalf of its community to make changes that will improve waste avoidance and resource recovery in the region.

“55% of residents reported they currently dispose all or some of their food waste in their bins”



Figure 11: The Shire's area of influence

“The Strategy includes activities that allow the Shire to directly control the outcomes while others enable the Shire to influence the outcomes. Using a combination of these will achieve the best results”

4.3 Our Targets

A series of targets will be applied to monitor progress under the Strategy towards the goal of zero waste to landfill by 2030, net zero carbon emissions and a cleaner and greener Peninsula. Future targets will be assessed against the 2019 baseline (Table 5).

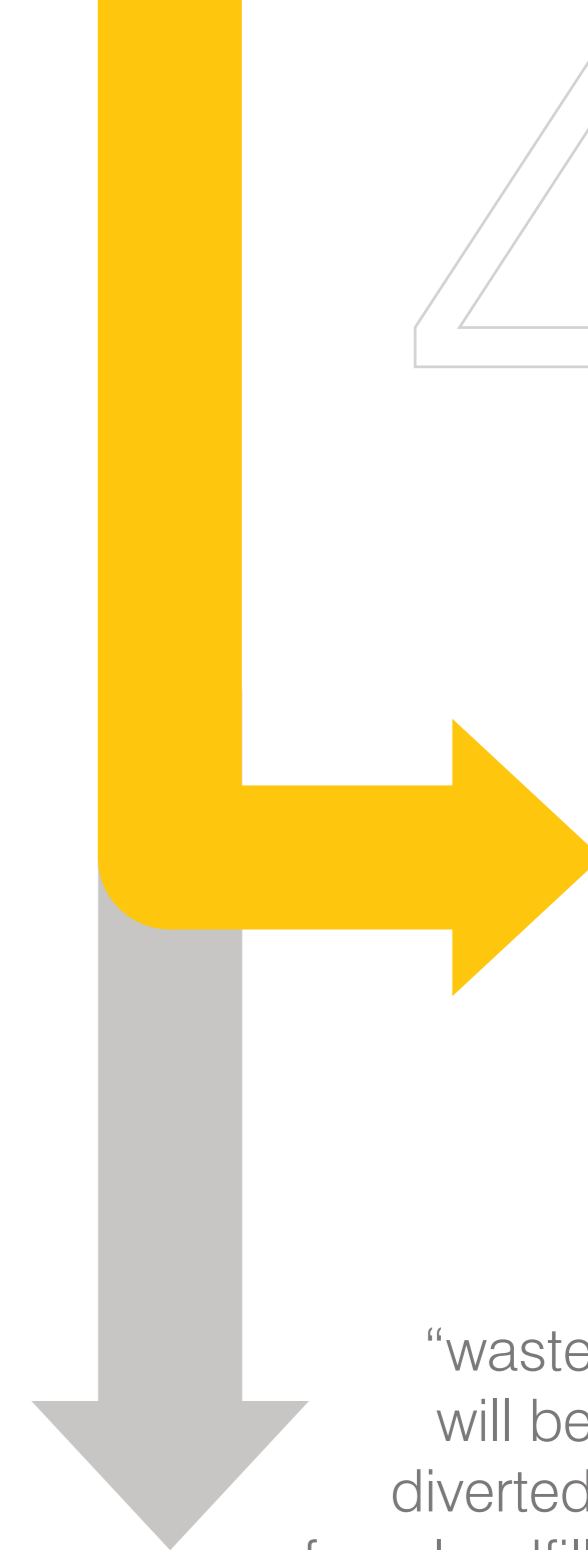
4.4 Our Pathway

Waste comes in a variety of forms and materials and is collected through different streams and associated systems. Figure 12 illustrates how waste will be diverted from landfill as a result of implementing actions that target each stream within this Strategy. The Shire will continue to work in partnership with MWRRG to deliver AWT services in the region to recover the remaining 20% of residual waste from Resource Recovery Centres, households and Hoppers that would have been sent to landfill.

Fundamentally, the Shire will work with the community to increase knowledge and skills and strengthen structures and systems that are needed to effectively achieve zero waste and contribute towards a circular economy over the longer term. Figure 13 outlines the potential ways to recover 72% of household waste currently disposed direct to landfill through the kerbside general waste bin.

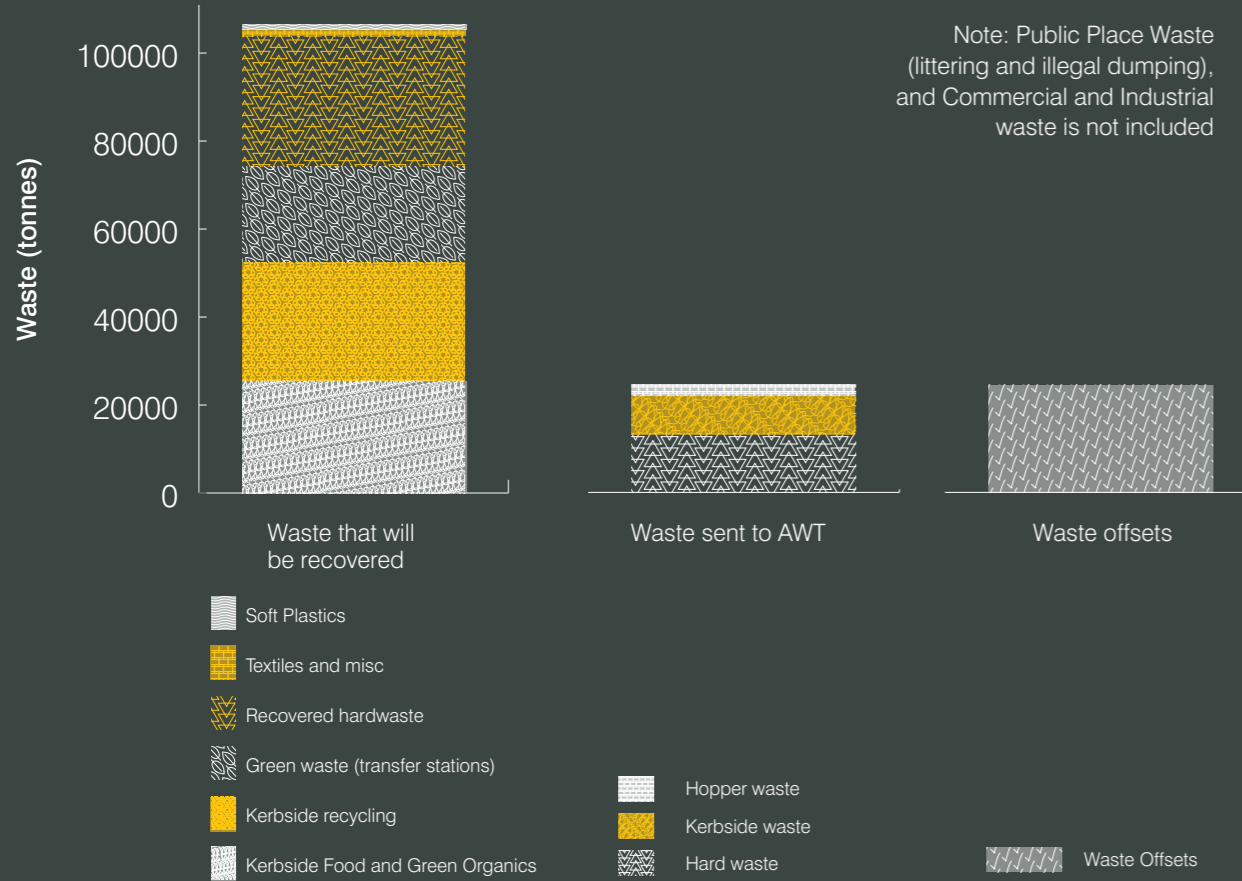
4.5 Landfill offsets

During the transition to achieving zero waste by 2030 and beyond, the Shire will offset any tonnage of municipal waste disposed into landfill and/or AWT facility through the use of an equivalent volume of recycled materials in civil and construction works, e.g. 1 tonne of recycled aggregate will equal 1 tonne offset in the Shire's landfill. The volume of waste recovered through kerbside recycling or drop off programs such as materials recovered and sold at the Mornington resell centre, will not be eligible to be included as offsets given recycling is currently an available option for such materials. The recycled materials available for waste offsetting may be sourced from outside the Shire region from a local reprocessor.



