

Waste and Litter Strategy 2018



Moreland City Council would like to acknowledge the expert advice received in the preparation of this document from Peter Allan of Sustainable Resource Use Pty Ltd.

Contents

Mayor's Forward	5
1. Introduction	6
2. Reducing waste – Moreland's vision	7
2.1 Resource sustainability	7
2.2 The Waste Hierarchy	7
2.3 A circular economy	7
3. Moreland Council's zero waste goal	8
3.1 Zero waste to landfill by 2030	8
3.2 Moreland Council Plan and Strategy Alignment	9
3.3 State and Metropolitan Plans and Strategies	10
3.4 National and global policy context	11
3.4.1 National policy	11
3.4.2 Federal Senate inquiry, Waste and Recycling in Australia	11
3.4.3 Meeting of Environment Ministers packaging commitment	12
3.4.4 Global context	12
4. Improving kerbside services	13
4.1 Summary of kerbside contracts	13
4.2 Cost of disposal	13
4.3 Moreland demographics	13
4.3.1 Population	14
4.3.2 Dwellings	14
4.3.3 Household composition	14
4.3.4 Language	14
4.4 Recycling organic (food and garden) waste	14
4.4.1 Kerbside collections	14
4.4.2 Composting on site	15
4.5 Commingled recycling service	15
4.5.1 What is in the recycling bin?	15
4.6 Garbage collections	17
4.6.1 How much garbage do we generate?	17
4.6.2 What is in the garbage bin?	17
4.6.3 Waste to Energy	20
4.7 Multi unit developments	20
4.8 Hard waste collections	21
4.8.1 What is in hard waste?	21
4.9 Commercial sites	22
5. Improving environmental outcomes	23
5.1 Other recycling opportunities	23
5.2 Advocating for waste reduction	23
5.3 Community Education	24

6. Eliminating litter and dumped rubbish	26
6.1 Dumped Rubbish	26
6.2 Litter	28
6.3 Public litter bins	29
7. Public places and council sites	30
7.1 Public places	30
7.2 Plastic wise policy	30
7.3 Council sites	30
8. Waste and Litter Strategy Action Plan	
8.1 Municipal food waste	31
8.2 Avoiding waste and increasing resource recovery	33
8.3 Council service delivery	36
8.4 Litter and dumped rubbish	39

Mayor's Forward

Council's Waste and Litter Strategy 2018-2022 outlines an innovative and bold plan to change the way waste is managed in our city.

It includes a range of initiatives to help us meet our zero carbon 2040 targets including achieving zero waste to landfill by 2030.

As part of this strategy, we will continue to pursue innovations to minimise waste and increase resource recovery.

Council will work to continue to eliminate single use plastics from council festivals and events. We will participate in innovative projects and trials where we endeavour not to simply take, make and dispose.

We will be rolling out a municipality-wide kerbside food waste collection service aimed at getting food out of landfill. We will also continue activities aimed at reducing litter, rubbish dumping and the contamination of recycling bins.

We will also be advocating to the state and federal government to implement the container deposit scheme as well as regulations that prioritise repair, repurposing and refurbishment of goods over recycling and disposal; and advocate for extended producer responsibility when it comes to waste.

A range of other exciting and innovative projects are outlined in the action plan of this strategy that will make a lasting and positive impact on our city and environment.

Together we can make a difference, and through the delivery of this strategy work toward zero waste to landfill and a more sustainable future.

A handwritten signature in black ink, reading 'Natalie Abboud'. The script is fluid and cursive, with the first letters of 'Natalie' and 'Abboud' being capitalized and prominent.

Cr Natalie Abboud

Mayor of Moreland

1. INTRODUCTION

Moreland City Council prepares a Waste and Litter Strategy every five years, setting the strategic direction for Council's delivery of waste and street cleansing services within Moreland, and an Action Plan. In preparation for the development of the new Strategy 2018, Council has reviewed the previous Strategy to examine the extent to which the Strategy met its objectives and actions, and the way Council can best deliver on its overall vision for waste minimisation and recovery in Moreland.

Moreland's demographics have changed significantly in recent years, with 44% of residents now living in medium to high density housing. With population projections set to see Moreland grow by 17% within the next four years,¹ Council needs to consider how best to provide services to our changing community.

Council has renewed its commitment to a dual focus on waste management and waste minimisation. Waste minimisation, although more complex to achieve, will be a key factor in delivering the strategies overall objectives. These objectives are aligned with the Environment Protection Act's waste hierarchy, which prioritises avoidance and waste reduction as the most preferred options for waste management, above recycling, recovery, treatment and disposal.

Almost two thirds of the 29 actions in the previous strategy were completed, including progress in increasing resource recovery, street cleanliness and reducing illegal dumping. The review of the previous strategy has identified that more work and resources need to be directed to the reduction of food waste and residential waste.

To underline Moreland's credentials as a progressive and environmentally concerned Council, the 2018 Strategy aims for higher diversion rates (less waste going to landfill, and more material being recycled), going beyond metropolitan and state averages. The new Strategy has the potential to create positive change in waste management in the municipality, while assisting to manage the impacts of Moreland's projected large population growth in the next five to ten years.

