

Draft Waste, Litter & Resource Recovery Strategy

Working towards a clean green and sustainable community







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Acknowledgment of Country

We, in the spirit of Reconciliation, acknowledge the Traditional Custodians of the land now known as the City of Maroondah, where Indigenous Australians have performed age old ceremonies. We acknowledge and respect their unique ability to care for Country and their deep spiritual connection to it. We pay our respects to their Elders, past, present and emerging.



Introduction

This Draft Waste, Litter & Resource Recovery Strategy 2020-2030 provides a 10-year roadmap for managing waste in Maroondah.

This strategy will contribute to one of the eight outcomes in Maroondah City Council's long-term community vision, *Maroondah 2040 - Our future together*: a clean, green and sustainable community.

It will do this by driving actions which help to achieve our collective vision for waste management in 2030:

In 2030, Maroondah will have clean open spaces, streets and neighbourhoods where majority of waste is diverted from landfill. Our community will have the knowledge and capacity to make informed decisions and use resources sustainably.

In the 2019-2020 financial year, we sent 20,144 tonnes to landfill and generated 11,259 tonnes of commingle recycling and 15,261 tonnes of garden waste. Encouragingly, we create less landfill waste than the average Melbourne household, but as our population increases, we risk sending more and more material to landfill, losing precious natural resources.

The cost of sending waste to landfill is increasing, as are the costs of processing recoverable waste. We need to look for alternatives, such as composting food waste with our garden waste and seeking advanced waste treatment alternatives for our landfill waste. This will reduce our reliance on landfill and create jobs to ensure resources in our landfill bins are circulated back through the economy. Council is committed to working closely with the Victorian Government on advanced waste treatment so that Maroondah has an alternative waste treatment option for waste currently sent to landfill within the next 10 years.

To achieve our strategy's vision, households, businesses, Council and visitors all have a role to play in reducing waste, recycling right and reusing and recovering as much resources as possible. The four key outcome areas of this strategy will provide the framework to achieve this:

1. Less waste is sent to landfill.
2. Majority of waste is recovered and recycled.
3. An informed community, with the capacity to make sustainable decisions.
4. Clean streets, parks and public places.

The ambitious actions and targets which underpin each outcome area will help ensure that as our city grows, we effectively manage and minimise the amount of litter, illegal dumping, and waste, that a growing city creates.

Planning for the next 10 years of waste collection and treatment ensures that viable resource recovery opportunities can be realised, capturing valuable resources and return them back into the economy. This strategy will provide a blueprint for how we will manage litter, illegal dumping and the collection of kerbside and public waste over the next 10 years. It will outline how Council will transition to new services including the introduction of food to the household garden organics service, the roll out of new glass-only recycling bins, the standardisation of kerbside wheelie bin lids and the diversion of general waste from landfill to alternative waste treatment.

Creating less waste has many benefits:

- less pollution from the extraction of raw materials
- less chance of litter being created
- more jobs created to repair and recover resources
- less money spent on purchasing items that become waste
- reduced greenhouse gas emissions
- a sustainable environment for future generations.

Reducing the waste we create is something in all of our control and can be as simple as switching to reusable alternatives such as reusable coffee cups, using a shopping list, composting our food waste, cooking with our leftovers, or shopping in bulk.

Our challenges and opportunities

Over the past two years, Victoria - and wider Australia to a lesser extent - has been greatly impacted by the change in global markets for recyclable materials.

The impact was largely a result of China introducing restrictions on the type of waste imports it will accept, highlighting the fragility of our waste system which largely relies on exporting recycling to overseas countries. At the same time this was occurring, the commodities market crashed making virgin materials cheaper to produce than recycled materials, which has resulted in an unstable recycling market and significantly increased the cost to process materials from the recycling bin. While this has provided significant challenges, it has also created an opportunity for increased investment in local markets and reprocessing capacity to help us reduce our reliance on export markets.

The recycling crisis has also placed a spotlight on the complicated policy and regulatory framework for waste, with responsibilities split over local, state and federal governments, and inconsistent regulations across states and territories making it difficult for businesses operating in national and/or international markets to invest in the Victorian waste and resource recovery sector, which is hindering efforts to improve waste management.

Local government has a limited scope of influence over the production chain which results in waste, as it deals with materials at the end of the value chain - when 'resources' become 'rubbish'. More complex challenges of upstream change (packaging design, banning problematic packaging, mandating recycled content) and downstream change (such as stimulating local processing markets), is driven by state and federal government. Council is committed to continuing its advocacy for waste minimisation opportunities at state and federal government levels.

Encouragingly the federal and state governments have been undertaking a lot of work in the waste and recycling area since the recycling crisis highlighted some of the systemic issues the sector is facing. The Council of Australian Governments (COAG) agreed to establish a timetable to ban the export of waste plastic, paper, glass and tyres in August 2019. In early 2020, COAG released the COAG's Waste Response Strategy which includes export ban timelines for unprocessed glass, mixed plastics, used tyres, and mixed and unsorted paper and cardboard (COAG, March 2020).

The proposed timetable phases the export bans in, with unprocessed glass banned from 1 July 2020, mixed plastics by 1 July 2021, used tyres by 1 December 2021, single resin/polymer plastics by 1 July 2022 and mixed and unsorted paper and cardboard by 1 July 2024. The response strategy also includes support for investment in local reprocessing capacity, without which there is a risk these materials could be landfilled. The ban provides an opportunity for us to reassess our sorting habits, making sure that what we put in the bin are acceptable items so we can support our growing domestic recycling and reprocessing markets.

The Victorian Government's *Recycling Victoria Policy* released early 2020, included several kerbside reforms aimed at reducing the likelihood of another recycling crisis and establishing an efficient, standardised, kerbside waste management system. This includes increasing the landfill levy \$20 per tonne over three financial years, from its current amount of \$65.90 to \$125.90 by 2022-23. It also includes significant kerbside collection system reform requiring councils to provide a food organics service to households by 2030 and a glass-only collection service by 2027.

By 2030, councils will also need to standardise bins to align with Standards Australia's Mobile Waste Containers - colours, markings and designation requirements AS 4123.7-2006 (R2017). This means household kerbside bins need to have red lid for general waste, yellow lid for commingle recycling, lime green lid for food and/or garden organics and purple lid for glass. The *Recycling Victoria Policy* also commits to the introduction of a Container Deposit Scheme (CDS) by 2023 which aims to halve beverage container litter in Victoria within 10 years (Department of Environment, Land, Water and Planning (DELWP) 2020).

All these policy initiatives will have a significant economic impact on Maroondah's waste and resource recovery services. Creating less waste provides an opportunity to reduce the economic impact of these changes by spending less on sending materials to landfill or to be reprocessed. Council can't do this alone though, we need everyone's help to reduce the amount of waste we create in Maroondah.



Roles and responsibilities

The roles and responsibility of government, industry and the community are described in the following table.

Stakeholder	Role and function in the waste and resource recovery system
Community	• Create waste and recoverable materials. • Sort waste into commingle recycling, garden organic, hard waste, chemical and electronic streams to be recovered. • Contribute to circular economy by purchasing goods made from recycled materials, repairing broken items, repurposing old items in to new ones, participating in collaborative consumption models (such as tool libraries). • Participate in decision-making processes through consultation opportunities with Local, State and Federal Governments (and NGOs). • Provide the waste and resource recovery industry with a social license to operate waste and resource recovery infrastructure. • Have the ability to influence the amount of waste created through purchasing habits and choices.
Business and Industry	• Create waste and recoverable materials. • Sort some waste into material streams to be recovered. • Create products from recycled materials. • Can influence decision making through consultation with local, state and federal governments. • Can take proactive action to design products and services to ensure they're recoverable at end of life.
Waste and resource recovery industry	• Advocate for the needs of the waste and resource recovery industry through industry bodies such as the Waste Management and Resource Recovery Association Australia (WMRR), Australian Organics Recycling Association (AORA) and the Australian Council of Recycling (ACOR). • Invest, build and operate a large portion of the waste and resource recovery industry infrastructure and network. • Collect, transport, sort, reprocess, trade, dispose and recover waste and resources.
Australian Government	• Coordinate aspects of the waste and resource recovery industry including: • setting targets and strategies for increasing recyclable content in packaging • setting targets and strategies for diverting food waste from landfill and reducing overall generation of food waste • coordinating the Coalition of Australian Governments (COAG) to facilitate discussions on export bans, streamlining laws and regulations of the waste and resource recovery industry • creating product stewardship (also known as co-regulatory) legislation, such as the National Television and Computer Recycling Scheme • endorsing the aims and strategies of Australian Packaging Covenant • influencing manufacturing, trade, supply chains, packaging materials through the creation of national regulations and laws.
Victorian Government	• Manages and plans the infrastructure requirements of the waste and resource recovery sector ensuring there is sufficient processing capacity for recoverable waste streams. • Facilitates and supports investment in the waste and resource recovery industry by business. • Monitors and supports the development of local remanufacturing capacity to recycle recovered materials. • Procures collaborative waste and resource recovery processing contracts with local governments. • Designs and delivers education campaigns such as <i>Love Food Hate Waste</i>, <i>Better Bag Habits</i> and <i>Love a List</i> campaign. • Provides strategic direction for municipal collected waste, including what can be collected.
Local government	• Manages the collection of household hard waste, general waste, garden organics and recyclables. • Educates the local community regarding the use of the waste system, waste avoidance and reuse. • Ability to influence state and federal government strategy and policy through advocacy, participation in advisory groups and networks, consultation on new regulations, policy and law.

Policy, regulation and legislative context

This strategy's targets align with the following global, state and Council policies, strategies, regulations and legislation.