“waste will be diverted from landfill as a result of implementing actions that target each stream within this Strategy”

Figure 12: Potential waste diversion pathway towards zero waste



AWT – Alternative waste technology

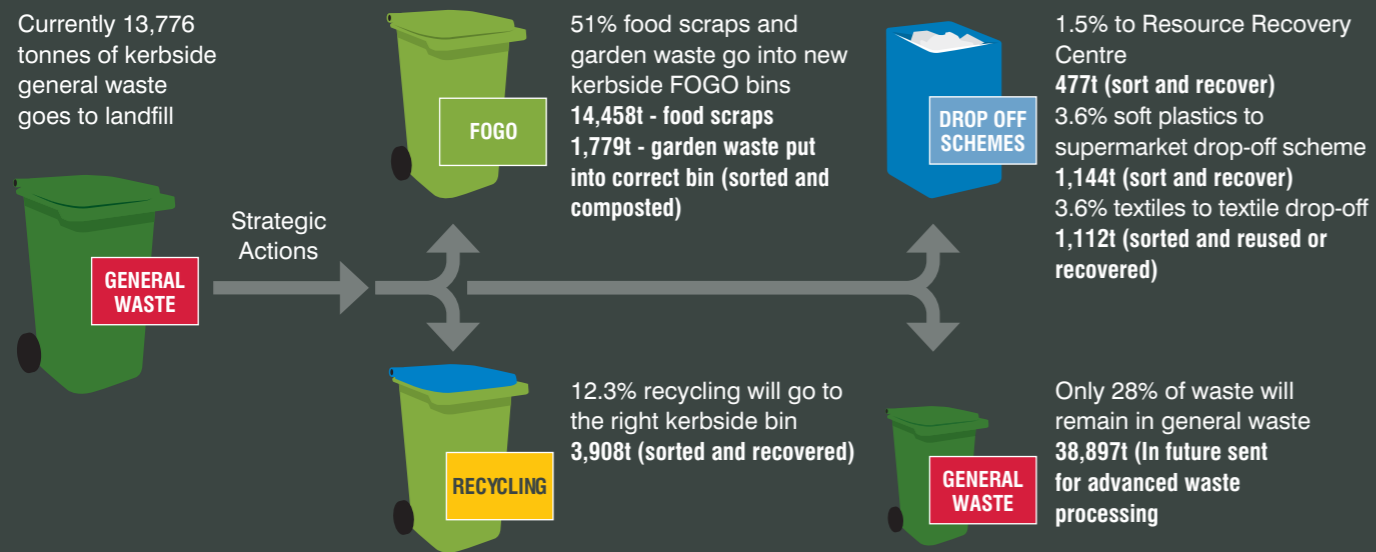


Figure 13 Zero waste diversion of kerbside general waste from landfill

Table 5: Waste Strategy 2025 and 2030 targets

Targets	Baseline	2025	2030
1. Waste related Greenhouse Gas emissions Tackling waste related emissions will contribute towards a net zero emissions by 2040	35,200 (t CO2 – eq)	1.7% per person annual reduction from waste generated emissions.	
2. Household rubbish produced Avoiding waste is the first step in the waste hierarchy and will accelerate our progress towards zero waste.	340 kg /household /year	10% reduction in household waste	20% reduction in household waste
3. Household waste diverted directly from landfill Our household bins contain a mixture of materials. Maximising recycling and composting organic waste will ensure that residual rubbish is only sent to an AWT facility	53%	75%	100%*
3a. Recycling contamination rate Keeping contamination rates low mean that less recyclables will be sent to landfill.	15.4%	Below 6%	Below 6%
3b. FOGO contamination rate Food waste makes up 45.5% of our household rubbish bins. Effectively recovering food waste and keeping contaminations level low will be essential to turning this waste into compost for our farms.	NA	Below 5%	Below 3%
4. Litter volume Preventing litter through education and infrastructure will protect our oceans from plastic pollution	NA	25% reduction in litter	50% reduction in litter
5. Illegal dumping A mixture of preventative and enforcement measures will be deployed to systematically address illegal dumping.	NA	15% increase in illegal dumping incidents investigated	30% increase in illegal dumping incidents investigated
5a. Illegal dumping hotspots Dumping hotspots will be monitored and a range of infrastructure will be used to minimise dumping	100	Below 80	Below 50
5b. Illegal dumpers identified The Shire will take a zero-tolerance approach to illegal dumping	NA	200	350
6. Recovery of non-kerbside recyclables from landfill Waste will be recovered through repair and reuse of materials/products collected at the Resource Recovery Centres, and temporary and permanent community collection points.	49.7%	82%	100%*
7. Waste offsets At a minimum, all waste sent to an AWT and landfill will be offset by using the same weight in products and construction.	NA	At least 11,500 tonnes of recycled content used in purchases, and civil and construction works	At least 22,829 tonnes of recycled content used in purchases, and civil and construction works
7a. Use of recycled content on the Peninsula Driving markets for recycled products is essential in building a robust and resilient recycling industry	NA	All asphalt used in roads contains recycled content	Minimum 80% of all new roads, footpaths, civil works and asset built with recycled content

* non-recyclable or reusable waste sent to an AWT may produce some residual waste which must be disposed at a suitably licensed facility.

5.

Our Waste Goals

The following section outlines the Shire's strategic objectives and the associated actions that will help us achieve zero waste and build a local circular economy. Each action has been ranked against a multicriteria assessment and its contribution to governance, economic, social and environmental outcomes (attachment D).

5.1 Goal 1. An empowered community

Achieving zero waste and a circular economy relies on building partnerships between the Shire, community and business. The Shire will continue to work with residents, the community and business organisations in targeted education programs and campaigns that build the capacity of the community to engage in actions that reduce, reuse or recover waste.

Leadership

Council will lead by example and focus on positive case studies towards zero waste and a circular economy. Inspiring the community, Council will celebrate the community's achievements and share clear actions that reduce waste and divert resources from landfill. Council will continue to look for opportunities to stimulate innovation and change both within Council and the broader community.

Action 1.1. Demonstrate leadership in resource recovery.

- 1.1.1 Implement mandatory recycling and waste management requirements for all Shire organised events
- 1.1.2 Regularly monitor performance of office recycling programs in all Shire offices and ensure maximum separation of recyclables and food organics is achieved.
- 1.1.3 Standardise rubbish and recycling infrastructure and education across all Shire offices and facilities
- 1.1.4 Trial new waste opportunities that will increase the community's ability to divert waste from landfill

Education

The Shire will prioritise developing an ongoing dialogue with the community to identify and remove barriers and develop an effective and convenient system that is integrated with communications programs based on behavioural science.

To support waste education, the Shire will implement the following key strategies:

- Design and implement effective behaviour change programs that:
 - Develop shared dialogue to identify barriers and opportunities;
 - Integrate education and communication that uses tools of behavioural psychology to foster preferred behaviours;
 - Monitor and gather feedback on education content, impact of delivery methods, and how behaviours are changing (observed behaviour as well as reported);
 - Continually improve communications and support to increase the accessibility of services.
- Expand education programs to support workplaces, businesses and schools.

The Shire will engage the community to value resources and avoid waste by increasing the number of initiatives that enable sharing, repairing and skill transfer, such as repair workshops.

Actions 1.2. Design targeted programs and explore partnerships with the community to reduce waste generation and promote reuse initiatives.

- 1.2.1 Investigate incentives for households to reduce consumption and avoid waste generation
- 1.2.2 Promote food waste avoidance to the community through programs such as Love Food Hate Waste
- 1.2.3 Promote and incentivise reusable nappies for parents and families

- 1.2.4 Support and promote non-profit and community organisations that build the capacity of residents to donate or sell goods prior to disposing in landfill (e.g. Op shop waste disposal guide)
- 1.2.5 Support community initiatives that encourage repair, reuse and/or swap activities e.g. Men's Sheds and Repair Cafes.
- 1.2.6 Develop behaviour change strategies and campaigns, including bin inspections, traditional and non-traditional social marketing and targeted messages to improve recycling and zero waste behaviours for residents and visitors.
- 1.2.7 Support the development and promotion of regional, state, and national waste education programs.
- 1.2.8 Support schools to deliver curriculum driven waste education by encouraging participation in Sustainability Victoria's Resource Smart Schools program, offering waste incursions and excursions, and recognising waste smart schools.
- 1.2.9 Promote and support a network of community waste programs and initiatives, e.g. contributing content to local media, promotion of recycling champions and peer to peer networks, forums and information pop ups, and creative recycling initiatives etc.
- 1.2.10 Promote the Best Bites initiative as a tool for businesses to improve waste practices and investigate incentives to encourage businesses to sign up to the Best Bites program
- 1.2.11 Support the promotion and delivery of Federal and State commercial initiatives and programs that minimises business waste and improves recycling
- 1.2.12 Investigate levers to incentivise waste avoidance and local circular economies in businesses, agriculture and industry

The Southern Peninsula Repair Café:

Repairing household items as a community

Opening in 2018, The Southern Peninsula Repair Café was inspired by a Dutch movement to give household 'waste' a second life. Community members are invited to bring in their broken, torn or neglected items, and volunteer fixers show how they can be fixed free of charge. As of early 2020, a total of 314 items have been reviewed by volunteers, with 75% of those items successfully fixed.

Throughout its first two years of operation, the Café has already saved 416kgs worth of functional items from landfill.

The Repair Café has brought community members together by repairing items such as chainsaws, heaters, clocks, and raising hems on clothes. The most common items for repair are lamps and blunt scissors. The Café offers a range of social snacks, from a cuppa and biscuits, to homemade items such as soups and cakes. Sessions operate on the third Sunday of every month (between March and November) from the Rye Community House.

There are 3 repair cafes on the Peninsula: Rye, Mornington and Hastings



Source: Southern Peninsula Repair Café

Our Waste Goals (cont.)

Single-use plastics

Plastic is one of the most ubiquitous materials in the economy and among the most pervasive and persistent pollutants within the marine environment. Within the linear approach to consumption, products get manufactured, bought, and used once or twice before being thrown away.