¹ ABS, *Census of Population and Housing*, Canberra, 2016

2. REDUCING WASTE – MORELAND’S VISION

2.1 Resource sustainability

Each year the Victorian community disposes of 1.16 million tonnes of material into landfills via household kerbside collections². Moreland contributes 30,000 tonnes annually to this statewide total³. Our “garbage” is made up of valuable resources from metals, plastics and glass through to food and garden vegetation. The loss of these resources undermines our drive to live sustainably; we need to capture and recycle more and to constantly assess the amount of materials, products and packaging we are consuming.

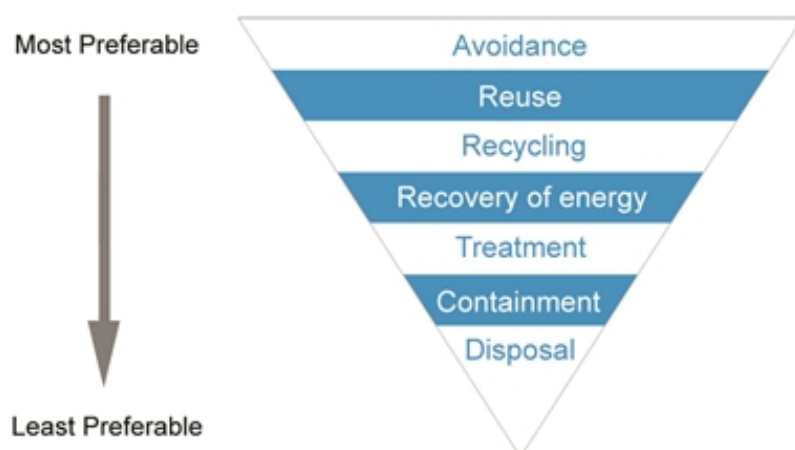
Moreland City Council wants to see an end to the landfilling of waste in order to:

- recover these materials and give them a second life;
- address the current national and international crisis in the treatment of recyclables;
- reduce the carbon impact of landfills from methane generation.

2.2 The Waste Hierarchy

The waste hierarchy provides an order of preference for the management of waste and is one of the eleven principles of environment protection contained in the *Environment Protection Act 1970*. The waste hierarchy identifies avoidance as the most preferred option with disposal as the least preferred.

Figure 1: The Waste Hierarchy⁴



2.3 A circular economy

Advanced economies traditional approach to resource use has followed a linear pathway where materials are extracted, manufactured, used and discarded for permanent disposal. Increasing population pressure and environmental impacts have made this model increasingly unsustainable.

² Sustainability Victoria, *Victorian Local Government Annual Waste Services Report*, 2015-16

³ Figure based on 2016-17 Moreland waste generation tonnages

⁴ Environment Protection Authority website, epa.vic.gov.au, August 2018

The circular economy is a different approach and involves a regenerative system in which resource use, waste, emissions, and energy leakage are minimised by slowing, closing, and narrowing energy and material loops. In a circular economy, products are designed with the end in mind and waste is designed out of the process. Products are designed and manufactured for repair, repurposing or reuse before they are recycled. This is in stark contrast to a linear economy where ‘built-in obsolescence’ has become prevalent in many consumer items.

As part of Council’s commitment to keeping resources in use, Council will seek to facilitate the establishment of repair cafes within the municipality. We will also ensure our procurement policy includes a preference for the purchase of goods made with recycled content which will help to ensure strong market destinations for the materials we collect and recycle.

Council can also play a role by participating in and supporting innovative trials for recycled or repurposed materials and by supporting or partnering with the university or business sectors to develop projects that keep resources circulating.

Moreland’s current annual household waste generation of 666kgs in total, made up of 234kgs recycling and 432kgs garbage⁵, is very high when compared to rates in other developed countries. Only Canada, USA and Greece⁶ send more waste to landfill than Australia’s total of 280kgs garbage per household. Only Canada, USA and Switzerland generate more overall. The challenges of resource scarcity, climate change, landfill availability and pollution mean we are being urged to reduce our generation of waste.

3. MORELAND COUNCIL’S ZERO WASTE GOAL

Moreland City Council aspires to be a leading council that pursues innovation. Council takes seriously its role in assisting its community to live and work in an environmentally sustainable manner. As part of Moreland Council’s Zero Carbon Evolution Strategy, reducing waste and increasing our recycling is a key goal of Council. Over the course of this strategy timeframe, new opportunities will become technically possible and Council will seek to identify these for review and possible adoption. Flexibility will be important. This is particularly the case with global recycling markets being transformed, and collection and sorting systems being reviewed.

3.1 Zero waste to landfill by 2030

Council has set a target to send zero waste to landfill by 2030. To be able to reach this target significant change will be needed at a macro level, with new processes and technology implemented at commercial scale in order for all waste to be diverted from landfill.

Council will advocate to state and federal government to implement a regulatory framework that prioritises repair, repurposing and refurbishment of goods over recycling or disposal. Council will advocate for extended producer responsibility for more items and will participate in innovative projects and trials that reflect circular economy principles as opportunities arise.