Jurisdiction	Policy	Targets/principles/priority areas
Global	<i>United Nations Sustainable Development Goal 12</i>	- By 2030, achieve the sustainable management and efficient use of natural resources. - By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses. - By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse. - By 2030, ensure that people have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.
Federal	<i>National Waste Policy; Less Waste, More Resources (2018)</i>	- Principle 1. Avoid waste - Prioritise waste avoidance, encourage efficient use, reuse and repair. Design products so waste is minimised, they are made to last and we can more easily recover materials. - Principle 2. Improve resource recovery - improve material collection systems and processes for recycling. Improve the quality of recycled material we produce. - Principle 3. Increase use of recycled material and build demand and markets for recycled products. - Principle 4. Better manage material flows to benefit human health, the environment and economy. - Principle 5. Improve information to support innovation, guide investment and enable informed consumer decisions.
	<i>National Food Waste Strategy: Halving Australia's food waste by 2030, Commonwealth of Australia (2017)</i>	- Target to halve the amount of food waste ending up in landfill by 2030. - Outcome 1. Policies are supportive of food waste avoidance, reduction and repurposing. - Outcome 2. Improvement and adoption of technologies, processes and actions to avoid and reduce food waste. - Outcome 3. Development of markets to support the repurposing of food waste. - Outcome 4. Practices and attitudes towards avoiding and reducing food waste are adopted and sustained.
	<i>Australian Packaging Covenant Organisation (2019) Australian Packaging Covenant Strategic Plan 2017-2022 Version 2 - 1 (January 2019)</i>	The four targets to be achieved by 2025 are: 100% of packaging to be reusable, recyclable or compostable 70% of plastic packaging recycled or composted 50% average recycled content across all packaging - to phase out problematic and unnecessary single use plastic packaging through redesign, innovation or alternative delivery methods.
State	<i>Recycling Victoria, A New Economy, The State of Victoria Department of Environment, Land, Water and Planning (2020)</i>	- Target 1. Divert 80% of waste from landfill by 2030, and an interim target of 72% by 2025 - Target 2. Cut total waste generation by 15% per capita by 2030 - Target 3. Halve the volume of organic material going to landfill between 2020 and 2030, with an interim target of 20% reduction by 2025. - Target 4. Ensure every Victorian household has access to food and garden organic waste recycling services or local composting 2030.



Jurisdiction	Policy	Targets/principles/priority areas
	<i>Victorian Government Policy Positions</i>	- In July 2026 the Victorian Government banned e-waste to landfill. - In November 2019 the Victorian Government banned the provision of lightweight single-use plastic bags. - The <i>Recycling Victoria policy</i> commits to the development of a waste to energy sector in Victoria with investment support, funding of research for end-use of residual products and developing a waste to energy framework. - Mandatory roll out of standard bin lid colours by 2030. - Mandatory roll out of food organic services to Victorian households by 2030. - Mandatory roll out of a glass collection service for all Victorian households by 2027. - Container deposit scheme by 2023. - Establishment of a new Waste Authority and Act by 2021 to oversee the waste and recycling sector.
	<i>Environment Protection Act 2018 (the Amendment Act)</i>	- Establishes the Victorian Waste and Resource Recovery Infrastructure Planning Framework which aims to coordinate state and regional waste and resource recovery infrastructure and integrate it with land use and transport. - Establishes the Environment Protection Authority and defines how the EPA work with community and industry to prevent and reduce environmental and health impacts from pollution and waste.
	<i>Statewide Waste and Resource Recovery Infrastructure Plan, Sustainability Victoria (April 2018)</i>	- Provides a 30-year roadmap for the waste and resource recovery system, ensuring that the right infrastructure is in place to manage waste and recycling. - Sets up the Community & Business Waste Education Strategy.
Local	<i>Maroondah 2040 - Our future together</i>	<i>Maroondah 2040 - Our future together</i> is a roadmap for our community, Council and other levels of government to partner together and create a future that enhances Maroondah as a great place to live, work, play and visit. This strategy aligns with the Maroondah 2040 future outcome of 'Clean, Green and Sustainable' and more specifically: - Action 4.2: Provide leadership and adopt sustainable innovative approaches to limit consumption, prevent litter, reduce waste to landfill and encourage reuse and recycling of resources. - Action 4.14: Support, educate and build the capacity of our community to make more environmentally sustainable lifestyle choices.
	<i>Water Sensitive City Strategy</i>	Outlines Council's priority actions for developing a water sensitive city including urban design measures on Council buildings which protect the environment from contaminated waste water.
	<i>Carbon Neutral Strategy (2014/15 - 2020/21)</i>	Provides direction on managing and reducing Council's corporate greenhouse gas emissions, including waste and office paper which together represent 1% of Council's greenhouse gas emissions.
	<i>Maroondah Sustainability Strategy (2016 - 2020)</i>	Sets out directions for Council to lead the way to greater sustainability by example and through engagement, partnerships and communication with the broader community.





Where are we now?

This section provides details of how waste in Maroondah is currently managed, how much waste is created, and an analysis of our services.

The scope of the strategy includes all Council-collected residential, commercial and industrial waste streams, Council buildings, public place litter bins, litter and illegal dumping. The following table provides details of the waste services currently provided by Council:

Service	Description
Residential booked hard waste	Maroondah residential households are entitled to two on-call hard waste collections per financial year, of up to 2 cubic metres per collection, or, one double collection of up to 4 cubic metres.
Residential kerbside residual waste	A weekly collection service for either an 80L or 120L residual waste bin.
Residential kerbside recycling	A fortnightly collection service for a 240L recycle bin. Households are entitled to a second recycling bin at no extra cost.
Residential kerbside garden organics	A fortnightly collection service for a 240L garden bin. Households can order an additional bin at a cost.
Commercial kerbside collection	Council extends the residential kerbside service to commercial properties and offers a 240L residual waste bin collection service, with a weekly, or three times a week collection option. This service comes with a fortnightly collection of a 240L commingle recycling bin.
Industrial kerbside collection	Council extends the residential kerbside service to industrial properties and offers a weekly collection of either a 120L or 80L residual waste bin. Where a Council recycling truck is in the area, a fortnightly 240L commingle recycling service can also be provided for an additional charge.
Public place litter bins	Collection and disposal of waste and recycling from public parks and streets.
Street and public place cleaning	To ensure that our public places and streets are kept clean, Council undertakes a range of services including: • wiping down bins and surrounds • picking up litter from public spaces • street sweeping • removal of graffiti from Council property and assets • provision of free graffiti removal kits to the community for removal of graffiti on private property.

Service	Description
Community and schools waste education program	Council provides a range of waste education programs and events which are designed to follow the waste hierarchy of Avoid, Reduce, Reuse, Recycle, Compost, Dispose. The waste education program also includes litter education incursions and resources for schools. The program includes a range of school incursion topics and resources, community workshops and resources, bin inspections, competitions, pop-up displays and targeted communications.
Compost Revolution Program	To encourage home composting of food waste Council provides up to 60% off a range of home composting systems through our Compost Revolution program. Households can receive up to one subsidised system per year through the program. The Compost Revolution website includes free tutorials on composting, worm farming and Bokashi systems.
Dumped rubbish	The removal of dumped rubbish from our public places and nature strips. Members of the public who are found to have dumped rubbish are educated, requested to remove the waste, and where the person isn't compliant, fined to recoup some of the cost of the waste disposal and officer time. Pro-active work, such as the use of surveillance cameras, and installing educational and warning signs, are also undertaken.
Stormwater litter traps (Gross Pollutant Traps)	Maroondah City Council undertakes research and studies to determine the best performance and placement of Gross Pollutant Traps to capture litter and prevent it from entering our catchments and then the ocean.
Clean up Australia Day	Maroondah City Council coordinates and disposes the litter collected by registered Clean up Australia Day sites in Maroondah.
Eastern Alliance for Sustainable Learning (EASL)	Maroondah City Council is a member of the Eastern Alliance for Sustainable Learning (EASL) which is an Eastern Council alliance comprising of Manningham, Yarra Ranges, Whitehorse, Knox and Maroondah City Council. EASL delivers a Learning for Sustainability conference each year for teachers in the member Council areas.



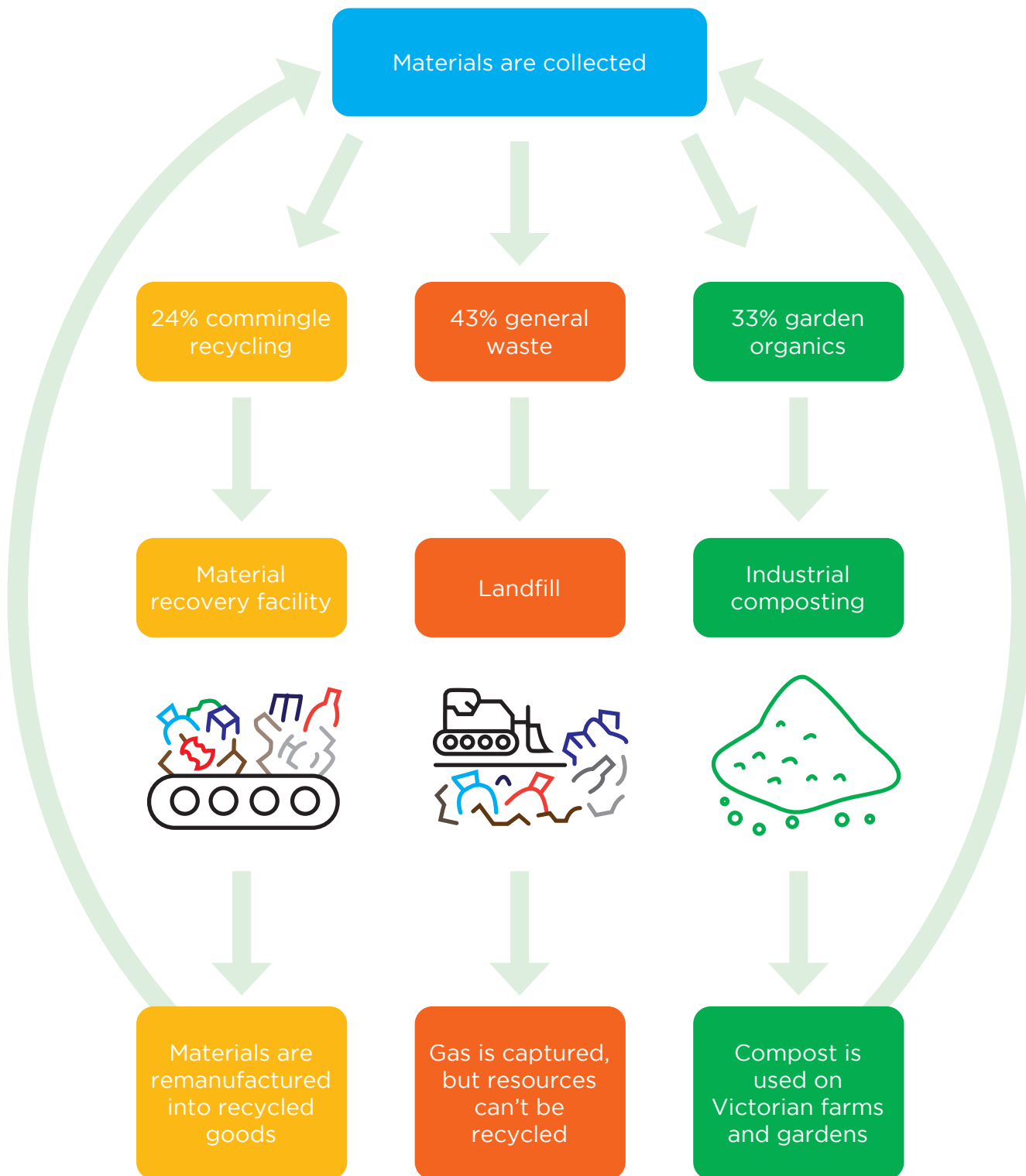
Where does our waste go?