The Shire's Single-use Plastic Policy will eliminate the use of single-use plastics across Council business, leases and events held on Shire owned land. To extend the change to the whole region, and the Shire will support local businesses and communities to reduce single-use plastic items, and work with community-based groups to promote behaviour change.

Action 1.3. Phase out single-use plastics on the Peninsula

- 1.3.1 Implement a Single-use Plastic Policy and phase out problematic and unnecessary single-use plastic across Shire business, leases, Shire sponsored events and activities held on Shire land.
- 1.3.2 Develop programs and initiatives that support local businesses and communities to reduce single-use plastic items, and work with community-based groups to promote single-use plastic free behaviours to the broader community.

Table 6: FOGO implementation plan

Stage	Timeframe	Activity
1	Jan-May 2021	Engage the community on new FOGO services and educational resources
1	Jun 2021	Distribution of caddies and certified compostable liners
1	Jul 2021	Allow all residents with a green waste bin to add organic food waste (Opt-in FOGO)
2	Jul 2022	Review opt-in FOGO
2	Jul 2023	Universal roll out pending contamination rate.

5.2 Goal 2. Net zero emissions

The Shire joins other councils, cities and nations in the declaration of a climate emergency and calls to accelerate efforts to reduce and draw down our emissions. Council is leading the way and has identified seven summits to reach net zero-emissions across the Peninsula by 2040.

Organic waste

When household organic waste such as kitchen food waste, garden waste and other organic matter like soiled tissues or paper is disposed to landfill, it undergoes anaerobic decomposition and produces methane, a greenhouse gas that has a global warming impact 25 times stronger than carbon dioxide. When composted, organic waste can produce commercial grade compost and soil conditioning products that can replace fertilisers and provide valuable nutrients for depleted Australian soils, when used in agriculture.

Encouraging home composting and introducing a Food Organic Green Organic (FOGO) kerbside collection service provides an opportunity to significantly divert tonnes of organic waste currently disposed in landfill. Recovering FOGO and other recoverable material from the average household general waste bin, will reduce the bin by two thirds compared to current levels (Figure 3).

To minimise contamination and risk of financial penalties, the FOGO service will be introduced over two stages (Table 6). With the aid of education, food waste will be directed to the existing opt-in garden waste kerbside bin.

Each household with an existing green waste bin will also receive:

- One Kitchen caddy (for food waste), and
- A year's supply of compostable certified caddy liners.

Transitioning to a universal weekly FOGO and fortnightly rubbish and recycling service may include:

- Increase in kerbside garbage bin sizes;
- Opt-in additional bins for larger or more frequently collected rubbish bins and FOGO bins;
- Additional services may be provided as standard to households with special needs e.g. households with infants or households with medical needs.

Action 2.1. Reduce and prevent food waste from landfill

- 2.1.1 Encourage and support community and home composting programs
- 2.1.2 Deliver an opt-in Food and Garden Organics Service that is accompanied by an education program guided by behaviour change principles e.g. Attractive caddies that are designed with branded messaging, high aesthetic appeal and motivate uptake of service; bin liners and targeted messaging.
- 2.1.3 Investigate mechanisms to encourage onsite organic treatment infrastructure (dehydrator, tank, digester, pulveriser) for non-residential properties.

Boomerang Bags Seawinds: Sewing the community together

Boomerang Bags Seawinds began in 2018 with the purpose of reducing plastic bags. Two and a half years later, volunteers have given donated fabric from op shops a second life by producing 7488 beautiful reusable bags.

It is now lending a hand to children in trauma incidents, homelessness, cancer patients, koalas injured in fires and children in need of school uniforms through the recycling of textiles.

As of July 2020, 200 trauma teddies have been made by volunteers and donated to other community groups such as the CFA and SES to provide to children on the scenes. Profits from selling bags have been redirected to purchase 20 swags for homeless locals, as well as using recycled material to produce 159 sleeping bag liners. 121 Canula bags have been designed to support cancer patients in carrying their medicine, and Boomerang mittens are now are now being used to recover Koalas from bushfire burns.

Boomerang Bags Seawinds also runs the Uniforms 4U program, which accepts donated uniforms from op shops and designs and fits them for families in need. 350 uniform bundles and 150 new pairs of shoes have been provided to vulnerable families, many who are now in the position to give back by returning out-grown uniforms and donating.

The Seawinds group has gone beyond reducing waste and uniting volunteer members, to using recycled products that create a stronger, more resilient community – rightfully earning itself a Tidy Towns – Keep Australia Beautiful award in 2019.

As an integral and integrated part of the community, volunteers at Seawinds teach people of all ages and abilities how to sew, educate children on the importance of recycling textiles, and work with community groups such as The Southern Peninsula Repair café to maintain its equipment.



Source: Seawinds Capel Sound Boomerang Bags

5.

Our Waste Goals (cont.)

Landfill

To reach net zero emissions, actions across all emission profiles will be essential. Solid waste encompasses 1.7% of Shire's emissions. The closure of the Rye landfill and transition towards an AWT facility will convert residual waste to energy, reducing our waste emissions and contributing to our Shire wide commitment to fighting climate change.

Action 2.2. Close and remediate Rye Landfill

- 2.2.1 Model waste disposal options after the closure of Rye Landfill within context of regional procurement of an alternative waste plant or the cost benefit of using an alternate landfill facility
- 2.2.2 Adequately Plan and fund post closure requirements, and work in accordance with the sites Environmental Management Plan. Ensure all reasonable efforts are made to protect the ecology of the area surrounding the landfill

Action 2.3. Increase gas capture at the Rye landfill

- 2.3.1 Investigate options to increase landfill gas capture and combustion in the current cell.

Action 2.4. Establish an AWT plant and adopt energy from waste practices for residual waste

- 2.4.1 Continue participating in the MWRRG procurement process for an AWT facility to service South East Melbourne

5.3 Goal 3. Recover waste prior to landfill

In a zero-waste environment, all efforts will be made to divert waste prior to landfill. This recovery will be achieved through improved household separation and recycling. More community drop-off hubs to capture non-kerbside recyclables will increase our ability to divert this waste, alongside increased efforts to

salvage items at our resource recovery centres and waste hoppers.

Contamination

The current contamination rate of kerbside recycling is 15.4%, which is significantly higher than historical rates. Over 50% of surveyed community members supported the introduction of penalties for residents who place incorrect material in their bins on a regular basis.

The Shire will improve advanced tracking system/s that uses cameras and monitoring technology during the kerbside bin collection process.

The Shire's contamination management plan incorporates a "carrot and stick" approach. When significant contamination is identified:

- The Shire will notify the resident via a bin sticker or letter with guidance on correct disposal;
- Significantly contaminated recycling or green organic bins will not be emptied, nor will drivers return to the property until the next scheduled collection and the contaminating items are removed;
- The recycling or green organic service will be removed and/or fine issued after 3 significant contamination incidences occur within a 6-month period (the level of contamination will be assessed using a set criterion in accordance with waste collection contracts). If collection is removed, it will only resume if the bin user attends a waste education session and signs a statutory declaration making a commitment to dispose of material in the correct bin.

The bin contamination policy will be complemented by specific and targeted waste education programs that work with residents in contamination hotspots, as well as requirements on future contractors to regularly review and evaluate the effectiveness of GPS or RFID technology systems for waste collection and contamination management.

The Shire will investigate a plan for waste collection from properties that are primarily

rented out for vacation accommodation purposes, i.e. effectively a commercial activity. The Shire will review owner requirements for instructing guests, and service models for properties whose waste production has a different composition and volumes to residential properties.

Action 3.1. Implement recycling contamination protocols and improve kerbside recycling services.

- 3.1.1 Work with recycling collection contracts to implement coordinated contamination management protocols and strategies
- 3.1.2 Develop and implement a waste contamination policy that is supported by a comprehensive recycling education campaign
- 3.1.3 Require waste contractors to regularly review and evaluate the effectiveness of GPS or RFID technology systems for waste collection and contamination management.
- 3.1.4 Work with DELWP and SV to deliver a 4 bin system that is consistent across Victoria (e.g. bin lid colours, common recyclable items and education materials)
- 3.1.5 Investigate options to adopt user pays principle and develop a differential commercial waste service for registered short stay accommodation

Non-kerbside recyclables

25% of kerbside plastics, glass, paper and metals can be recovered through our current recycling infrastructure and strengthened markets for recycled materials. Other materials can be dropped off, separated and recovered through the Shire's Resource Recovery Centres and other schemes that involve a network of Shire and third-party collection points throughout the Peninsula. For example, soft plastics (scrunchable plastics) can be sorted and dropped off at REDcycle collection points available at most supermarkets.

Blairgowrie community garden: Business food waste to community compost

Since opening in August 2019, The Blairgowrie Community Garden has built partnerships with three local businesses to collect food waste, such as potato peels from food preparation or products that have become too old to sell. Volunteers collect food waste from the Blairgowrie IGA, Blairgowrie Café and Ivy Co Café throughout the week.

The Blairgowrie Community Garden turns food waste from local businesses and community members into valuable compost for the community garden.