Council will seek to provide more opportunities and services for residents to divert

⁵ Figure based on 2016-17 Moreland waste generation tonnages

⁶ OECD, Municipal waste (indicator). doi: 10.1787/89d5679a-en, (Accessed on 11 May 2018)

materials away from landfill. For example, introducing the option for food waste recycling through the green waste bin, with full participation, has the potential to divert 15,000 tonnes of waste from landfill each year.

With a current diversion rate of 46% (incorporating green waste and recycling) we sit just above the state average of 44%⁷. With the introduction of food waste into the green waste bin this diversion rate could exceed 70% with full participation in the service. The optimum diversion rate that could be achieved, based on the current profile of the average garbage bin, is 80%. The remaining fraction of the garbage stream includes disposable nappies, sanitary products, composite packaging, polystyrene, broken ceramics and glassware, broken toys, clothing, fabrics and soft furnishings. Until an accessible recovery option is available to residents for these materials they will continue to require a disposal option.

Behaviour change will be a necessary factor in aiming for the zero waste target. Council will develop and implement a range of best practice behavior change programs targeting waste avoidance and minimisation, increased recycling and reduced contamination and dumping. The programs will aim to reduce barriers and increase motivation for change. Careful consideration will be given to ensuring steps to change are accessible and aim to solve problems not impose hardship.

This strategy outlines some of the actions Council proposes to improve upon our current waste diversion with the goal of reaching the zero waste to landfill by 2030 target. The accompanying action plan lists these in order of priority. The actions address food waste kerbside collection, reduced dumping of rubbish and a focus on helping the community to avoid waste. In the shorter term, Council commits to lead by example, ensuring all Council sites and activities are waste wise with full reuse and recycling measures in place.

3.2 Moreland Council Plan and Strategy Alignment

Council Plan 2017-2021 – sets the strategic directions, outcomes and actions that relate directly to the objectives of this Strategy. Of the three Strategic Directions, the second objective Progressive City relates specifically to this Strategy. The related key priority and deliverables are:

Key Priority:

- Enhance the environmental outcomes of Council waste services and increase the communities' awareness/participation in environmental initiatives to reduce waste to landfill.

Deliverables:

- Trial education and implementation of initiatives to actively reduce waste to landfill.
- Become a 'Plastic Wise' Council by banning all disposable items at Council festivals and events.

Zero Carbon Evolution Strategy 2020 Refresh / 2040 Framework - sets out Council's plan to work with the community to achieve a 22% reduction in carbon emissions by 2020 and zero emissions by 2040. The Action Plan - Activating the community to reduce emissions - has a target for 70% of the municipality to receive a kerbside food waste collection service by 2020.

Municipal Public Health and Wellbeing Plan 2017-2021 – is a whole-of-Council plan that outlines the strategic health and wellbeing priorities for the municipality. It sets out a

⁷ Sustainability Victoria, *Victorian Local Government Annual Waste Services Report 2015-2016*, Melbourne, 2017

framework to bring together all the work across Council that impacts on people's physical health and mental wellbeing in a coordinated way. The Plan aligns with the Council Plan 2017-2021 and the Municipal Strategic Statement. It includes a goal that 'Moreland is a cooler, greener and more sustainable city'.

3.3 State and Metropolitan Plans and Strategies

The Victorian state government is currently planning for a shift away from waste disposal to the adoption of a circular economy where materials are captured through recycling and reused. The Statewide Waste and Resource Recovery Infrastructure Plan (SWRRIP)⁸ sets a major statewide focus on reducing the disposal of food waste, electronic waste, and plastics. The cost of landfill has been progressively raised by state governments through a landfill levy, to discourage waste disposal. A reduction in the amount of garbage we generate will therefore provide Moreland residents with financial savings.

The State Government has announced a ban on the disposal of electrical and electronic waste. This ban will come into effect on 1 July 2019⁹. It has also announced a ban on single use lightweight plastic shopping bags. There is also a strong commitment to move away from disposal of residual waste at landfills to Advanced Waste and Resource Recovery Technologies.

The following are key State Government policies that this strategy will align with:

Victorian Waste and Resource Recovery Framework – developed in 2014 to provide the long term strategic framework for infrastructure at a state and regional level. The Framework facilitates the integration of Statewide and Regional Infrastructure Plans.

Victorian Waste Education Strategy - developed in 2016 to create a consistent and coordinated approach to waste education focusing on behaviour change in order to assist Victorians to divert waste from landfill, reduce waste generation and boost recycling.

State-wide Waste and Resource Recovery Infrastructure Plan 2015-2044 - provides a long-term vision to guide the planning and management of waste and resource recovery infrastructure in Victoria for the next 30 years.