We have the following waste collection and processing contracts in place to manage waste in Maroondah.

Service	Contractor
Collection of general waste, commingle recycling and garden organics bins from households, businesses and public places	JJ's Waste & Recycling
General waste disposal	General waste is currently disposed of at Hanson Landfill in Wollert which uses best practice greenhouse gas capture and management.
Garden organics processing	Currently under negotiation with a new contract set to be signed in 2021. Materials are composted and used on Victorian farms and parks. The new contract will be able to take food as well as garden organics, with an 18-month lead time required for establishment of infrastructure.
Commingle recycling	Currently processed by Polytrade in Dandenong South where materials are sorted into separate streams for reprocessing.
Hard waste	Contracted to Cleanaway to recycle e-waste, metal, mattresses, and timber as well as disposing of non-recoverable materials at South East Melbourne Transfer Station.

Current waste and recycling process

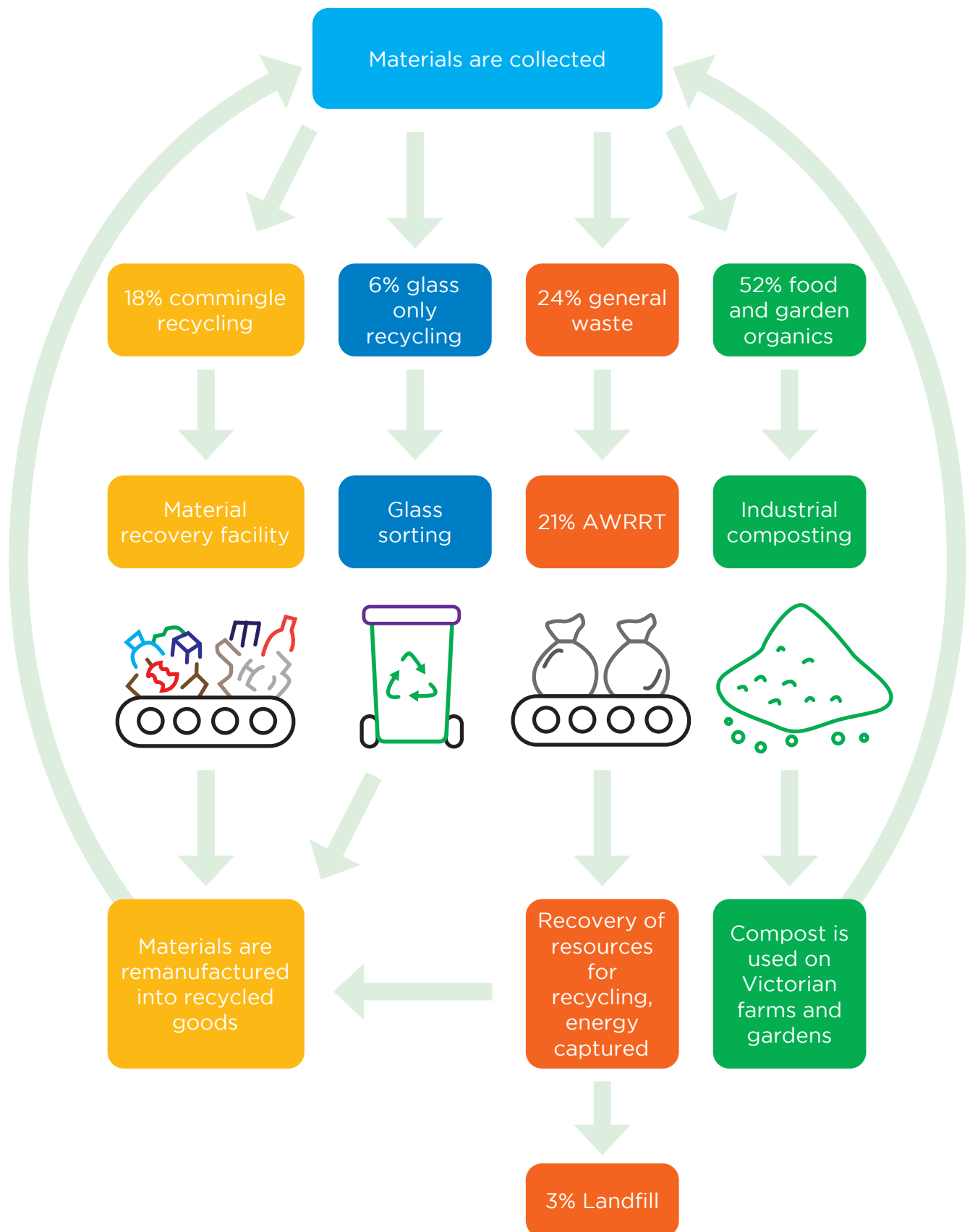
This diagram shows what portion of the total waste stream our commingle recycling, general waste and garden waste currently comprise, and what currently happens with these materials after they're collected.





Future waste and recycling process

This diagram shows what portion of the waste stream remains once we've introduced glass only recycling, food and garden organics and AWRRT processing of general waste.



How are we currently doing?

We divert 51% of waste collected from the kerbside bin collection service

Maroondah residents are excellent recyclers, in 2018-19 Maroondah was ranked 15th out of the 79 Victorian Local Councils for the amount of waste recycled and diverted from kerbside collections (Sustainability Victoria, August 2020). In total, we're diverting 8% more waste from landfill than the average Metropolitan Melbourne council. The table below shows how we compare to our eastern region neighbouring councils in 2018-19 financial year. Data for 2019-20 shows that the amount we're diverting from kerbside collections is also increasing, up from 51% in 2018-19 to 56% in 2019-20.

Council	Percentage of waste diverted from landfill
Manningham Council	54%
Knox Council	53%
Maroondah City Council	51%
Yarra Ranges Council	47%
Whitehorse Council	49%
Metropolitan Average	43%

(Sustainability Victoria, August 2020)



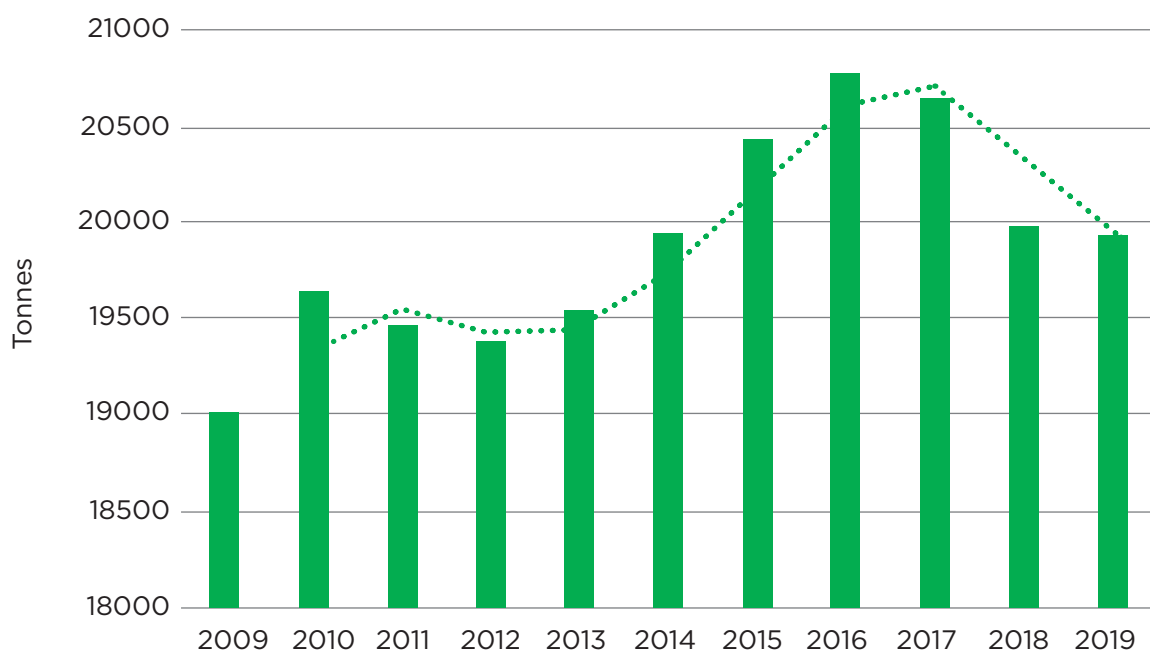
The amount of landfill waste we're creating is starting to reduce

The average household in Maroondah discarded 438 kg of general waste in 2019-2020 financial year which went to landfill. This is slightly less than the state-wide average of 447 kg and significantly less than the outer metropolitan Melbourne average of 516 kg per household (*Sustainability Victoria, August 2020*).

Since 2018, even though population is increasing, the downward trend in the amount of waste we send to landfill has continued. A key initiative undertaken in 2017 included the launch of Council's Compost Revolution program which has now seen over 2,600 households participate in home composting, diverting nutrient rich food scraps from landfill for use on their gardens.

Figure 1 provides a snapshot of the total amount of waste sent to landfill each year, by tonnes.