By diverting food waste from landfill, The Blairgowrie Community Garden is helping to eliminate greenhouse gasses that are produced by the breakdown of organic matter in landfill environments. The rich compost product improves the soil of the community garden, allowing a larger quantity and quality of food to be grown. By composting food waste, The Community Garden also supporting farmers, by ensuring that none of their valuable labour, time, water and nutrients to produce nutritional crops does not become landfill waste. Rainwater is also captured to water the crops in the community garden.

The composting has been made possible with the generosity of community donations and volunteers. The Blairgowrie Community Garden is working to improve their composting systems to produce higher quality compost and increase the amount of food waste they can process.



Source: Blairgowrie Community Garden

Our Waste Goals (cont.)

Action 3.2. Increase recovery of problem household wastes and other recyclables at Resource Recovery Centres.

3.2.1 Promote Resource Recovery centres as community recycling hubs for e-waste, batteries, cardboard, and hard to recycle items

3.2.2 Maximise sorting, reuse and recovery of construction and demolition waste generated through Shire projects

3.2.3 Maximise diversion of recoverable materials from the resource recovery centres through pre-sorting material and salvaging sellable items

3.2.4 Review Resource Recovery Centres and develop an operational strategy that builds steps towards achieving best practice standards. Where necessary perform upgrades to Resource Recovery Centres and enhance function and accessibility for the community e.g. maximise waste separation, recovery and reuse.

Action 3.3. Improve accessibility of the collection network for non-kerbside recyclable items

3.3.1 Promote booked hard/green waste collection services to improve accessibility to bulk waste service for residents without access to a trailer

3.3.2 Improve accessibility of mobile and permanent community drop-off network/hubs for non-kerbside recyclable items such as e-waste, clothing etc.

3.3.3 Promote the uptake and availability of third-party product stewardship and non-profit recycling programs (e.g. REDCycle)

3.3.4 Develop a business case for expanded polystyrene disposal and onsite processing at the Resource Recovery Centres.

Sustainable Procurement

Councils spend between 45% – 60% of their annual budgets on procurement and can therefore influence the types of products available in the market. The Shire will strengthen the procurement policy, preferencing supplier agreements which prioritise products containing recycled content and demonstrates commitment and action towards a circular economy and net zero carbon emissions.

To mandate recycled content levels in all Council's civil construction and building works projects, the Shire is developing an Environmentally Sustainable Development (ESD) policy based on:

- Maximum use of recycled content and on-site recycling and reuse;
- Only use virgin material where it can be demonstrated that recycled material is not available or there is a technical limitation to using recycled material;
- Requiring projects demonstrate how Policy objectives are met, during both design and construction; and
- Reviewing and updating standards to reflect best practice and align to sustainability and circular economy principles

Action 3.4. Embed Sustainable Procurement and Environmentally Sustainable Design policies across the Shire

3.4.1 Develop and implement an ESD policy for new Council building and civil works, any upgrades, refurbishments and fit outs. Provide staff, residents, builders and developers with resources to incorporate ESD principles.

3.4.2 Enhance the Procurement Policy to prioritise materials and products made from recycled material, to meet sustainability principles and minimises climate change impacts.

3.4.3 Trial materials with recycled content, such as asphalt and concrete, to inform standards in all civil projects across the peninsula

3.4.4 Work with developers and planners to implement the Better Practice Guide for Waste Management and Recycling in Multi-unit Developments on the Peninsula

5.4 Goal 4. A clean and healthy Peninsula

Litter and Illegal Dumping is a highly visible challenge on the Peninsula that impacts ecosystems, spreads weeds and vermin, and can potentially place public health at risk.

Litter

Litter is defined as any waste that is less than 50 litres.

The Shire will focus on building community participation and adopting approaches and strategies that not only seek to influence correct litter prevention behaviour, but broader influence and social norms. This will be achieved through education, infrastructure, activities and events that build pride in community help reinforce social norms that littering is not acceptable and that the natural environments are important and valued.

The Shire will focus on providing:

- Clear and consistent messaging and signage;
- Increased training and knowledge for those involved with enforcement to help deter littering;
- Promote and enhance community participation in litter collection and prevention projects; and
- Appropriate general waste and recycling public place infrastructure.

The Shire will conduct regular infrastructure audits and use a combination of mobile and fixed bins to determine the most appropriate configuration and positive impact of litter and illegal dumping. Infrastructure needs will be determined based on the factors listed in Table 7.

New Peninsula Men's Shed: Repairing bikes with primary school students.

The New Peninsula Men's Shed (NPMS) began working with Mornington Park Primary School in 2017 to support their bike education program. The Men's Shed members teach students basic bike maintenance and repair skills.

"The aim is to have every child at the school owning a bike and be equipped with the skills to maintain their bikes" – Peter Harris, NPMS

Since 2017, the school has seen an increased participation in students riding or walking to school.

The VicRoads Bike Education program has funded the purchase of bike equipment such as tyres, tubes, valves, seats, spokes and lubricants. Old bikes that are collected through the Shires resource recovery centres are repaired or broken down for spare parts by members of the two peninsula Men's Sheds.



Source: New Peninsula Men's Shed

Our Waste Goals (cont.)

Decision Area	Factor
Cost	Purchase and install
Amenity	Visual appeal Ease and safety of use Cleanliness (litter and pest control) Uniformity
Servicing	Ease of installation Maintenance and cleaning Accessibility for collection Capacity to limit contamination

Table 7 Public bin infrastructure decision factors

New solutions for public waste management will also be explored. Solar bins use a combination of compaction and smart systems that provide greater waste storage capacity than traditional litter bins, and real time monitoring of available bin storage space for effective public place waste management. Solar panels on the top of the bin power the internal compactor, and Wi-Fi enabled communications and alerts. Side panels can be custom designed. Such bins can reduce collection frequency by 80% and reduce the potential for overflow over the holiday season

Action 4.1. Improve waste collection and resource recovery in public places

- 4.1.1 Install public smart bins that uses sensors, solar powered compaction units and facilitates collection optimisation
- 4.1.2 Conduct audit of public place infrastructure, particularly in litter hotspot areas such as the foreshore areas, and regularly monitor and improve location, size, signage and collection frequencies.
- 4.1.3 Increase the presence of public place recycling bins in locations with high foot traffic. Standardise bin infrastructure and signage for public bins

Action 4.2. Deliver anti-litter behaviour change campaigns

- 4.2.1 Develop and implement Peninsula wide littering campaigns tailored to residents, day visitors and short stay visitors (e.g. short stay information packs)
- 4.2.2 Support volunteer clean-up groups, for example, promoting days and locations for each group, and providing waste collection services
- 4.2.3 Install drinking taps when undertaking infrastructure upgrades and or new developments in high visitation areas.

Illegal Dumping

Illegal dumping is an environmental crime, which can range from being a large scale organised criminal activity or opportunistic dumping of unwanted items on the kerbside. As well as potentially causing serious pollution, illegal dumping also poses a risk to human health and impacts local amenities. Cleaning up illegal dumping comes at a significant cost to local communities, councils and land managers.

Depending on the type and quantity of waste, illegal dumpers can be motivated by:

- Convenience;
- The opportunity to make money;
- Perceived risk and consequences of getting caught;
- An unwillingness to pay; and
- An uncaring attitude.

It is important for the Shire and community to work together to enforce and improve compliance with existing illegal dumping laws. The Shire will adopt best practice preventative measures that will address illegal dumping at its source and thus, save on waste removal costs. In addition to education, the Shire will increase resources for enforcement, investigation and prosecution.

Illegal dumping hotspots are known locations that are regularly targeted by dumping of

large volumes of waste. These locations are characteristically difficult to access and often requires a vehicle. The geographic nature of the Peninsula lends itself to multiple hotspot locations; long stretches of unlit roads, reserves and no through roads with little foot and vehicular traffic creates ideal conditions for opportunistic dumpers. The Shire will systematically address these hotspot locations by developing unique strategies to reduce access to these locations.

Action 4.3. Providing community engagement programs to encourage behaviour change regarding illegal dumping

- 4.3.1 Develop proactive education and behaviour change campaigns that includes the following strategies and tactics:
 - Name and Shame approach;
 - Promote prosecutions, fines and penalties;
 - Ensure high visibility within hot spots such as foreshore areas;
 - Increase enforcement including surveillance patrols and issuance of fines and penalties;
 - Maintain a strategic dumped waste investigation and collection program;
 - Encourage community reporting and improve use and uptake of reporting apps such as Snap, Send, Solve; and
 - Recognising and celebrating the community for their assistance.
- 4.3.2 Continue to disseminate and promote information on correct waste behaviours, use of Council's waste services, and understanding of potential contamination from 'free' and illegally dumped green waste.
- 4.3.3 Continue addressing illegal waste dumping on a regional level by working in partnership with neighbouring Councils and other public authorities/

agencies e.g. relevant water authorities, EPA, Keep Victoria Beautiful, Sustainability Victoria, Vic Roads and Parks Victoria

- 4.3.4 Work with property managers and owners to disseminate correct disposal of waste information and support renters to access Council's booked kerbside service (e.g. waste voucher request templates).