Recycling Industry Strategic Plan – announced in 2018 to provide a blueprint for a safe, resilient and efficient recycling system in the medium to long term. State Government will help drive greater demand for products containing recycled materials through procurement and boost investment in recycling infrastructure.¹⁰

Circular Economy Policy – a key action of the Recycling Industry Strategic Plan is to develop a whole-of-government circular economy policy by 2020 which will build on the government's existing waste and resource recovery initiatives and help to minimize waste and maximize recovery and re-use of materials.¹¹

Metropolitan Waste and Resource Recovery Implementation Plan 2016 – developed as one of seven Regional Implementation Plans. The Plan covers Melbourne's Metropolitan

⁸ Sustainability Victoria, *Statewide Waste and Resource Recovery Infrastructure Plan Victoria 2018*, Melbourne, 2018

⁹ Department of Environment, Land, Water and Planning, *Managing e-waste in Victoria*, August 2015

¹⁰ Department of Environment, Land, Water and Planning, *Recycling Industry Strategic Plan Fact Sheet*, 2018

¹¹ Department of Environment, Land, Water and Planning, *Recycling Industry Strategic Plan Fact Sheet*, 2018

region and focuses on four strategic objectives: to reduce waste to landfill; to increase organic waste recovery; to deliver community, environmental and economic benefits and to plan for Melbourne's growing population. No new landfills have been planned for metropolitan Melbourne and will only be recommended if absolutely necessary, after a 2019 review of the Plan.

Plan Melbourne 2017-2050 - guides the growth of Melbourne for the next 35 years. It includes a number of targets from the MWRR Implementation Plan, including that 25% of municipal solid waste collected through Metropolitan Waste and Resource Recovery Group (MWRRG) contracts be diverted from landfill; that 95% of new multi-unit developments accommodate resource recovery collections, and that MWRRG secure a 600,000 tonne processing capacity for organic waste in Melbourne by 2026.

3.4 National and global policy context

3.4.1 National policy

The reduction of waste is an objective of all governments at Federal, State and local level. The aims of the National Waste Policy¹² are to:

- avoid the generation of waste, reduce the amount of waste (including hazardous waste) for disposal;
- manage waste as a resource;
- ensure that waste treatment, disposal, recovery and re-use is undertaken in a safe, scientific and environmentally sound manner; and
- contribute to the reduction in greenhouse gas emissions, energy conservation and production, water efficiency and the productivity of the land.

One of the key areas outlined in the policy is taking a shared responsibility for reducing the environmental, health and safety footprint of products and materials across the manufacture-supply-consumption chain and at end-of-life. This led to the development of the Product Stewardship Act 2011 which provides the framework legislation to responsibly manage the environmental, health and safety impacts of products during use and, in particular, at end-of-life.

This product stewardship framework has formed the basis of programs for the recovery of packaging, newspapers, computers and televisions, lighting, tyres, oil and phones. In most cases it sees the industries contribute funding for recovery and recycling and the development of action plans.

3.4.2 Federal Senate inquiry, Waste and Recycling in Australia – following the implementation of China's National Sword policy in 2018 the Federal Senate Environment and Communications References Committee undertook an inquiry into Australia's recycling sector. The Senate made 18 recommendations to the Federal Government including:

- the establishment of a circular economy;
- the urgent implementation of 16 strategies established under the National Waste Policy;

¹² Australian Government Department of Environment and Energy, *National Waste Policy*, Canberra, 2009

- the prioritisation of waste reduction and recycling above waste-to-energy and commitment to the waste hierarchy;
- that federal, state and territory governments agree to a phase out petroleum-based single-use plastics by 2023;
- that federal, state and territory and local governments assist recyclers to increase the diversion of material from landfill; improve the quality of materials recovered through the collection programs; improve sorting of materials at recycling facilities; and assist manufacturers to increase the amount of recycled material used in production.¹³

3.4.3 Meeting of Environment Ministers packaging commitment – at a meeting of Australia’s federal, state and territory environment ministers on 27 April 2018 a commitment was made to reduce the amount of packaging waste generated, to make it easier for packaging to be recycled and to eliminate all packaging from landfill by 2025. By 2025 100% of Australian packaging should be recyclable, reusable or compostable.¹⁴

3.4.4 Global context

At a global level there is increasing ownership of the need to reduce our resource consumption and to better manage end of life outcomes for waste. The concern about materials, particularly plastic, entering our rivers and oceans has never been higher. There is also concern and global agreements about the transfer of waste from developed countries to poorer countries and the social and environmental impact of this.

Recently, China, the world’s biggest importer of waste material for recycling, introduced restrictions on the materials it accepts under its ‘National Sword’ policy. This has significantly affected the export of mixed paper and plastics and impacted on other paper and plastic material. The overall impact on household collections has been of concern and this has involved State and local government efforts to ensure the viability of the system for the future.

At a global level, particularly across Europe, there has been a heightened awareness that we need to move our economies to a more circular model which entails gradually decoupling economic activity from the consumption of finite resources and designing waste out of the system.

The European Commission has adopted an ambitious new Circular Economy Package¹⁵ to help European businesses and consumers to make the transition to a stronger and more circular economy where resources are used in a more sustainable way. The proposed actions will contribute to "closing the loop" of product lifecycles through greater recycling and re-use and bring benefits for both the environment and the economy. The plans will extract the maximum value and use from all raw materials, products and waste, fostering energy savings and reducing greenhouse gas emissions.