Figure 1: Total tonnes of landfill waste per year



Case study - Compost Revolution Program

Maroondah joined the Compost Revolution program in 2017, providing the community access to a range of subsidised home composting systems. Maroondah residents can access their discounted system by going to the Compost Revolution website (www.compostrevolution.com.au/maroondah), entering in your address, selecting the preferred system, completing a tutorial if needed, and then entering in delivery and payment information. There are a range of discounted systems available, from pet poo composters to Bokashi buckets to traditional compost bins, at up to 60% off the RRP and with free delivery.

Home composting has many benefits

- Nutrients from food waste are returned to the soil, helping to retain moisture and improve the microbiology of the soil.
- Reduces the need for synthetic fertilizers, saving money and helping the environment.

- If well managed, reduces the greenhouse gases associated with organic waste breaking down in landfill.
- Reduces landfill waste.
- Reduces the likelihood of plant diseases and pests occurring, therefore reducing reliance on pesticides and herbicides.

Key statistics

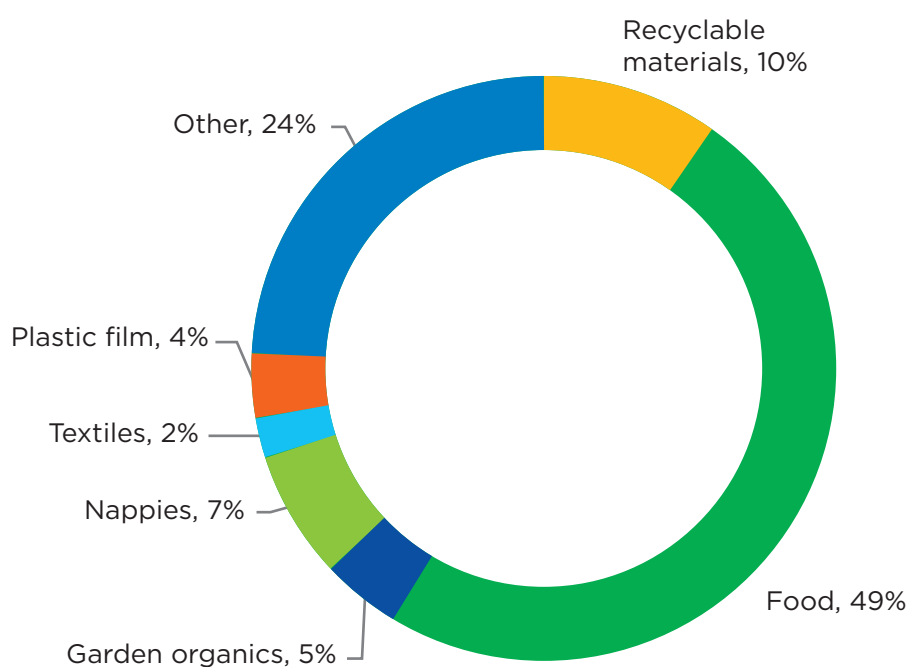
- 2,668 households have ordered a system since August 2017.
- 3,274 community members have visited the site and completed a tutorial.
- An estimated 517,945 kg of food waste has been diverted from landfill since the program started in 2017.
- Over 190 tonnes of greenhouse gases have been avoided which is the equivalent of taking 41 passenger vehicles off the road for one year.

There's opportunity to recover more by improving how we sort waste

While our community are great recyclers, there's opportunity to reduce waste sent to landfill by up to 15%, by weight, if we sorted all our recycling and garden waste.

Figure 2 shows what's currently being placed in our general waste bins. Food waste, by weight, comprises almost half the waste we send to landfill and there's opportunity to significantly reduce it through waste avoidance, home composting, and for the unavoidable food waste, introduction of a kerbside food and garden organics collection service for households.

Figure 2: Composition of our landfill waste bins, by weight



(Maroondah Domestic Waste Audit, 2018)



There's some confusion about what can go in the recycling bin

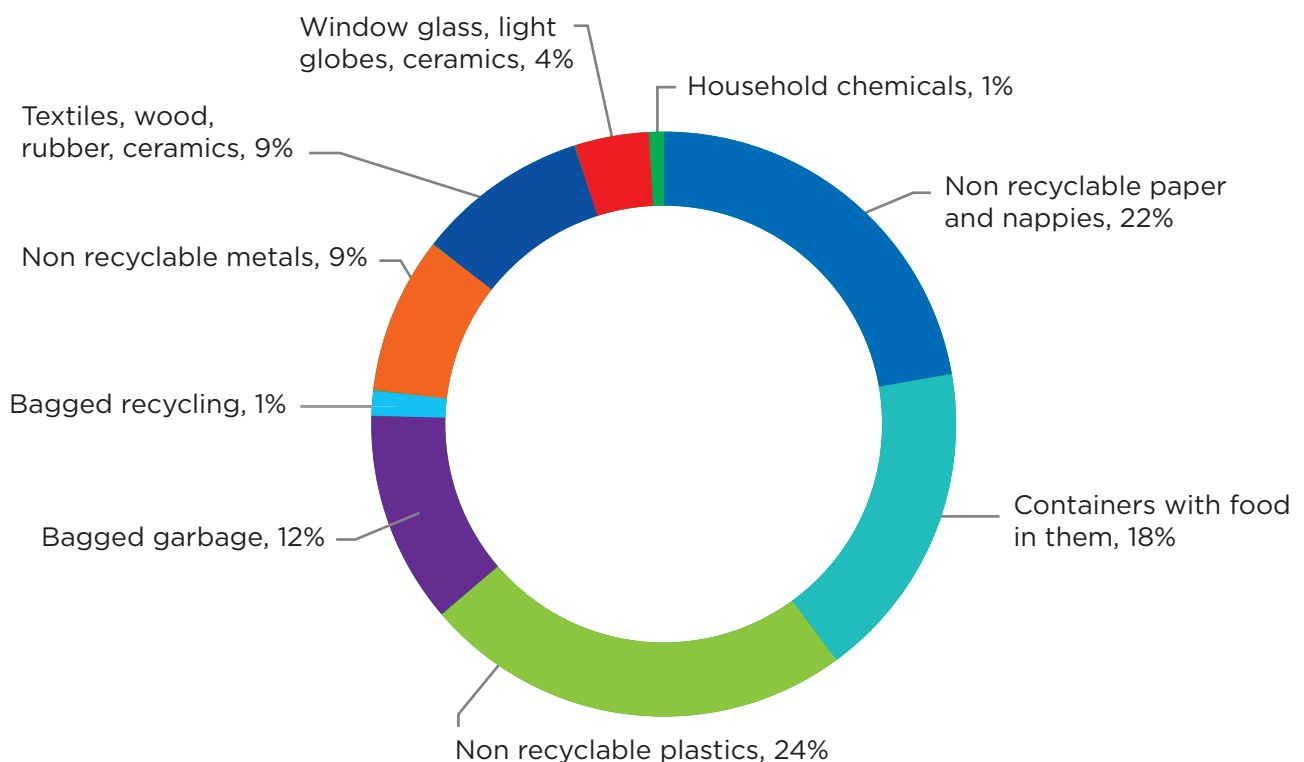
Maroondah has an average contamination rate of 13% which is 2.5% higher than the state average of 10%. Contamination refers to materials that are placed into the recycling bin which don't belong there. Contamination of recycling leads to greater costs for Material Recovery Facilities (MRF) when sorting our recycling into different materials. This reduces their efficiency, contaminates other materials which could have been recycled, and in some cases, endangers workers and breaks machines resulting in MRFs having to close temporarily so machinery can be repaired.

As the Council of Australian Governments (COAG) export ban comes into effect, it's also more important than ever that we recycle correctly, so we support our growing local reprocessing markets.

The average Maroondah household creates 253kg of recycling per year, this is 11kg more than the average household in Victoria. Of this, 32kg is considered a contaminant, or materials which should not be placed in the household recycling bin. Figure 3 shows the main contaminants that end up in our recycling, as a percentage by weight.

Items that should go in your recycling bin include paper and cardboard packaging, rigid plastic bottles and containers, metal tins and aerosols, aluminium cans and foil, and glass bottles and jars. Although other materials are recyclable, like scrap metals, batteries or wood, our recycling bin system is designed to capture recyclable packaging materials from the kitchen, laundry and bathroom. It's not designed to capture items which are irregularly generated such as window glass, drainage pipes and washing baskets, even though these materials are made from plastics, metals, paper or glass.

Figure 3: Main contaminants of our recycling bins, as a percentage by weight



(Maroondah Domestic Waste Audit, 2018)

Our garden organics is slightly more contaminated than other councils

The average contamination rate of Maroondah's garden organics is 4% which is 1% greater than the average metropolitan Melbourne household. If we're to successfully transition to allowing food with our garden organics service, this rate of contamination will need to drop so we don't put the end-users of our compost at risk and end up paying costly contamination penalty rates.

Each year the average Maroondah household disposes of 286kg of garden waste, 11kg of this is considered an unacceptable material or a 'contaminant'.

The main item that goes into the garden organics bin which shouldn't is 'oversized' materials such as branches longer than 40cm in length and logs which are greater than 10cm in diameter. Large items break our trucks and they take too long to turn into compost, even when using industrial composting technologies.

Other items that are incorrectly going into the garden bin are loose soil, rocks, treated wood, animal faeces, bagged garden waste, textiles and recyclable packaging. Figure 4 shows the breakdown of the contaminants in our garden bin by weight.