Action 4.4. Adopt a proactive prevention model that demonstrates best practice in illegal dumping compliance and enforcement

- 4.4.1 Coordinate an Internal Litter Task Force to build capacity within Council to plan and address illegal dumping hot spots and dumping of significance, and to ensure that best practice procedures are streamlined across Council.
- 4.4.2 Investigate options to increase the enforcement capacity of Council
- 4.4.3 Adopt a prevention model to target illegal dumping hotspots and improve hot spot monitoring and management to inform strategic placement of surveillance devices

5.

Our Waste Goals (cont.)

5.5 Goal 5. Data driven decisions

In order to make better waste decisions and monitor our progress towards zero waste, high-quality data is essential. Clear and consistent data will be collected across the Shire's waste contracts to provide residents with a comprehensive story of waste.

Action 5.1. Improve reporting on material that is reused, recycled and disposed to inform continual improvement

- 5.1.1 Develop a reporting and monitoring tool for recovered bulky material, and for Shire wide reuse of recycled material in civil and construction projects
- 5.1.2 Develop a set of robust key performance indicators for inclusion in supplier contracts and ensure contractors provide waste generation and resource recovery data that is accurate, transparent and timely.

Action 5.2. Provide regular report cards that update the community on Shire progress towards targets

- 5.2.1 Develop a reporting dashboard to track the Strategy progress and provide annual updates to the community.
- 5.2.2 Conduct annual audits of kerbside rubbish, recycling and green waste.

5.6 Goal 6. An innovative and vocal Peninsula

The Shire can directly influence how waste is managed on the Peninsula through our policies and strategies. However, in areas outside of the Shire's jurisdiction and when coordination with all levels of government is necessary, the Shire can have influence through strategic advocacy.

The Shire is committed to reinvesting savings from reduced waste disposal costs back into the community through waste and environmental initiatives, and the development of a Local Waste Innovation Fund. The Innovation Fund will support the development of local solutions to rethink waste and encourage community and businesses to stimulate new markets and improve resource recovery practices.

Action 6.1 Enabling and supporting strategic partnerships

- 6.1.1 Facilitate the establishment or expansion of local waste solutions and providers

Action 6.2. Implement funding mechanisms to support local waste initiatives

- 6.2.1 Investigate and develop a model for a Local Waste Innovation fund

Action 6.3. Advocate on behalf of the community to State and Federal government members of parliament on matters of policy and funding

- 6.3.1 Conduct advocacy activities at all levels of government for solutions and policies which supports waste avoidance, reuse, recycling and recovery. e.g. National Packaging Strategy initiatives and Container Deposit Legislation.
- 6.3.2 Continue to support and advocate for Extended Producer Responsibility schemes that help reduce waste and increase opportunities for resource recovery

6.

Monitoring and Evaluation

Monitoring and evaluation are integral to measuring the overall success of the Strategy and ensuring that projects and activities are delivered in an efficient and effective manner whilst meeting the Strategy objectives.

This section outlines how the Shire plans to monitor the Strategy's implementation and evaluate its success.

6.1 Evaluation Framework

Strategy

The overarching Strategy document defines strategic directions and actions to be monitored.

Implementation Plan

The Shire will develop annual implementation plans that will define action plan objectives and outcomes to be monitored.

Individual project and activities

The individual projects and activities that are included in the implementation plan will each have associated key performance indicators attached for monitoring and reporting.

6.2 Strategy Evaluation

A 5-year implementation plan has been developed, see Appendix A. A full Strategy evaluation will be conducted in 2025, to assess achievements and develop a new five-year plan that will include community feedback and take into account any significant changes to the waste sector. The review will include an assessment of any innovations, new technologies or issues that could impact the delivery of a strategic action.

At the end of each year of implementation, a simple dashboard style report will be produced and released to the general public.

KPIs will be reported at a high level only, the evaluation matrix can be found in Appendix B. More specific monitoring and evaluation will be conducted at the individual project and activity level and contribute towards ongoing performance improvement



Appendix A – Implementation Plan 2020 – 2025

Our Waste Goal 1: An Empowered Community

L equals low (up to \$100,000), M equals medium (\$100,000 to \$1 million), H equals high (\$1 million plus).

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
1.1. Demonstrate leadership in resource recovery.	1.1.1 Implement mandatory recycling and waste management requirements for all Shire organised events	Start	L	Operations	●	●	●	●	●
	1.1.2 Regularly monitor performance of office recycling programs in all Shire offices and ensure maximum separation of recyclables and food organics is achieved.	Enhance	L	Operations	●	●	●	●	●
	1.1.3 Standardise rubbish and recycling infrastructure and education across all Shire offices and facilities	Enhance	L	Operations	●				
	1.1.4 Council to test new waste opportunities and lead the community	Enhance	L	Operations/Grants	●	●	●	●	●
1.2. Design targeted programs and explore partnerships with the community to reduce waste generation and promote reuse initiatives.	1.2.1 Investigate incentives for households to reduce consumption and avoid waste generation	Start	L-M	Operations	●	●	●	●	●
	1.2.2 Promote food waste avoidance to the community, through programs such as Love Food Hate Waste	Enhance	L	Operations	●	●	●	●	●
	1.2.3 Promote and incentivise reusable nappies, for parents and families	Start	L	Operations	●	●	●	●	●
	1.2.4 Support and promote non-profit and community organisations that build the capacity of residents donate or sell goods prior to disposing in landfill (e.g. Op shop waste disposal guide)	Enhance	L	Operations	●	●	●	●	●



Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
1.2	1.2.5 Support community initiatives that encourage repair, reuse and/or swap activities e.g. Men's Sheds and Repair Cafes.	Enhance	L	Operations	●	●	●	●	●
	1.2.6 Develop behaviour change strategies and campaigns, including bin inspections, traditional and non-traditional social marketing and targeted messages to improve recycling and zero waste behaviours for residents and visitors	Continue	L	Operations	●	●	●	●	●
	1.2.7 Support the development and promotion of regional, state, and national waste education programs.	Continue	L	Operations	●	●	●	●	●
	1.2.8 Support schools to deliver curriculum driven waste education by encouraging participation in Sustainability Victoria's Resource Smart Schools program, offering waste incursions and excursions, and recognising waste smart schools.	Continue	L	Operations	●	●	●	●	●
	1.2.9 Promote and support a network of community waste programs and initiatives, e.g. contributing content to local media, promotion of recycling champions and peer to peer networks, forums and information pop ups, and creative recycling initiatives etc.	Enhance	L	Operations	●	●	●	●	●
	1.2.10 Promote the Best Bites initiative as a tool for businesses to improve waste practices and investigate incentives to encourage businesses to sign up to the Best Bites program	Enhance	L	Operations/Budget bid	●	●	●	●	●

Appendix A – Implementation Plan 2020 – 2025 (cont.)

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
	1.2.11 Support the promotion and delivery of Federal and State commercial initiatives and programs that minimises business waste and improves recycling	Enhance	L	Operations	●	●	●	●	●
	1.2.12 Investigate levers to incentivise waste avoidance and local circular economies in businesses, agriculture and industry	Start	L-M	Grant/ Budget bid	●	●	●	●	●
1.3. Phase out single-use plastics on the Peninsula	1.3.1 Implement a Single-use Plastics Policy and phase out problematic and unnecessary single-use plastic across Shire business, leases, Shire sponsored events and activities held on Shire land.	Start	L	Operations	●	●	●	●	●
	1.3.2 Develop programs and initiatives that support local businesses and communities to reduce single-use plastic items, and work with community-based groups to promote single-use plastic free behaviours to the broader community.	Start	M	Budget bid	●	●	●	●	●

Our Waste Goal 2: Net Zero Emissions

L equals low (up to \$100,000), M equals medium (\$100,000 to \$1 million), H equals high (\$1 million plus).

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
2.1 Reduce and prevent food waste from landfill	2.1.1 Encourage and support community and home composting programs	Enhance	L	Operations	●	●	●	●	●
	2.1.2 Deliver an opt in Food and Garden Organics Service that is accompanied by an education program guided by behaviour change principles e.g. Attractive caddies that are designed with branded messaging, high aesthetic appeal and motivate uptake of service; bin liners and targeted messaging.	Start	H	Operations	●	●	●	●	●
	2.1.3 Investigate mechanisms to encourage onsite organic treatment infrastructure (dehydrator, tank, digester, pulveriser) for non-residential properties.	Start	M-H	Grants	●	●	●	●	●
2.2. Close and remediate Rye Landfill	2.2.1 Model waste disposal options after the closure of Rye Landfill within context of regional procurement of an alternative waste plant or the cost benefit of using an alternate landfill facility	Continue	L	Operations	●				
	2.2.2 Adequately Plan and fund post closure requirements, and work in accordance with the sites Environmental Management Plan. Ensure all reasonable efforts are made to protect the ecology of the area surrounding the landfill	Continue	H	Operations	●	●	●	●	●

Appendix A – Implementation Plan 2020 – 2025 (cont.)