¹³ Commonwealth of Australia, The Senate Environment and Communications References Committee, *Never waste a crisis: the waste and recycling industry in Australia*, June 2018

¹⁴ Lindy Hughson, *Australian govt. commits: no packaging to landfill by 2025*, Packaging News, April 2018

¹⁵ European Commission *Circular Economy Package*, http://ec.europa.eu/environment/circular-economy/index_en.htm, (May 2018)

4. IMPROVING KERBSIDE SERVICES

4.1 Summary of kerbside contracts

Council currently utilises a number of different delivery models to collect and process the waste and recycling collected from the households within Moreland. These models are a mixture of local and regional contracts

Service	Delivery Model	Expires
Garbage, Recycling and Green Waste collection - North	In house	
Garbage, Recycling and Green Waste collection - South	Citywide	2024
Garbage disposal	Cleanaway (Regional Contract)	2023
Recycling Receival	Visy	2023
Green Waste Receival	Veolia – North West Organics Contract (Regional Contract)	2028
Hard waste collection	WM Waste Management	2023
Hard waste disposal/recycling	Cleanaway, Sims Metals, others	2023

** Note: North refers to services north of Bell Street, with South referring to services south of Bell Street*

It is Council's current intention to align the review of the Waste and Litter Strategy to the period prior to new contracts being established, allowing any emerging recovery and diversion opportunities to be built into the receival and collection arrangements and contracting.

4.2 Cost of disposal

Each year the cost to Moreland ratepayers of the collection and landfilling of general waste from households amounts to over \$6 million. Disposal costs will continue to increase unless less waste is produced by households. By contrast, waste avoided through recycling can reduce costs for Council and its ratepayers.

If the Moreland reduction and recycling rates can match communities in other leading Melbourne municipalities, such as Nillumbik and Banyule, ratepayers could see a major reduction in disposal costs. Reductions in waste to landfill will enable funds to be put towards better recycling and litter abatement strategies.

4.3 Moreland demographics

The demographic information provided below is sourced from the Australian Bureau of Statistics, Census of Population and Housing, 2011 and 2016.

4.3.1 Population

In 2016 there were 172,091 residents in Moreland, an increase of 11% since 2011, in line with recent state-wide growth of 11% but below Greater Melbourne's population growth of 18%. Within Moreland, the greatest growth occurred in Brunswick where the population increased by 24% from 2011, compared to a 10% increase in the previous six years. The majority of Moreland's other suburbs grew in line with or slightly higher than Moreland's population growth, with only Coburg, Brunswick West and Pascoe Vale South growing at a slower rate, between 6.5% and 7.2 %. The median age of people in Moreland was 34, with more than a third of residents aged between 20 – 40 years (38% of the population), while 20% of the population were under 20 years of age, and 23% were aged 40 – 60 years.

4.3.2 Dwellings

Housing stock increased from 63,370 to 70,639. The main trend to note since 2011 is the vast increase in medium and high-density dwellings within Moreland. Medium density housing has increased from 30% to 35% and high density has increased from 5% to 9% of total housing stock since 2011, with 44% of the population now living in medium to high density housing.

4.3.3 Household composition

In 2016 Moreland household composition was 27% single person households, 33% two-person households, and 40% households with three or more people per household. This was similar to the 2011 Census data.

4.3.4 Language

In Moreland over half of the population (56%) speak English at home, with 41% speaking a non-English language. The most common languages were Italian 8%, Arabic 5%, Greek 4.5%, Urdu 2.5% and Mandarin 2%. This is comparable to the 2011 Census data, however there is now less Turkish spoken (previously 2%) and more Urdu (previously not recorded)¹⁶

4.4 Recycling organic (food and garden) waste

4.4.1 Kerbside collections

The largest component of our garbage is now food waste, making up 52% of the average Moreland garbage bin¹⁷. With a local processing facility now built and available, a key priority for Council in the life of this strategy, will be to establish kerbside recycling of food organics through the existing kerbside green waste collection service. Increasing the percentage of households with a green waste/garden organics bin will be a priority and absorbing the added cost into the waste services charge will be necessary.

The amount of current green waste currently collected in Moreland is less than half of the statewide average. The Moreland annual yield is 141kg per household across the municipality. This 141kg compares to a statewide figure of 290kg and an average across inner metropolitan areas of 237kg and outer metropolitan councils of 297kg per household annually.¹⁸

¹⁶ City of Moreland, <https://profile.id.com.au/moreland>, (Accessed on 12 May 2018)

¹⁷ Moreland kerbside garbage audit, 2015

This shortfall is the result of two factors. Green waste bins are currently an 'opt in' service for residents which more than 30,000 households (45%) currently don't use. Some Melbourne Councils provide an organics collection as a universal service paid within the waste charge, similar to the commingled recycling service. Changing to a universal organics collection would increase diversion however it may have the unintended consequence of also increasing contamination with residents using green bins to dispose of non-organic items. A trial will begin in late 2018 of food waste collection in the green waste bin.

Council will also increase its work with the community to provide information to households and retailers about how they can reduce the amount of food waste and to deal with food organics at a household level with on-site composting.

4.4.2 Composting on site

In addition to the collection of garden and food organics for regional processing, there is an important role for at-home and local community-based composting. Many residential sites can compost a range of food and garden organics at home and utilise the composted product on site. This means the nutrient levels of the site are maintained and can contribute to food production or other garden applications. Council is committed to supporting at-home composting through subsidising the purchase and delivery costs of composting equipment along with the provision of composting education programs delivered by people passionate about food and gardening, to help householders save money by reducing food waste sent to landfill.