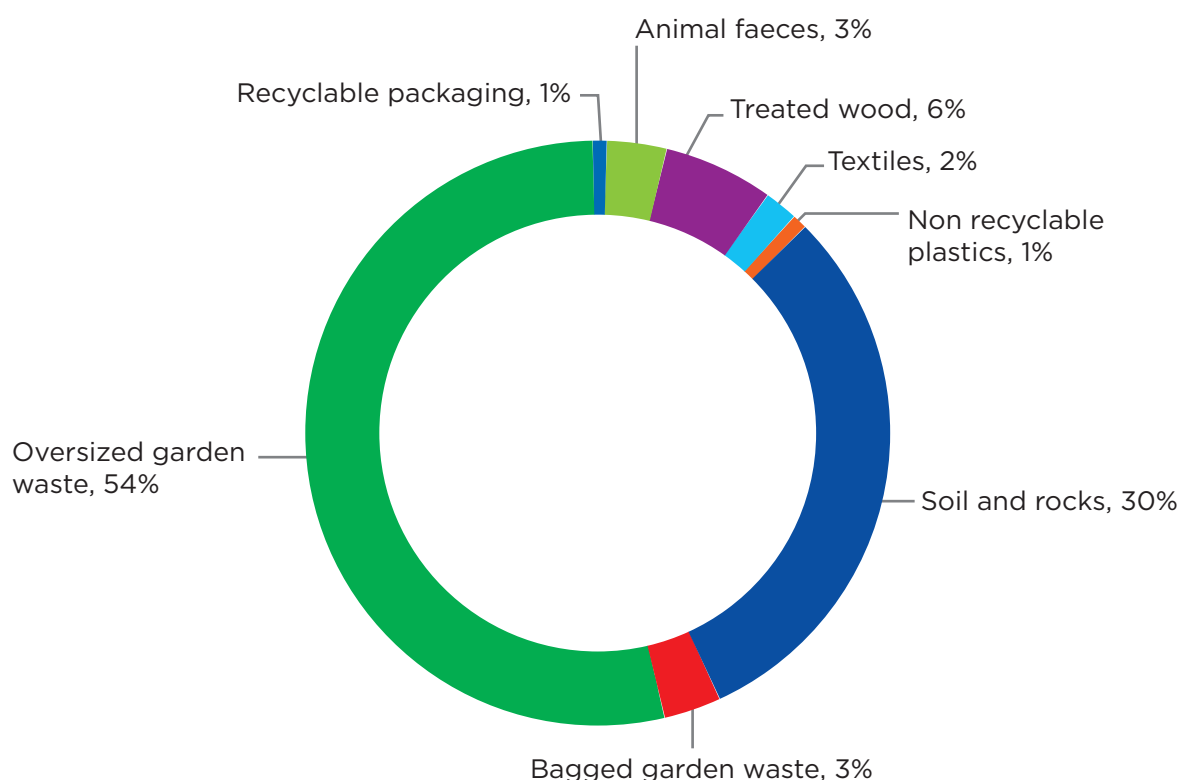
Items that should go in the garden organics bin include grass clippings, weeds, cut flowers, branches and small logs up to 10cm in diameter and 40cm in length, garden pruning's and leaves.

There's opportunity to recover more hard waste

We collected and disposed of 3,765 tonnes of hard waste in 2019-2020 financial year, of which, 11% of the waste collected was diverted from landfill including mattresses, steel, whitegoods and e-waste.

Compared to the average Victorian council which recovers 24% of hard waste materials, we can improve this recovery rate and seek out opportunities for further resource recovery.

Figure 4: Main contaminants of our garden organics bins, as a percentage by weight





What does the evidence say?

This section provides information on the research Council has undertaken to inform the Strategy, the current trends in the recycling, waste and litter sectors and the opportunities for reducing waste and litter and increasing recovery of materials.

Evidence base, trends and opportunities

Research was undertaken to inform the development of the strategy, in particular, the research focused on:

- future residual waste management options
- future organic waste management options
- markets for commingled recyclables and recycled organics
- container deposit schemes and potential advocacy.

Council sought to understand what service changes should be implemented over the next 10 years considering the environmental, social and economic benefits of a range of service options. This research (alongside feedback from the community, desktop research, data analysis of waste stream sizes and composition, and interviews with other local governments) has been used to inform the strategy's action plan.

This includes the design of the new food and garden organics service and the timing of new landfill contracts, so they align with the Victorian Government-led group procurement for an Advance Waste Resource Recovery Treatment (AWRRT) facility. It also informed Council of the types of AWRRT technologies which would lead to higher order energy recovery. The research has helped us understand the challenges and opportunities that we will face over the next 10 years, and coupled with the community consultation undertaken to inform the draft strategy, has formed the evidence base for the strategy and action plan.

Since 2016, the overall amount of landfill waste created in Maroondah has been declining

This trend is also reflected nationally where the amount of waste created per person in Australia reduced by 10% between 2006 and 2018 (*Australian Government, 2018*). At the same time, the amount of waste collected from kerbside bin collections that is diverted from landfill has also increased slightly, from 51% in 2018/2019 to 56% in 2019/20. Although this is encouraging, we know that the consumer-based society that we live in, and the take, make, dispose linear economy approach to creating products and then disposing of them, is not going to serve us well into the future. A move to a more circular economy, where materials are used again and again, is necessary to ensure efficient use of our finite natural resources.

The Victorian Government has committed to introducing a Container Deposit Scheme (CDS) to reduce plastic litter

The scheme will offer a refund for eligible bottles returned to a collection point for recycling, encouraging recycling when we're away from home. The scheme, aimed to be introduced in 2023, will cover beverage containers, and is expected to halve beverage container litter in Victoria within 10 years (*DELWP, February 2020*). This scheme, which Maroondah City Council has been actively advocating for, will have significant impact on reducing the impact of plastic bottles and containers in our marine environment which in 2015 was estimated to be over 150 million tonnes (*Ocean Conservancy, September 2015*).

Other benefits of introducing a CDS include providing a cleaner recycling stream for reprocessors, which improves the overall value of the materials collected, in turn stimulating local markets for recovery of these materials (*DEWLP, February 2020*).

Maroondah has provided comment to the Victorian Government on the proposed model for the scheme where we highlighted the need for further investment in domestic processing capacity, stressed the importance of including glass wine and spirit bottles in the scheme and supported the need for a network operator that is independent of industry.

Collecting and processing food waste into compost will reduce reliance on landfills

Council undertook research to assess what options are available for managing food waste. Currently, food waste makes up 49%, by weight, of the average Maroondah household garbage bin. However, as food waste is dense, and occupies less volume in the bin per kilogram than other waste, it represents about 7% of the household general waste bin by volume.

This means that currently, if households in Maroondah were to remove all the food waste and place into their garden bin, there would not be enough space in their garbage bin to allow for a fortnightly collection. The introduction of a Food and Garden Organics (FOGO) service, while maintaining current bin collection frequencies, would still recover food waste for higher value use such as compost on farms, parks and gardens in Victoria, while not putting strain on households which can lead to increased FOGO contamination levels. Collection frequency of the general waste bin will be reviewed throughout the Strategy period for consideration of any collection frequency changes to take place at the end of this strategy period.

Organic waste in landfill releases a potent greenhouse gas, methane, which is 21 times more potent than carbon dioxide. Even though most landfills recover majority of the emissions released from organic waste, some losses are experienced before this gas is captured.

Home composting, worm farming, using Bokashi fermentation systems, green cones and pet poo composters, when well-managed, are the best way to treat unavoidable organic waste. These systems allow organic waste to be turned back into a resource for the garden and negate the need for collection and transportation which also creates greenhouse gas emissions.

Maroondah's new Food and Garden Organics (FOGO) service will help divert organic food waste from landfill, instead turning it into a rich compost that can be used on Victorian farms, gardens and parks.

If 100% of food waste was placed into the food and garden bin this has the potential to divert up to 8,800 tonnes of food waste from landfill and reduce greenhouse gas emissions by 3,279 tonnes CO₂-e each year. This is equivalent to the emissions saving from removing 708 passenger vehicles from the road for one year.

Maroondah has excellent data on the composition of our kerbside waste streams. Analysis of this data shows that approximately one third of food waste presented to the residual bin is made up of food still in containers (mainly bottles with liquid still in them) and that it is reasonable to assume that the containerised portion would not be diverted to the food and organics service immediately. This strategy's targets reflect this, with 50% diversion of waste from landfill target by 2030 and an interim diversion rate of 20% by 2025.

Other actions, such as the ongoing promotion of home composting through subsidies and free workshops, will also contribute to achieving these ambitious targets, which also align with the *Recycling Victoria Policy*.



Waste to energy as an alternative to landfill

The *Recycling Victoria Policy* has committed to increasing the landfill levy from the current cost of \$65.90 to \$125.90 by 2022-23. Although this represents a significant cost increase, it will raise Victoria's landfill levy to align with other States and Territories and create an incentive to transition from landfill to alternative technologies. Alternative technologies typically have higher capital and operating costs than landfill but can recover the energy value of unrecyclable materials as electricity and/or heat.

Advanced Waste and Resource Recovery Treatment (AWRRT) has the ability to divert as much as 95% of the current general waste from landfill depending on the technology that is used.

Maroondah is supportive of looking for new ways to manage landfill waste and has been working with the Victorian Government and other metropolitan Melbourne Councils on the group procurement of an AWRRT facility. The success of any new AWRRT will be contingent on the technologies proposed and the level of pre-sorting of recoverable materials. Whilst Maroondah supports the move to an AWRRT, we will only commit to the new facility if potential negative outcomes are appropriately addressed. Issues such as emission levels, including greenhouse gasses, pre-sorting of recoverable material, distance of travel, and the overall cost will be considered closely. The current timeframe for the group procurement would potentially see a new AWRRT facility operational by 2030.

Local processing and manufacturing capacity

Victoria has a heavy reliance on the export of kerbside materials for recycling due to limited local remanufacturing options. In September 2020, Victorian exports of post-consumer materials made up an estimated 32% of Australian exports (Sustainability Victoria, November 2020).

International waste export bans will mean that significantly more local remanufacturing capacity is urgently needed to ensure that we can continue to recycle materials from the commingle recycling bin. Because of the lack of local markets, Victorian Councils who have recently tendered for commingle recycling processing contracts have found that some materials are no longer being accepted. The main items no longer being accepted are plastics, specifically plastic codes #3, #4, #6 & #7, which represents approximately 1.6% of the materials in Maroondah's commingle recycling stream.

Maroondah is committed to working with the Victorian Government to advocate for more investment in the sector, to ensure the necessary markets and associated infrastructure are established in time to meet the looming export bans.





What we did and what you told us

This section provides an overview of the community consultation undertaken to inform the draft Strategy, including what consultation was undertaken, with who, and the outcomes.