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
2.3. Increase gas capture at the Rye landfill	2.3.1 Investigate options to increase landfill gas capture and combustion in the current cell.	Enhance	M	Operations	●	●	●	●	●
2.4. Establish an AWT plant and adopt energy from waste practices for residual waste	2.4.1 Continue participating in the MWRRG procurement process for an AWT facility to service South East Melbourne	Continue	NA	-	●	●	●	●	●

Our Waste Goal 3: Recover Waste prior to landfill

L equals low (up to \$100,000), M equals medium (\$100,000 to \$1 million), H equals high (\$1 million plus).

● Design ● Deliver ● Review

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
3.1. Implement recycling contamination protocols and improve kerbside recycling services.	3.1.1 Work with recycling collection contracts to implement coordinated contamination management protocols and strategies	Enhance	NA	-	●	●	●	●	●
	3.1.2 Develop and implement a waste contamination policy that is supported by a comprehensive recycling education campaign	Enhance	L	Operations	●	●	●	●	●
	3.1.3 Require waste contractors to regularly review and evaluate the effectiveness of GPS or RFID technology systems for waste collection and contamination management.	Start	NA	-	●	●	●	●	●
	3.1.4 Work with DELWP and SV to deliver a 4 bin system that is consistent across Victoria (e.g. bin lid colours, common recyclable items and education materials)	Start	H	Grant	●	●	●	●	●
	3.1.5 Investigate options to adopt user pays principle and develop a differential commercial waste service for registered short stay accommodation	Start	NA	-		●	●	●	●



Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
3.2. Increase recovery of problem household wastes and other recyclables at Resource Recovery Centres.	3.2.1 Promote Resource Recovery centres as community recycling hubs for e-waste, batteries, cardboard, and hard to recycle items	Enhance	L	Operations	●	●	●	●	●
	3.2.2 Maximise sorting, reuse and recovery of construction and demolition waste generated through Shire projects	Enhance	NA	-	●	●	●	●	●
	3.2.3 Maximise diversion of recoverable materials from the resource recovery centres through pre-sorting material and salvaging sellable items	Enhance	NA	-	●	●	●	●	●
	3.2.4 Review Resource Recovery Centres and develop an operational strategy that builds steps towards achieving best practice standards. Where necessary perform upgrades to Resource Recovery Centres and enhance function and accessibility for the community e.g. maximise waste separation, recovery and reuse.	Enhance	M	Budget bid	●	●	●	●	●

Appendix A – Implementation Plan 2020 – 2025 (cont.)

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
3.3. Improve accessibility of the collection network for non-kerbside recyclable items	3.3.1 Promote booked hard/green waste collection services to improve accessibility to bulk waste service for residents without access to a trailer	Enhance	L	Operations	●	●	●	●	●
	3.3.2 Improve accessibility of mobile and permanent community drop-off network/hubs for non-kerbside recyclable items such as e-waste and clothing etc.	Enhance	L	Operations	●	●	●	●	●
	3.3.3 Promote the uptake and availability of third-party product stewardship and non-profit recycling programs (e.g. REDcycle)	Enhance	L	Operations	●	●	●	●	●
	3.3.4 Develop a business case for expanded polystyrene disposal and onsite processing at the Resource Recovery Centres.	Start	M	Budget bid	●	●	●	●	●
3.4. Embed Sustainable Procurement and Environmentally Sustainable Design policies across the Shire	3.4.1 Develop and implement an ESD policy for new Council building and civil works, any upgrades, refurbishments and fit outs. Provide staff, residents, builders and developers with resources to incorporate ESD principles.	Start	L	Operations	●	●	●	●	●
	3.4.2 Enhance the Procurement Policy to prioritise materials and products made from recycled material, to meet sustainability principles and minimises climate change impacts.	Enhance	-	NA	●	●	●	●	●
	3.4.3 Trial materials with recycled content, such as asphalt and concrete, to inform standards in all civil projects across the peninsula	Start	L	Operations	●	●	●	●	●
	3.4.4 Work with developers and planners to implement the Better Practice Guide for Waste Management and Recycling in Multi-unit Developments on the Peninsula	S	M	Operations	●	●	●	●	●

Our Waste Goal 4: A Clean and healthy Peninsula

L equals low (up to \$100,000), M equals medium (\$100,000 to \$1 million), H equals high (\$1 million plus).

● Design ● Deliver ● Review

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
4.1. Improve waste collection and resource recovery in public places	4.1.1 Install public smart bins that uses sensors, solar powered compaction units and facilitates collection optimisation	Start	M	Budget bid	●	●	●	●	●
	4.1.2 Conduct audit of public place infrastructure, particularly in litter hotspot areas such as the foreshore areas, and regularly monitor and improve location, size and signage collection frequencies.	Enhance	L	Operations	●	●	●	●	●
	4.1.3 Increase the presence of public recycling bins in locations with high foot traffic. Standardise bin infrastructure and signage for public bins	Enhance	H	Operations/ Budget bid	●	●	●	●	●
4.2. Deliver anti-litter behaviour change campaigns	4.2.1 Develop and implement Peninsula wide littering campaigns tailored to residents, day visitors and short stay visitors (e.g. short stay information packs)	Enhance	L	Operations	●	●	●	●	●
	4.2.2 Support volunteer clean-up groups, for example, promoting days and locations for each group, and providing waste collection services	Continue	L	Operations	●	●	●	●	●
	4.2.3 Install drinking taps when undertaking infrastructure upgrades and or new developments in high visitation areas.	Enhance	M	Budget bid	●	●	●	●	●

Appendix A – Implementation Plan 2020 – 2025 (cont.)

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
4.3. Providing community engagement programs to encourage behaviour change regarding illegal dumping	4.3.1 Develop proactive education and behaviour change campaigns that includes the following strategies and tactics: <ul style="list-style-type: none"> Name and Shame approach; Promote prosecutions, fines and penalties Ensure high visibility presence within hot spots such as foreshore areas; Increase enforcement including surveillance patrols and issuance of fines and penalties; Maintain a strategic dumped waste investigation and collection program; Encourage community reporting and improve use and uptake of reporting apps such as Snap, Send, Solve; and Recognising and celebrating the community for their assistance 	Enhance	M	Operations/ Budget bid	●	●	●	●	●
	4.3.2 Continue to disseminate and promote information on correct waste behaviours and use of Council's waste services, including greater promotion of the booked hard and green waste collection services, and understanding of potential contamination from 'free' and illegally dumped green waste	Enhance	L	Operations	●	●	●	●	●
	4.3.3 Continue addressing illegal waste dumping on a regional level by working in partnership with neighbouring Councils and other public authorities/ agencies e.g. relevant water authorities, EPA, Keep Victoria Beautiful, Sustainability Victoria and Parks Victoria	Enhance	NA	-	●	●	●	●	●
	4.3.4 Work with property managers and owners to disseminate correct disposal of waste information and support renters to access Council's booked kerbside service (e.g. waste voucher request templates).	Start	L	Operations	●	●	●	●	●

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
4.4. Adopt a proactive prevention model that demonstrates best practice in illegal dumping compliance and enforcement	4.4.1 Coordinate an Internal Litter Task Force to build capacity within Council to plan and address illegal dumping hot spots and dumping of significance, and to ensure that best practice procedures are streamlined across Council.	Continue	NA	-	●	●	●	●	●
	4.4.2 Investigate options to increase the enforcement capacity of Council	Start	M	Budget bid	●	●	●	●	●
	4.4.3 Adopt a prevention model to target illegal dumping hotspots and improve hot spot monitoring and management to inform strategic placement of surveillance devices	Enhance	M	Operations/ Budget bid	●	●	●	●	●

Our Waste Goal 5 – Data Drive Decisions

L equals low (up to \$100,000), M equals medium (\$100,000 to \$1 million), H equals high (\$1 million plus).

● Design ● Deliver ● Review

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
5.1. Improve reporting on material that is reused, recycled and disposed to inform continual improvement	5.1.1 Develop reporting and monitoring tool for recovered bulky material, and for Shire wide reuse of recycled material in civil and construction projects	Start	L	Operations	●	●	●	●	●
	5.1.2 Develop a set of robust key performance indicators for inclusion in supplier contracts and ensure contractors provide waste generation and resource recovery data that is accurate, transparent and timely.	Start	L	Operations	●				
5.2. Provide regular report cards that update the community on Shire progress towards targets	5.2.1 Develop a reporting dashboard to track the Strategy progress and provide annual updates to the community.	Start	L	Operations	●	●	●	●	●
	5.2.2 Conduct annual audits of kerbside rubbish, recycling and green waste.	Continue	L	Operations	●	●	●	●	●

Appendix A – Implementation Plan 2020 – 2025 (cont.)

Our Waste Goal 6 – An Innovative and Vocal Peninsula

L equals low (up to \$100,000), M equals medium (\$100,000 to \$1 million), H equals high (\$1 million plus).