Community composting hubs assist people who are unable to compost their food waste at home. Moreland residents can register to use a community composting hub where they can take their food waste for composting. Hubs are located at community gardens where the composted material is used to grow food. Council will continue to support community gardens to establish community composting hubs with low-tech, low-cost interventions as opportunities arise.

4.5 Commingled recycling service

Over the past twenty years, Council has provided all households with a kerbside recycling service. The community has embraced this with ever increasing amounts of recyclable material collected. The total amount of material recycled through the yellow lidded recycling bin exceeded 16,000 tonnes in 2017.

This has resulted in a greenhouse gas reduction of 10,000 tonnes, equivalent to taking 2600 cars off the road.¹⁹ In addition, a further 10,100 tonnes of garden organics was recycled through the kerbside organics collection. Currently 55% of households contribute to this collection.²⁰

4.5.1 What is in the recycling bin?

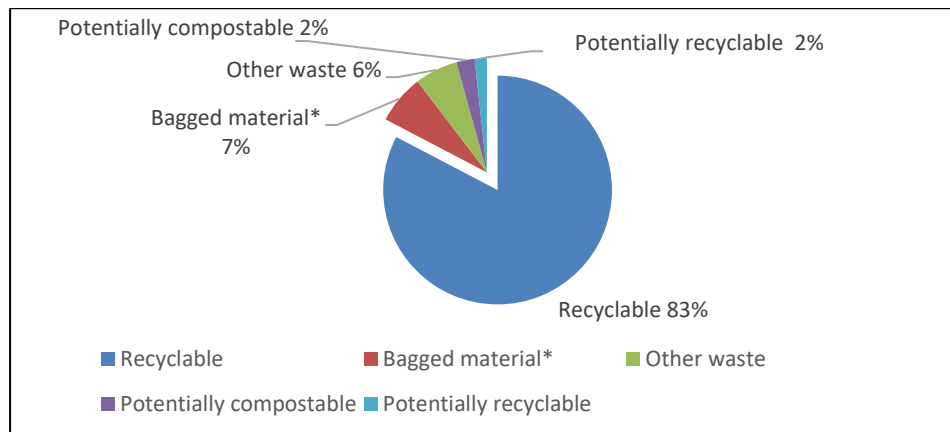
An audit of kerbside recycling bins in 2015 found a high level of contamination in the recycling stream. Figure 1 below shows that the average contamination rate across Moreland

¹⁹ Sustainability Victoria, LCA Kerbside Recycling Calculator, sustainability.vic.gov.au.

²⁰ MCC pathway data, April 2018

was 17%, much higher than the metropolitan average of 6%. The presence of contaminant material is a threat to the sorting, sale and processing of our recycling and increases the cost of the service for Council. Contamination can be the result of a range of factors from householder confusion about what can be included and how to present it (including bagging recyclables), to misuse of the recycling bin to dispose of garbage.

Figure 1: Profile of contamination in the kerbside recycling bin



** of the bagged material 50% was recyclable and 50% contaminated material*

A key priority for Council will be to reduce the level of contamination in the recycling bin to at or below the metropolitan average. In addition to educational/behaviour change programs, a series of inspections, audits, and warnings to households will be needed. Options to reduce recycling bin contamination could range from intensively working with the household to withdrawing the service. Further options to consider will include more surveillance and the introduction of fines or removal of bins for the incorrect use of recycling bins. The bin inspection program will need to be expanded and the kerbside garbage and recycling services policy updated. The program will utilise all communication channels available to Council.

The material collected through the kerbside recycling service is sent to a regional facility for sorting. Mixing all materials together for collection can undermine the quality of each material if sorting to recycling specifications is not achievable. The introduction of Container Deposit Schemes in other states has provided a source-separated supply of clean, quality glass that manufacturers are prepared to pay for.

Flexible plastic packaging is the fastest growing form of packaging. The REDcycle program which provides collection points for this packaging type at the major supermarkets, ensures soft plastics are source-separated from other materials, making these materials more attractive to manufacturers as they are clean and free of contaminants. The next round of recycling receipt contracts will need to consider options for expansion of the range of materials accepted to include flexible plastics and any other key materials that are practical to handle.