What we did

Initial scoping consultation was undertaken at the Maroondah Festival Café Consult which helped to inform the development of the initial consultation topics. The topic areas ended up including a broad scope of issues from satisfaction with current services to support for proposed future services. Litter and illegal dumping, single-use plastics, advocacy, high density developments and recycling of materials that aren't placed in the blue-lidded bin (i.e. mobile phones) were topics also canvassed. Overall, the first phase of consultation was a great success. We received over 900 pieces of feedback which was used to inform the scope of the Strategy and the areas for focus during the second consultation phase.

The second consultation period concentrated on gathering feedback to inform the draft Strategy. The 'inform' consultation ran from Monday 1 July to Tuesday 6 August 2019, with over 1,800 members of the community participating in the consultation process and 900 community members submitting feedback. Just over 700 residents visited the online consultation hub, over half of which completed a survey and/or submitted a vision statement.

A summary of the different consultation avenues and number of community members engaged is provided below.

Engagement activity	Events	Participants
Online consultation hub	1	701
Pop-up consultation	7	156
Codesign behaviour change workshop	1	10
Waste vision workshops with schools	6	54
Maroondah Festival	1	925
Total:	16	1,846

The community was asked for feedback on the following topics via face-to-face and an online survey:

- Feedback on current waste and resource recovery services provided by Council
- Satisfaction with current household waste services
- Support for introducing a food and garden organics service
- How Council can further support households to separate food waste
- Support for diverting residual waste to Alternative Waste Treatment
- Materials the community would like to drop off at recycling events or permanent recycling locations
- How the community prefers to learn about waste and resource recovery services.



Due to the complexities of litter, illegal dumping, single-use plastics and multi-unit developments, these issues were explored using qualitative feedback formats. This included open ended questions asked during pop-ups on the 'issues cube' and a community workshop. This approach enabled deeper responses allowing Council to get richer feedback on the issues. This information will help Council to target education, enforcement, and infrastructure interventions and to better engage with the community on litter and illegal dumping.

During the pop-up events, an 'issues cube' (a large box, propped up on a bar table on a rotating base) was used where each face of the cube had a question on it:

- Where do you see the most litter in Maroondah?
- What should Maroondah City Council do to address litter?
- Is litter a problem in your neighbourhood? Tell us what sorts of litter you see in your local area?
- How do you avoid single-use plastics like straws, plastic bags, coffee cups, drink bottles and balloons?

The issues of single-use plastics, illegal dumping and litter, and high-density housing was explored in more detail via a community action plan codesign workshop. The workshop ran participants through a simplified framework for developing a behaviour change project to help address these issues.

The result of the workshop was a range of potential actions, put forward by the community, that will help to address the behaviours that contribute to the issues. These have then informed relevant sections of the Strategy's action plan.

Council's Waste Education Officer visited schools across Maroondah where they were invited to participate in a workshop aimed at developing a vision for waste management in Maroondah. Students were asked: 'What should waste management look like in the future? They were then assisted with identifying key issues and possible actions that could address the issues. These actions were then themed, and goals were set that were then used to create a 'statement' for the future.



What you told us



The key themes that emerged from our engagement with students across Maroondah were:

- Education
- Community
- Sustainable
- Promotion
- Awareness
- Incentives
- Resources
- Opportunities
- Reduce waste

These key themes then informed the vision statement for this strategy:

In 2030, Maroondah will have clean open spaces, streets and neighbourhoods where majority of waste is diverted from landfill. Our community will have the knowledge and capacity to make informed decisions and use resources sustainably.

Less waste sent to landfill

We heard that our community values the essential waste services that Council provides and is overwhelmingly very satisfied with Council's performance in providing kerbside waste collections.

Our community wants to see food waste diverted from landfill, and with the right tools and information provided, is supportive of Council introducing a food and garden organics service. Our community is also supportive of Council investigating appropriate alternative waste treatment options for waste currently sent to landfill. We need to ensure that the right technology and process is used so that the new treatment is clean, recovers resources for greater beneficial uses, and results in an overall reduction in greenhouse gas emissions.

Clean streets, parks and public spaces

Our community values its leafy green public spaces. It sees the public place litter bin collection service as an important way to help keep public places clean. Access to bins, reducing illegal dumping of household rubbish, and educating the broader community on the impact of litter on our rivers and oceans are activities they would like to see Council focus on to protect our natural assets.

An informed community that makes sustainable choices

We heard that education is important to help our community make informed decisions.

The community has told us that they prefer online methods for receiving information regarding their waste services. It was also clear that a range of communication channels are still necessary for reaching different people in the community. Our community wants more detailed information on what can go in recycling bins. The most common points of confusion were whether you could recycle bottle tops; the meaning of recycling symbols; the necessity to wash items before placing them in the recycling bin; and what plastics can be recycled. Many people also suggested the use of incentives for those who do the right thing and recycle correctly.

Education is the main tool in Council's toolkit for addressing the more complex issue of waste avoidance, and our community supports the ongoing work Council does in waste education and would welcome additional activities to increase awareness and promote sustainable actions in the community.

Recover and recycle more resources

Maroondah households are below the state average in terms of the amount of waste sent to landfill each year and there is strong support in the community to see more resources recovered from household waste and even less waste sent to landfill. Our community would welcome more opportunities to drop off items for recycling to public drop off events and/or permanent recycling locations. We heard that access to recycling opportunities needs to be convenient for the community and recycling events need to be widely promoted.





A strategy for the future

This section provides details of our strategy for managing waste and litter over the next 10 years.

A vision for waste management

The Maroondah 2040 Community Vision document provides a roadmap for our community, Council and other levels of government to partner together and create a future that enhances Maroondah as a great place to live, work, play and visit. This strategy helps to deliver on one of the eight Maroondah 2040 community outcomes: *A clean, green and sustainable community*. It will do this by driving actions which help to achieve our collective vision for waste management in 2030:

In 2030, Maroondah will have clean open spaces, streets and neighbourhoods where majority of waste is diverted from landfill. Our community will have the knowledge and capacity to make informed decisions and use resources sustainably.



Strategic Framework

To achieve our vision, our key directions are grouped into four outcome areas which reflect the themes and values which emerged during consultation.



The Outcome Areas and the Strategy's Key Directions will drive action to achieve our collective vision for waste management in Maroondah.

The Key Directions of this Strategy are grouped under each of these four outcome areas and the delivery of each Outcome Area's actions has been prioritised into the following timeframes:

- short-term (1 to 3 years)
- medium-term (4 to 6 years)
- long-term (7 to 10 years).



Outcome area 1: Less waste sent to landfill

This section provides details on how we will reduce the amount of waste which is being sent to landfill over the next 10 years.

Key Directions

- Reduce our reliance on landfill by composting food waste with our garden waste.
- Collaborate with the community, other Councils, state and federal governments and agencies in planning our transition to new services.
- Empower the community to avoid, reduce and reuse waste.
- Advocate for best practice advanced waste processing technologies as part of the Eastern Region joint procurement initiative, which reduce waste to landfill, have a net greenhouse gas reduction and are safe for our community.

The targets

In 2030, Maroondah will have halved the amount of waste we send to landfill, based on 2020 levels, with an interim target of 20% reduction by 2025.

The evidence

Currently landfill is the only option for residual waste. However, planning for AWRRTs which can recover energy value and use it for heating, electricity/gas production and biofuels is being undertaken by the Victorian Government. These technologies allow us to divert the majority of our waste from landfill. The cost of advanced waste technologies is more than landfilling at the moment. As landfill levies rise to align with other states and territories, and policies to support a safe and efficient advanced waste processing industry are established, we will start to see the playing field even out. Maroondah is committed to being part of the conversation to ensure advanced waste processing infrastructure is available in the future.

Maroondah is currently participating in a group procurement process with Councils from across south and eastern metropolitan Melbourne to establish an advanced waste processing facility which can process residual waste. It takes a long time to establish these facilities, so it will still be a number of years before alternative waste processing is an option. In the meantime, reducing the waste we send to landfill will be more important than ever.

We know that up to 50% of the waste that ends up in landfill, by weight, is food waste which could be avoided or composted. Maroondah is committed to continuing working with our eastern region council neighbours to establish a composting facility which can process food along with our garden waste.

In addition to new FOGO service and transitioning to AWRRTs, moving to a circular economy and away from our current 'take, make, dispose' model of consumption and disposal will help to create jobs, reduce waste and litter and most importantly reduce our reliance on natural resources. We need to drive and encourage actions which help to achieve this such as undertaking research to find new ways of doing things, incentivising reuse and repair of materials and educating the community.

What our community said

Our community said it's very satisfied with Council's performance of providing waste services and they would welcome investment by Council into AWRRTs, providing the right technologies are used, to reduce waste sent to landfill. The community is supportive of diverting food waste from landfill into the garden organics bin for compost that would be used on farms and gardens in Victoria providing they have the right tools and information to help make this change.





Priority Actions

Our priority actions for reducing waste to landfill are outlined below. Each action has been prioritised into delivery timeframes. Some projects will continue over the full 10 year period, whilst others will be delivered during specific financial years. This ensures that the cost of new services and projects can be managed sustainably.

	Priority Actions	Timeframe (years)		
		1-3	4-7	8-10
1.1	Advanced waste treatment procurement Continue to work with State Government on procurement of landfill waste alternative processing facilities. Advocate for a solution where the proposed technology and processes ensure environmental and social benefits. Divert waste to an alternate treatment technology by 2033.	•	•	•
1.2	Advanced waste processing Once contract in place, divert waste from landfill to alternative waste processing facility within three years of contract being awarded.			•
1.3	Food and garden organics processing procurement Continue to work with Metropolitan Waste Management and Resource Recovery Group and eastern region Councils to tender for a processing facility that can compost food and garden organic waste.	•		
1.4	Introduce a food and garden organics (FOGO) service Once contract in place, and appropriate notification has been provided to the processing contractor, roll out new food and garden organics service.	•		
1.5	Standardise bin lids To meet the requirements of the <i>Recycling Victoria Policy</i> , during roll out of new FOGO service, change over food and garden organics bin lids to lime green and change over commingle recycling bin lid to yellow.	•		
1.6	Support and encourage repairing of items in the community by providing small operational grants for repair cafes.		•	
1.7	Provide subsidies for reusable cloth nappies and sanitary products.		•	
1.8	Provide subsidies for home garden mulchers, to reduce the amount of garden waste needing to be collected, to encourage use of mulch on home gardens to reduce watering requirements and improve soil condition.		•	
1.9	Encourage and promote composting of organic waste at the household level by continuing to offer subsidies to households on home composting systems and providing free workshops to residents. Continue to review and expand the range of subsidised home composting systems offered.	•	•	•
1.10	Encourage household uptake of the 80L garbage bin service.	•	•	•
1.11	Expand Compost Revolution program to include on-site organic composting systems for residential medium-rise buildings & not-for-profit community organisations.		•	•
1.12	Partner with and support universities and research institutions looking at ways to process difficult to recycle waste and alternative waste technologies.	•	•	•

Indicators of progress

Target: In 2030 we will have halved the amount of waste sent to landfill based on 2020 levels, with an interim target of 20% reduction by 2025.