Action	Activity	Status	\$	Funding	2020/21	2021/22	2022/23	2023/24	2024/25
6.1 Enabling and supporting strategic partnerships	6.1.1 Facilitate the establishment or expansion of local waste solutions and providers	Start	M	Grants	●	●	●	●	●
6.2. Implement funding mechanisms to support local waste initiatives	6.2.1 Investigate and develop a model for a Local Waste Innovation fund	Start	M	Operations	●	●	●	●	●
6.3. Advocate on behalf of the community to State and Federal government members of parliament on matters of policy and funding	6.3.1 Conduct advocacy activities at all levels of government for solutions and policies which supports waste avoidance, reuse, recycling and recovery. e.g. National Packaging Strategy initiatives and Container Deposit Legislation.	Continue	NA	-	●	●	●	●	●
	6.3.2 Continue to support and advocate for Extended Producer Responsibility schemes that help reduce waste and increase opportunities for resource recovery	Continue	NA	-	●	●	●	●	●

Appendix B – Evaluation metrics

Service Area	Description	Unit/Metric
Landfill		
Municipal waste to landfill per household	Municipal waste sent to Rye landfill	Kg/per household/per annum
Total Waste to landfill per capita	Municipal waste sent to Rye landfill or alternative site	Kg/per capita/per annum
Household Kerbside Collection		
Waste / Resource Generation	Total generated – recyclables captured in the commingled recycling stream	Kg/hh/annum
	Total generated – FOGO captured in the organics waste stream	Kg/hh/annum
Resource Recovery Rate	Proportion of total generated recyclables captured in the commingled recycling stream and collected for sorting	% by weight
	Proportion of total FOGO captured in the organics waste stream for processing	% by weight
Contamination rate	Proportion of material placed in commingled recycling bins that is contamination	% by weight
	Proportion of material placed in organics bins that is contamination	% by weight
	Proportions of household bins rejected for collection due to significant levels of contamination	% of bins inspected
Diversion rate	Proportion of total materials generated by households that is diverted from landfill for sorting or reprocessing	% by weight
Greenhouse gas emissions	Net balance of CO2 from waste related activities	Tonnes CO2
Waste Minimisation and Avoidance		
Community initiatives	Number of active community initiatives/programs	Count
Waste incursions and excursions for schools	Number of incursions and excursions for schools	Count per annum
Reuse	Annual tonnages sold through The Shire reuse store	Number household items sold
Litter and Illegal Dumping		
Litter	Number of penalties and notices	Count per annum
	Local litter audit checks	Count per annum and peak period or event
	Annual tonnages collected	Tonnes per annum
Illegal Dumping	Number of penalties and notices	Count per annum
	Number of illegal dumpers identified	Count per annum
	Number of cases of dumped waste removed after directive from Council	Count per annum
	Number hotspots recorded in hotspot register	Count per annum
	Annual tonnages collected	Tonnes per annum
Sustainable Procurement		
Recycled materials	Amount of recycled content used to replace virgin materials in civil and construction	Tonnes per annum

Appendix C – Policies and Regulation

National Waste Policy 2018

The 2018 National Waste Policy sets the collaborative and coordinated framework for all governments, businesses, communities and individuals. The policy reflects the global shifts towards a circular economy and new thinking where waste is avoided, there are improved opportunities for resource recovery, use of recycled material is increased, there is a better management of resources that benefit the environment, human health and the economy, and there is increased support for innovation. Seven national targets are identified:

1. Ban the export of waste plastic, paper, glass and tyres by second half of 2020
2. Reduce total waste generated by 10% per person by 2030
3. 80% average resource recovery rate from all waste streams following the waste hierarchy by 2030
4. Significantly increase the use of recycled content by government and industry
5. Phase out problematic and unnecessary plastics by 2025
6. Halve the amount of organics sent to landfill by 2030
7. Make comprehensive economy-wide and timely data publicly available to support better consumer, investment and policy decisions

National Packaging Targets

In 2018, the Australian government announced new national targets to reduce packaging waste and improve local recycling markets.

The 2025 national packaging waste targets are:

1. 100% of all Australia's packaging will be reusable, recyclable or compostable by 2025 or earlier
2. 70% of Australia's plastic packaging will be recycled or composted by 2025
3. 30% average recycled content will be included across all packaging by 2025
4. Problematic and unnecessary single-use plastic packaging will be phased out through design, innovation or introduction of alternatives

National Waste Export Bans

According to the 2018 National Waste Report, Australians generated 54.5 million tonnes of waste per year from which 58% was successfully recycled while 4.3 million tonnes were exported, primarily fibre and plastics.

In August 2019, the Council of Australian Governments (COAG) announced it would establish a timetable to

ban the export of waste plastic, paper, glass and tyres, whilst building Australia's capacity to generate high value recycled commodities and associated demand.

National Food Waste Strategy

Food waste is estimated to cost the Australian economy \$20 billion each year. This results in significant loss of the water, land, energy and fuel used to produce and distribute food. Furthermore, landfilling organic waste produces greenhouse gas emissions, contributing to climate change.

The National Food Waste Strategy aims to halve food waste by 2030. To achieve this target, there are four priority areas: supportive policies, business improvements, developments of markets to repurpose food waste, and changing consumer behaviour.

Environment Protection Act 2017

In recent years, there have been tightened environmental legislative and regulatory measures as well as an increased EPA compliance/enforcement focus on waste facilities related to storage of combustible recyclables, e-waste landfill bans, and landfill environmental management guidelines, which will impact the Shire's waste management operations.

Moreover, the Victorian Government intends for the Environment Protection Act 2017 (the new Act) to commence on 1 July 2021. When it commences, the amended Act will give EPA enhanced powers and tools to prevent risks to the environment and human health as well as the ability to issue stronger sanctions and penalties which hold environmental polluters to account. In an Australian first, the general environmental duty is criminally enforceable.

The new general environmental duty reflects a shift in focus from managing pollution to prevention of harm. As such, the industry can expect increased EPA resourcing and compliance requirements for waste, which are all factors that can foreseeably impact the Shire's former and current landfills and transfer station operations.

The new Act will significantly change the current environmental legislative and regulatory regime in Victoria, placing greater emphasis on increased environmental risk management and incident prevention, while introducing a range of mandatory reporting obligations. The Act will introduce amended fees proportionate to level of littering, and new permissions (licenses or permits) for resource recovery centres. The introduction of a civil remedy provision provides

third parties, such as community members and interest groups, with the ability to seek civil remedies such as Court orders to restrain a person from engaging in conduct that is not in compliance with the new Act, or for specific breaches of the Act.

Recycling Victoria – a new economy

The ability to maintain and make the best use of our resources for longer periods within the supply chain may offer cost savings and benefits to businesses environmentally, socially and economically, not least providing opportunities for job creation in the maintenance and repair of certain products/materials. The Victorian Government's recycling action plan will overhaul our recycling and shift waste towards a circular economy by:

- Reforming kerbside collection:
 - container deposit scheme (2022/23)
 - glass (2021-2027)
 - organic collection (2026/27 – 2030)
- Addressing plastic pollution
- Supporting communities and the reuse economy
- Increasing the landfill levy
- Regulating waste as an essential service
- Encouraging investment and infrastructure developments

Victoria's Recycling Infrastructure Plan

Also known as the Statewide Waste and Resource Recovery Infrastructure plan, it is a 30 strategic plan to deliver Victoria a waste sector and the resource recovery infrastructure that protects human and environmental health, maximises the recovery of materials and minimising the long-term cost to households, industry and government. The following strategies will assist to deliver the plan:

- Victorian Market Development for Recovered Resources Strategy
- Victorian Organics Resource Recovery Strategy 2015
- Victorian Waste Education Strategy 2016

Metropolitan Waste and Resource Implementation Plan

The plan sets out how the waste and resource recovery infrastructure needed for the 31 municipalities within metropolitan Melbourne will be achieved. The plan strategic objectives are to reduce waste sent to landfill, increase organic waste recovered, deliver community, environmental and economic benefits, and plan for Melbourne's growing population. The plan moves away from landfilling towards valuing waste as a resource for which new industries and jobs can be nurtured.

Metropolitan Regional Litter Plan 2019 – 2024 (draft)

Household and commercial littering and illegal dumping remains a persistent and complex issue, type of littering and reasons varying across regions. The Victorian Waste Education Strategy 2016 recognises the need for local and regional actions in a tailored response to littering. The draft Metropolitan Regional Litter Plan will identify priority litter issues and provide a plan to meet the following objectives:

1. Councils are committed to preventing and reducing litter and illegal dumping
2. Councils are supported and seek to make evidence-based decisions about prevention and management of litter and illegal dumping
3. Councils collaborate internally and externally on initiatives to increase education and enforcement on litter and illegal dumping.

Appendix D – Strategic Prioritisation

The Shire identified a range of actions to achieve zero waste targets and strategic objectives by 2030. Each activity has been identified as having potential to reduce waste to landfill and provide other environmental, social and economic benefits to the community.

Strategic Prioritisation

The following areas of assessment criteria were established by the Shire and have been used to compare the relative strengths and weakness and subsequent impact of potential actions upon achieving zero waste:

1. Governance
2. Economic
3. Social
4. Environmental

A description of each type of criteria is presented below.

Governance

Governance includes considerations for how an option supports Commonwealth, regional and state policies. The state and regional policies particularly include the:

- SV Statewide Waste and Resource Recovery Infrastructure Plan;
- MWRRG Waste and Resource Recovery Implementation Plan;
- Victorian Recycling Industry Strategic plan;
- Circular Economy Policy (impending);
- Shire policy and strategies:
 - Climate Change Engagement Plan; and
 - Climate Emergency Declaration.