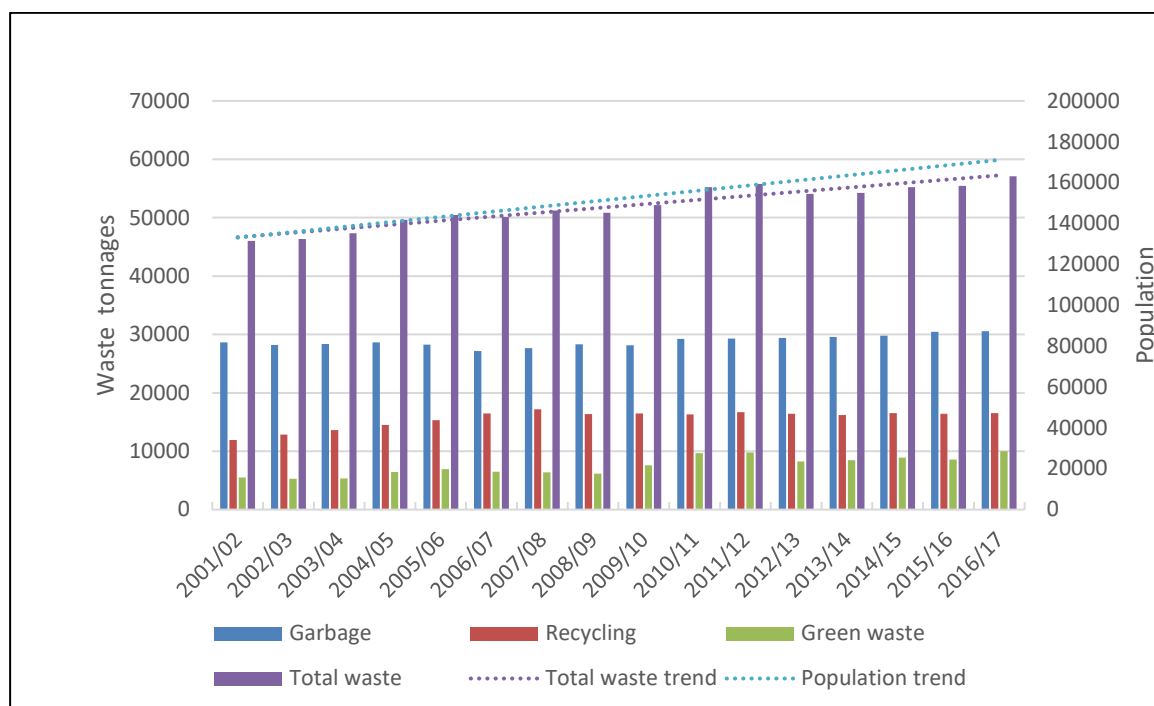
The key challenge for recycling is glass. When it is collected it is broken and often small glass fragments get into paper, cardboard, plastics and make the recycling of these materials more difficult. Alongside other councils, State Government and the recycling industry, we will investigate the costs and benefits of collecting either paper and cardboard, or glass, separately to other materials. With global markets for recycling demanding higher quality sorted material, this may be crucial to the security of household recycling systems.

4.6 Garbage collections

4.6.1 How much garbage do we generate?

The snapshot of waste data from 2012 – 2017 outlined here shows waste generation rising slightly above population growth for this period.

Figure 2: Annual waste tonnages for garbage, recycling and green waste



The amount of household garbage collected in Moreland is average by metropolitan standards on a per household basis. If Moreland's garbage yield was at 7kg/hh/week instead of 8.3kg/hh/week, then the annual saving would be almost \$1m in disposal and collection.

4.6.2 What is in the garbage bin?

An audit of kerbside garbage bins in 2015 found that the average bin contained 52% food waste, 20% recyclable content, 10% nappies, 12% 'other' (tissues, dust, fabric, composite packaging) and 4% garden waste (see Figure 3 below). Around one fifth, or 22%, of the bin content was residual waste.

Figure 3: Garbage bin composition, 2015



A key priority for reducing waste to landfill will be a focus on food waste and the collection service for food organics in the green waste bin. Food is the largest component of the garbage bin, making up 52% and its diversion will have a profound impact on garbage generation. Council will introduce food organics into the green waste collection at the earliest opportunity.

Council is also keenly aware of the amount of recyclable material still in garbage bins. One fifth or 20% of the material in our garbage bins is currently recyclable, with a further 8% - 10% of recyclable soft plastics.²¹ A focus on getting a higher level of diversion of this material will be a priority during the life of this strategy. Behaviour change programs and ongoing education such as the bin inspection program will be crucial to diverting this material into the recycling stream. Diverting more material from landfill will improve recovery rates as well as free up garbage bin capacity for the household.

The other key material for focus will be disposable nappies, making up 10% of the waste to landfill stream. It is proposed that Council investigate options to increase usage of cloth nappies in the community. If feasible this could be through an annual balloted rebate or the introduction of a nappy library.

With the introduction of the food organics service there will be a combined opportunity to divert the 4% green waste currently sent to landfill along with the 52% food waste, moving us closer to our zero waste goal. Whether the food organics/green organics bin is rolled out as a universal or opt in service it will have greater appeal and relevance to a wider section of the community as every household produces food waste.