Strategic indicator: Total amount of waste sent to landfill, by tonnes, each year.

Partnerships:

- Eastern region Councils
- Metropolitan Waste and Resource Recovery Group
- Department of Environment, Land, Water and Planning
- Eastern Alliance for Sustainable Learning
- University and research institutions.

Internal policy links:

- *Maroondah 2040 - Our future together*
- *Sustainability Strategy 2016 - 2020*
- *Carbon Neutral Strategy 2014-15 - 2020/21*
- *Water Sensitive Strategy 2015 - 2025.*





Outcome area 2: More resources recovered and recycled

This section provides details on how we will recover and recycle more resources over the next 10 years.

Key Directions

1. Align Council waste services with the *Recycling Victoria Policy*.
2. Seek out opportunities for increasing resource recovery.
3. Ensure robust governance of waste services.
4. Lead by example in reducing waste.

The targets

In 2030, 80% of materials collected from kerbside bins will be diverted from landfill, with an interim target of 72% by 2025.

The evidence

The Victorian Government's *Recycling Victoria Policy* outlines a commitment to require councils to provide a 'core' four bin system which includes a fourth bin for glass jars and bottles. We know that separating streams helps to improve the value of recovered materials and that some MRFs are not taking commingle recycling with glass included. Council has committed to working with the Victorian Government to implement a glass only service by 2027 and will undertake further community consultation before the service is designed to understand what service our community wants and needs.

The recycling crisis highlighted the fragility of our recycling system in Victoria and has resulted in more investment by the Victorian Government to transform the sector. The local processing markets are still in their infancy, this issue is exacerbated by a lack of end remanufacturing markets, and lack of market demand for recycled products. With waste export bans looming, there's risk of materials being sent to landfill if more investment into local processing markets isn't prioritised by the Victorian Government.

What the community has told us

Our community values the materials placed in our bins and wants to have more opportunity to recycle household items that can't currently go in the commingle recycling bin.

Priority Actions

	Priority Actions	Timeframe (years)		
		1-3	4-7	8-10
2.1.	Introduce a glass-only recycling collection service Introduce a glass bottle and jar recycling service to ensure Council services align with the <i>Recycling Victoria Policy</i> .			•
2.2	Standardise bin lids To meet the requirements of the <i>Recycling Victoria Policy</i> , during roll out of new glass service, changeover to new red-lidded general waste bin.			•
2.3	After the introduction of a glass only recycling service, introduce a user pay service for additional recycling bins.			•
2.4	Investigate a user-pays system for tree pruning collections, as part of new residential hard waste contract, to assist households during months where garden organic waste amounts increase.	•		
2.5	Investigate offering multi-unit dwellings, that are required to share a recycling bin due to limited kerbside presentation space, a larger, 360L recycling bin which can still be collected by Council's side-arm lift vehicles.	•		
2.6	Research and assess viable options for increasing recycling of materials collected via the kerbside hard waste collection service.	•		
2.7	Continue to provide community recycling drop-off events. Trial expanding current service of two, all day events per year, to four, half day events to provide more flexibility for the community. Trial inclusion of polystyrene, textiles and cardboard.	•	•	•
2.8	As Maroondah has not had a Detox your Home Event since 2012, and there is no plan by the Victorian Government to offer one to Maroondah in the future, trial a Council-funded chemical collection event for Maroondah residents. Continue advocating for a collection funded by the landfill levy under the Victorian Government's Detox your Home program.	•		
2.9	Provide free, permanent, drop off locations for recyclable items that cannot go in the kerbside recycling bin. Investigate developing several small, modular and mobile, recycling stations which could be rolled out to several suburbs in Maroondah to provide equitable access for the community.	•		
2.10	Investigate development of a permanent, shipping container size, recycling station, for bulky waste types such as cardboard, polystyrene, medium-sized e-waste (televisions, computers, appliances), clothing/textiles etc.			•
2.11	Investigate supporting circular economy opportunities for local businesses via use of online waste trading platform ASPIRE.	•		
2.12	Undertake resource-flow audits of Council-run facilities and establish Waste Management Plans for each site. Data can then be used for developing waste action plans and can be used by other areas of Council (i.e. for carbon neutral reporting). Lead by example by reducing waste in Council operations and report back to the community on waste recovery initiatives.		•	•



	Priority Actions	Timeframe (years)		
		1-3	4-7	8-10
2.13	Develop a recycled-content purchasing policy to support the recycling industry and promote circular economy activities in Maroondah. Ensuring that goods are fit for purpose.		•	•
2.14	Develop an internal policy, as well as guidelines for developers, on minimum requirements for waste management in new developments. Investigate inclusion of organics recovery systems, e-waste disposal, community gardens and programs such as share waste.	•		
2.15	Prepare a Waste Management Plan (WMP) checklist for developers to make it easier to meet Council's waste management requirements, to streamline WMP process, and ensure future developments are prepared for new glass and FOGO services.	•		
2.16	Ensure robust governance of waste services by developing a policy for existing and new future waste management services for all property types including non-residential properties.	•		

Indicators of progress

Target: In 2030, 80% of materials collected from kerbside bins will be diverted from landfill, with an interim target of 72% by 2025.

Strategic indicator: Percentage of all materials collected from kerbside bins which is diverted from landfill for recovery.

Partnerships:

- Victorian Councils
- Metropolitan Waste and Resource Recovery Group
- Department of Environment, Land, Water and Planning

Internal policy links:

- *Maroondah 2040 - Our future together*
- *Sustainability Strategy 2016 - 2020*
- *Carbon Neutral Strategy 2014-15 - 2020/21*
- *Water Sensitive Strategy 2015 - 2025*





Outcome area 3: An informed community, with the capacity to make sustainable decisions

This section provides details on how we will educate, communicate and engage with the community and Council staff to ensure the materials we collect have viable markets and to encourage waste avoidance and reduction and the reuse of materials.

Key Directions

- Lead by example in sorting our waste.
- Provide accessible information on Council waste services.
- Advocate to the Victorian and Australian Governments for the best outcomes for our community.
- Encourage and support behaviours that avoid, reduce, reuse, repair and recycle waste.

The targets

Target 1. Recycling contamination level is at, or below, the Victorian state average, by 2030.

Target 2. Amount of materials recovered at recycling stations and events doubles by 2030.

What the evidence tells us

It's more important than ever that we put the correct things in our bins and that there's opportunity to improve how we sort our waste to increase resource recovery and reduce contamination. With so much happening in the waste sector over recent years our community is more engaged than ever, and we need to continue our education programs, and look at new ways to educate, to ensure that we maximise the opportunity to educate and inform our community.

What the community has told us

The community has told us they are sometimes confused about what to put into the recycling bin and that ongoing education, using a range of approaches, will help to reach our diverse community.

Priority Actions

	Priority Actions	Timeframe (years)		
		1-3	4-7	8-10
3.1	Educate and inform Council staff on waste and recycling issues so they can be champions in the community. Investigate establishment of a waste champions group to implement waste reduction/avoidance actions.	•		
3.2	Promote use of the Environmental Upgrade Finance mechanism to support business to access finance for environmental upgrades to existing non-residential buildings (including waste reduction).	•	•	•
3.3	Expand use of imagery in waste education materials. Investigate creating a sticker which has images of all acceptable items for the recycling bin to remove doubt, reduce contamination and instances of 'wish-cycling'.	•		
3.4	Investigate opportunities for gamification of recycling education by creating online sorting games for children and young adults. Implement following introduction of new glass bin and FOGO services to provide an additional education tool regarding which bin items should go in.		•	
3.5	Investigate making information more readily available to residents via Council website; such as ordering new bin stickers and waste calendars.	•		
3.6	Continue to provide new residents to Maroondah with waste management information. Review information currently provided and investigate expanding to provide disposal information for items that cannot go into Council's kerbside waste services, information on Council's waste education program in addition to correct disposal information for kerbside services.	•	•	•
3.7	Continue to work with language schools and Swinburne TAFE to provide information to new arrivals on waste management in Maroondah.	•	•	•
3.8	Continue to undertake biennial domestic waste audits to ensure Council's communication and education campaigns are appropriately targeted and effective, and to inform waste contracts.	•	•	•
3.9	Reward households that recycle correctly and provide direct feedback to households who aren't via ongoing bin inspection programs. Offer prizes and rewards for the households who are doing the right thing.	•	•	•
3.10	Promote Victorian Government-led programs such as Love Food Hate Waste, Back to Earth and Detox your Home.	•	•	•
3.11	Investigate the development of a mobile phone application which would allow the community to: • check their bin day. • check what items can go in which bin. • book an on call hard waste collection. • find where to take materials for recycling or disposal that cannot be collected via the kerbside waste services. • pay for an additional hard waste collection if the allocated two collections per financial year have been exceeded.		•	•



	Priority Actions	Timeframe (years)		
		1-3	4-7	8-10
3.12	Provide primary and secondary schools with free presentations on waste and recycling. Review current presentations and realign with the new Strategy.	•	•	•
3.13	Review Early Learning Centre (ELC) waste education kit. Investigate options for educating children 3-5yrs and for supporting ELCs in reducing waste in centres.	•		
3.14	Continue to support households to avoid and reduce waste at home via free workshops on a wide range of topics aimed at avoiding, reducing, reusing & recycling.	•	•	•
3.15	Redevelop Council's annual waste education program to re-align with the new Strategy. Continue to promote and encourage behaviours which align with the waste hierarchy principles of avoid, reduce, reuse, recycle, treat, dispose.	•		
3.16	Continue advocacy on behalf of Maroondah for improved waste and resource recovery outcomes, including, but not limited to: • a state-wide container deposit scheme which has a broad range of packaging items included • greater distribution of the landfill levy to increase resource recovery options in Victoria, in particularly advocating for market development activities to avoid future risk of another market collapse. • increasing product stewardship programs for problematic waste, including all e-waste (in particularly photovoltaic cells), mattresses & furniture. • improving packaging design to increase recyclability of and reduce waste associated with packaging. • state-wide waste education campaigns. • stimulation of local end markets to ensure materials collected from the kerbside can continue to be recycled as waste export bans are established.	•	•	•

Indicators of progress

Target 1: Recycling contamination level is at, or below, the state average, by 2030.