The Victorian state waste and resource recovery priorities and strategic framework are shown in Figure 14.

Figure 14: Victoria's priorities to realise an integrated waste and resource recovery system

In Victoria, more than 60% of all materials sent to landfill are organic in nature, therefore increasing recovery of food waste is an important factor to reduce the tonnes of material sent to landfill. Improving the recovery of organic material is a priority of the State Government and the Victorian Organics Resource Recovery Strategy (VORRS) has been released to support this outcome.

Sustainability Victoria identifies that prioritising recovery of materials and resources is fundamental to achieving the goals of the State wide Resource Recovery Infrastructure Plan, in particular Strategic Direction 1. In relation to Local government services and infrastructure the SWRRIP states that expanding the number of councils that offer food organics collection services as part of the kerbside system is a key action in Regional Implementation Plans to increase organics recovery rates. The MWRRG's WRRIP identifies how regional and local waste infrastructure needs and opportunities will be met over the next 10 years, and delivers state wide goals and strategic directions in the Metropolitan resource recovery region. The Metropolitan Implementation Plan's objectives are to:

- Reduce waste sent to landfill;
- Increase organic waste recovered;
- Deliver community, environmental and economic benefits; and
- Plan for Melbourne's growing population.

The Victorian Recycling Industry Strategic Plan has been developed to support industry in the medium to long-

term, minimise recycling costs for Victorian households, and build a resilient recycling sector in Victoria. The plan's goals are to:

- Stabilise the recycling sector, particularly in the wake of China's new trade measures;
- Increase the quality of recycled materials;
- Improve the recycling sector's diversity and productivity; and
- Develop markets for recycled materials.

This Recycling Industry Strategic Plan primarily relates to the comingled recyclable collection and education programs offered to the community to support this service. Consideration of SV's guidance on optimised kerbside collection systems, in particular as it relates to the comingled recycling stream, would best support the goals of the Recycling Industry Strategic Plan. Differing recyclables service options are not considered as part of this modelling.

The following criteria (Table 9) facilitates an assessment of each option against priorities of relevant Commonwealth, State and Shire policies.

Table 9: Governance alignment criteria

Governance criteria	
Poor: option does not align/support State policy/Strategy goals and objectives	1
Limited: option marginally aligns with State policy/Strategy goals and objectives	2
Good: option aligns/supports State policy/Strategy goals and objectives	3
Excellent: option aligns/supports State policy/Strategy and best practice	4

Broader economic benefits

The broader economic benefits related to each option may consider whether a new service would bring a degree of local economic growth to the area through the creation of full time employment (FTE), or through resource recovery innovation, local initiatives in the local government area, potential investment in advanced waste resource recovery treatment infrastructure, or enhancement of the market for end products.

Table 10: Broader economic benefits criteria

Economic criteria	
Poor: option does not improve upon business as usual economic growth or prolong landfill lifespan	1
Limited: marginal improvements in local economic growth or expansion of existing landfill lifespan	2
Good: option facilitates good local economic growth and moderately prolongs lifespan existing landfill	3
Excellent: option facilitates the best local economic growth and strongly prolongs lifespan existing landfill (through jobs and end markets for recycled products)	4

Social criteria

Municipal waste services are inherently reliant on community effort and engagement to operate successfully, which in turn is influenced by their degree of simplicity, accessibility and quality of associated education. This criteria assesses each option by the requirement for public effort, ease and convenience i.e. the ease of transition and likely behaviour change (Table 11). Overall this considers the level of community engagement necessary to achieve the desired objectives and the capacity of the system to accommodate the waste generation needs of households.

Table 11: Social criteria

Social criteria	
Poor: Heightened effort/significantly reduced convenience, poor local capacity, requires high community engagement level and a major change in behaviour	1
Limited: Some community engagement and capacity building that leads to local resilience, and minor behaviour change from increased benefits such as improved convenience	2
Good: Moderate community engagement and capacity building that leads to local resilience, and moderate behaviour change from increased benefits such as improved convenience	3
Excellent: Strong community engagement and capacity building that leads to local resilience, and significant behaviour change from increased benefits such as improved convenience	4



Figure 14: Victoria's priorities to realise an integrated waste and resource recovery system

APPX

Our Waste Goals (cont.)

Environmental Criteria

One of the primary objectives for all Shire operations is to achieve carbon neutrality. The majority of all emissions associated with a kerbside collection system arise from landfilled material. This criterion is focused on identifying actions that deliver the highest diversion from landfill and reduce associated emissions. Other activities are prioritised that minimise harm to the environment or may involve litter and illegal dumping prevention or reduction or single use plastics.

Table 12: Environmental criteria

Environmental criteria	
Poor: Negligible reduction in waste to landfill and does not improve environmental behaviours or contribute to carbon neutrality	1
Limited: Small reduction in waste to landfill and greenhouse gas emissions. Minor change in environmental behaviours (e.g. reduced litter, illegal dumping)	2
Good: Moderate reduction to landfill and greenhouse gas emissions and positive change in environmental behaviours (e.g. reduced litter, illegal dumping)	3
Excellent: Critical contribution to achieving zero waste to landfill and carbon neutrality. Significant changes in environmental behaviours (e.g. large reduction in litter and illegal dumping)	4

Multi Criteria Analysis

In order to complete the Multi Criteria Analysis (MCA), the Shire provided weightings for each criteria. These included:

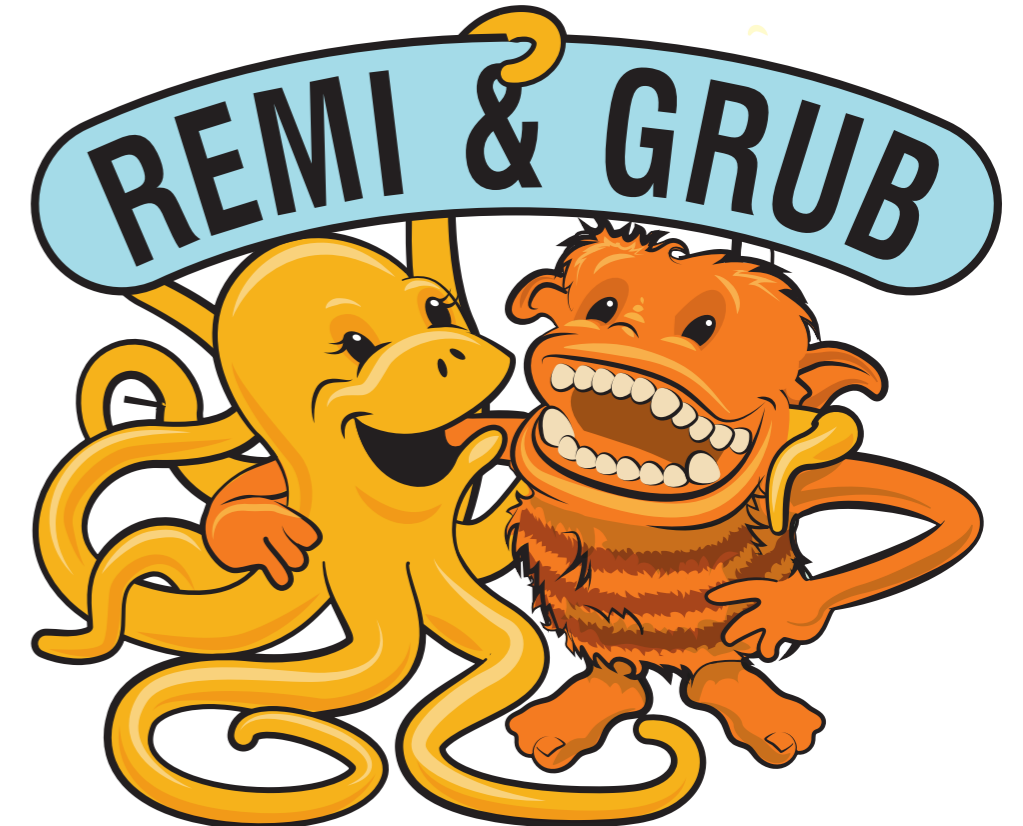
1. Environmental: 35 %
2. Economic: 25%
3. Social: 30%
4. Governance: 10 %

Each option was scored by MRA (waste expert consultants) and Shire across each criteria and ranked according to the overall average.

ABBR

Abbreviations

AWT	Alternative Waste Treatment
C&D	Construction and demolition waste
C&I	Commercial and industrial waste
DELWP	Department Environment Land Water and Planning
ESD	Environmentally Sustainable Development
FOGO	Food organic green organic
MSW	Municipal Solid Waste
MWRRG	Metropolitan Waste and Resource Recovery Group
NPMS	New Peninsula Men's Shed
SV	Sustainability Victoria
The Shire	The Mornington Peninsula Shire Council
The Strategy	The Beyond Zero Waste Strategy 2030



The Shire's 'Remi and Grub', along with Belcome Grammar, were nominated for a 2020 'Keep Victoria Beautiful Award' for educating the community about litter prevention.

Further information

Further information about the Mornington Peninsula Beyond Zero Waste Strategy 2030 is available on the Mornington Peninsula Shire website

 mornpen.vic.gov.au/ourwastefuture

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