Target 2: Amount of materials recovered at recycling stations and events doubles by 2030.

Strategic indicators: Percentage of materials incorrectly placed into the commingle recycling bin.
Total tonnages of materials recovered for recycling from recycling stations and drop off events.

Partnerships:

- Schools and community groups
- Swinburne TAFE
- Eastern Alliance for Sustainable Learning
- Sustainability Victoria





Outcome area 4: Clean streets, parks and public spaces

This section provides details on how we will manage the litter and dumped rubbish over the next 10 years.

Key Directions

- Take a strategic approach to managing litter and illegal dumping.
- Educate and empower the community to take action.
- Improve the amenity of our streets, parks and public spaces.
- Lead by example by reducing single-use plastics.

The targets

In 2030 we will have clean streets, parks and public spaces.

The community satisfaction levels regarding Council's management of litter and illegal dumping will have improved and the amount of dumped rubbish requests will have reduced.

What the evidence tells us

Although the amount of illegal dumping in Maroondah is less substantial than what occurs in other Councils, there is still a need to act to reduce litter and illegal dumping. We know that litter that's thrown on the ground in Maroondah ends up in our rivers and ultimately in the ocean, hurting our marine life. The introduction of a CDS in 2023 will help encourage the community to return bottles to collection points when they're away from home and could help to help reduce bottle litter by 50% over 10 years.

What the community has told us

Our community is passionate about our local environment and ensuring the amenity of our unique city is maintained. The community said they want to hear more about what Council does to manage litter and illegal dumping and want to be able to get involved to address the issue.

Priority Actions

	Priority Actions	Timeframe (years)		
		1-3	4-7	8-10
4.1	Work with real estate agents, owner's corporations and building managers of Multi Unit Dwellings (MUDs) to establish onsite group hard waste bookings. This will reduce the amount of time hard waste sits out on the nature strip, reducing potential litter being spread into the street and improve the overall street amenity.		•	•
4.2	Provide education infrastructure for shared bin storage areas of MUDs to reduce amenity impacts from misuse of bins.	•	•	•
4.3	Tape dumped rubbish piles with 'under investigation' tape to provide the community with visibility of enforcement activities.	•	•	•
4.4	Continue to use street signs and surveillance cameras in known dumping hot spots to deter potential dumping of waste and provide evidence so any perpetrators are caught.	•	•	•
4.5	Create a page on Council's website with information about litter and illegal dumping in Maroondah. Include information on how litter and illegal dumping is managed, explain the different agencies and stakeholders involved, the complex range of litter sources and issues, and the role council plays.	•		
4.6	Make use of data collected from gross-pollutant traps to target education at the litter source.	•	•	•
4.7	Develop a litter and illegal dumping education strategy.	•		
4.8	Develop a single-use plastic policy for council run events to reduce single-use plastics and promote alternatives to the community through leading by example.		•	
4.9	Develop litter pick up kits for walkers and community groups to use. Investigate methods for free disposal of the litter collected.		•	•
4.10	Investigate establishment of an internal litter action taskforce which has staff representation from across all departments, in addition to relevant external partners involved in litter/illegal dumping. This taskforce would investigate grant funding opportunities, advocacy actions, identify priorities, and guide the development of relevant policy and plans.		•	•
4.11	Continue to provide litter and illegal dumping education sessions to schools in Maroondah.	•	•	•
4.12	Continue to participate in relevant industry networks to stay informed of issues relating to litter and illegal dumping in Melbourne.	•	•	•
4.13	Continue to undertake street and public place cleansing activities including litter collection and removal, wiping down of bins and surrounds, street sweeping and city cleaning services.	•	•	•
4.14	Continue to provide support to the community to participate in Clean Up Australia Day including coordination of the drop off locations for collected litter and disposal of any collected litter.	•	•	•
4.15	Seek funding opportunities for new litter projects.	•	•	•
4.16	Communicate the introduction of the Victorian Government Container Deposit Scheme to the community and encourage community participation in the scheme.	•	•	•



Indicators of progress

Target 1: Increase community satisfaction levels regarding Council's management of litter and illegal dumping.

Target 2: Reduce the rate of increase in the number of dumped rubbish requests by 15% by 2025, reduce illegal dumped rubbish requests by 15% by 2030.

Strategic indicators: rate of change to community reported satisfaction levels from 2019 to 2030.

Partnerships:

- Schools and community groups
- Victorian Government
- EASL



Tracking our progress

A detailed monitoring and evaluation plan will underpin the strategy, tracking the performance of each action against the desired outcomes. Progress towards meeting the strategy targets will be reported annually to Council with an interim review after five years and a full review after 10 years.

Outcome area	Targets	Performance indicator/s
Less waste sent to landfill.	50% reduction in waste sent landfill by 2031. Interim target of 20% by 2025.	Amount of waste sent to landfill.
More resources recovered and recycled.	80% landfill diversion rate of materials collected from kerbside bins by 2031. Interim target of 72% by 2025.	Amount of waste collected from kerbside bins which is recovered and not sent to landfill.
An informed community, with the capacity to make sustainable decisions.	Contamination rate will be below state average by 2030. Double the amount collected for recycling from community drop off events and recycling stations.	Contamination rate for commingle recycle bin. Amount of materials collected for recycling.
Clean streets, parks and open spaces.	Increase community satisfaction levels in relation to litter and illegal dumping. Reduce the rate of increase in the number of dumped rubbish requests by 15% by 2025. Reduce overall amount of illegal dumped rubbish requests by 15% by 2030. Increase amenity of open spaces.	Community satisfaction survey responses. Number of dumped rubbish requests received. Before and after photos of community-led litter pick-ups.



References and Glossary

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Glossary

Advanced waste resource recovery technology (AWRRT): A class of thermal treatment technologies including pyrolysis, gasification and plasma gasification that can be used to recover energy from the carbon matter (plant and animal material and plastics) present in residual waste or a fuel prepared from waste material.

Advanced waste processing: The act of processing residual waste using advanced waste resource recovery technologies.

Commingle recycling: Different materials for recycling are combined for collection.

Contamination: Materials placed in a bin that do not belong in that bin. For example, placing plastic bags, recycling in plastic bags, containers with food, etc. into the recycling bin when they're not accepted by the MRF.

Diversion rate: The amount of recycling and garden waste collected from kerbside bins which is diverted from landfill, divided by the amount collected from recycling, garden and landfill bins.

E-waste: Any discarded item that has an electrical cord, plug or battery.

Energy from waste: Also known as waste to energy, this refers to treatment processes or technologies which derive the energy value from waste for turning into electricity, biogas, heating or fuel.

Food organics: Food waste from households, out-of-date specification food, meat, fruit and vegetable scraps. Excludes liquid wastes.

FOGO (Food Organics Garden Organics): Combined collection and processing of household food and garden organics.

Garden organics: Waste derived from organic garden sources, such as leaves, prunings and lawn clippings.

Garbage, landfill, residual waste: The materials collected from the general waste bin.

Hard waste: Bulky or large household items difficult to dispose of due to their size and which aren't accepted in kerbside bin collections.

Illegal dumping: The purposeful act of discarding rubbish onto land which is not licensed to accept that waste. Generally, illegal dumping refers to large or multiple items dumped into bushland or naturestrips. Whereas litter includes any small, medium or large item which is purposefully, or accidentally, discarded inappropriately.

Landfill levy: Is a landfill disposal tax collected and administered by the Victorian Government. The purpose of the landfill levy to provide funding to support the reduction of waste. The landfill levy provides a financial incentive to reduce waste generation and explore other means of treating or processing waste.

Material Recovery Facility (MRF): The first place materials from the commingle recycle bin are taken where the materials are sorted into their different streams for sale to reprocessors.

Municipal Solid Waste (MSW): Waste collected by councils, including waste from kerbside bins, public place bins, council facilities, hard waste etc. Excludes commercial and industrial, agricultural, medical, radioactive, construction and demolition waste classifications.

MWRRG: Metropolitan Waste and Resource Recovery Group.

MAV: Municipal Association Victoria.

Product stewardship: Product stewardship is an approach to minimising the social, environmental and economic impacts of materials and products. It acknowledges that those involved in producing, selling, using and disposing of products have a shared responsibility to manage the material or product in a way which reduces the impact throughout its lifecycle.

For example, the National Television and Computer Scheme is a co-regulatory product stewardship scheme in which the Australian Government sets the minimum requirements and industry has flexibility in how they meet those requirements.

Public place bins: Refers to any council collected bin which is in a public space including strip shops, parks and reserves.



Putrescible waste: A waste classification which includes organic wastes capable of decomposition by micro-organisms. This includes household general waste and garden organics.

Recycle: Conversion of waste into reusable material.

Reprocessing: The undertaking of a process to treat a discarded material in order for it to be used again.

Residual waste: The materials which remain after source separation of organics and recyclables.

Resource recovery: The act of recovering materials for reuse or recycling to avoid the items going to landfill.

Resource recovery rate: The percentage of recoverable resources placed in the recycling and/or garden organics bins, by the total amount of the recoverable resources within the landfill, recycling and garden organics bins.

Reuse: To use a material or item again. This can be for the same purpose (i.e. donating clothing to an op shop) or for a different purpose (i.e. reusing a glass jar to store something).

Source separation: The act of segregating waste into different materials and streams in order to recover materials.

Waste: Any unwanted, unusable material that is to be discarded. Includes materials destined for recycling, resale or reprocessing.



To contact Council

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- email maroondah@maroondah.vic.gov.au

Translating and Interpreter Service

13 14 50

National Relay Service (NRS)

13 36 77

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