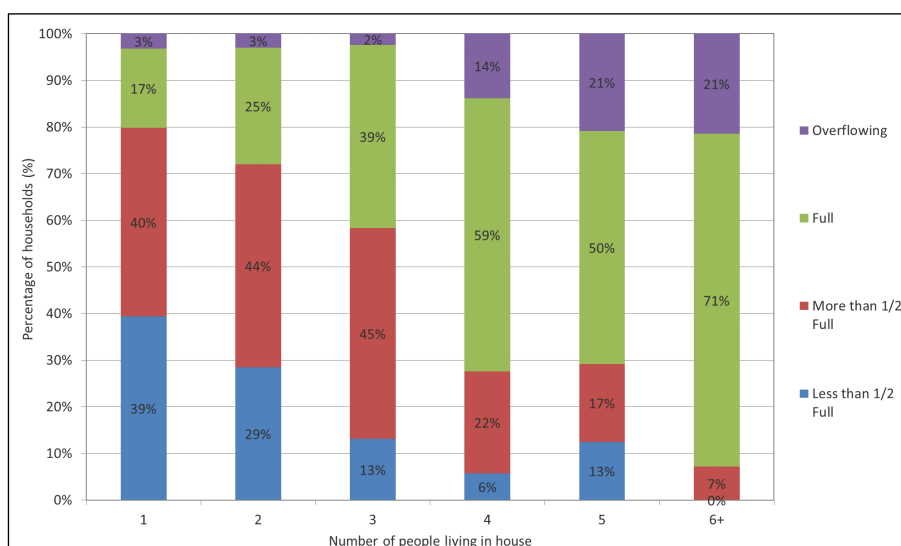
With the progressive expansion of recycling opportunities, the amount of garbage presented will decrease. As well as reducing garbage disposal costs for ratepayers, it may mean we can reduce the size of our garbage bins. Council will investigate options to support households with reduced waste, such as smaller

²¹ Moreland kerbside garbage audit, 2015

garbage bins or less frequent collections. Appropriate rewards will also be considered.

Currently the majority of households (80%) have an 80 litre garbage bin with the remainder having a larger sized bin. The 2016 Bin Inspection Program found that 73% of households with four or more people had their bins at capacity or overflowing, with the percentage increasing as the number of people in the household increased, with 92% of 6 people households with bins at capacity or overflowing. Nearly half of the recycling bins and over a third of green bins that received 'warning' or 'rejection' notices for contamination during the program also had full to overflowing garbage bins. In line with these figures, the second most common contaminant in recycling bins, and the most common in green waste bins was household garbage. In contrast the vast majority of 1 and 2 people households (50% of Moreland households) rarely use their total garbage bin capacity.

Figure 4: Comparison of garbage bin capacity and number of people per household



Household garbage also accounts for 20% of dumped rubbish reports and 26% of public litter bin contents. These findings suggest that a significant proportion of the population are not able to manage with the bin capacity they currently pay for. Sustainability Victoria has also looked at the correlation between bin size and contamination issues in recycling bins. They found that the contamination rate increased when there was a decrease in garbage size, with contamination increasing from 3.6% with a 240 litre bin to 5.6% with a 120 litre bin, to 6.6% with an 80L bin.²² Although Moreland has much higher contamination rates than metropolitan averages one could assume that a similar correlation would be found in Moreland. To manage this issue Council could seek to match household's needs by promoting the option of larger or additional bins for households with four or more people and smaller bins for one and two-person households.

The introduction of a food waste collection service has the potential to free up capacity in garbage bins. Further capacity could be afforded through diverting recyclables which currently account for 20% of the garbage stream. Achieving full diversion for all recoverable materials would enable further downsizing of bins across the municipality.

²² Sustainability Victoria, *Victorian Local Government Annual Waste Services Report 2015-2016*, Melbourne, 2017

4.6.3 Waste to Energy

Council will actively evaluate the potential benefits of regional contracting for garbage services and for the transition to Advanced Waste and Resource Recovery Technologies when the costing is competitive and landfill contracts conclude. In line with the objectives of the waste hierarchy and principles of a circular economy Council will support the regional development of non-thermal technologies such as anaerobic digestion and in-vessel composting where the outputs produced can be captured and used. Council will not support the development of thermal 'waste to energy' technologies such as incineration, gasification, combustion, pyrolysis and plasma arc for the disposal and treatment of waste. Thermal technologies can produce a host of negative environmental impacts including release of toxins into the atmosphere. Such an approach does not align with the goal of creating a regenerative and sustainable system for resource use. Council will instead support the development of technologies that do not create further environmental harm or undermine efforts to recover and recycle materials.

4.7 Multi unit developments

An increasing proportion of Moreland residential properties are medium to high density developments. Medium density housing (multi-unit developments of 1 – 3 stories) has increased from 30% to 35% and high density housing (taller than 3 stories) has increased from 5% to 9% since 2011. Together these developments range from dual occupancy sites through to large apartment buildings with many residents. With small street frontages relative to their size, some developments are impractical to service safely because of the number of bins presented at the kerbside. To address this Council now issues all new developments of more than three dwellings that have common land, with shared bins.

Moreland Council is committed to ensuring a waste and recycling service is provided to these sites. The use of 660L and 1100L garbage and recycling skips to manage the collection from higher density sites may be considered. Collections of larger skips are likely to be serviced by a rear-loading vehicle.

Medium density multi-unit developments have additional challenges to meet, with contamination levels (i.e. non-recyclable items in recycling bins) often higher than acceptable. In order to achieve good recycling results at these sites, a specific education strategy will need to be developed and implemented. This may include provision of a container or reusable bag to get recyclables down to ground level collection points not in single use plastic bags.

Often provision for storing and collecting waste and recycling at high density sites is not considered by developers at the planning stage. This can make it very difficult to retrofit waste collection services to these sites once they are occupied. The provision for all waste services, including hard waste, will be a priority at the planning approval stages of larger developments. This may include ensuring an access point at ground level

Optimal design for waste management would include space to manage food waste on site. Many residents find once they move into a medium to high density dwelling that there is no space available to put a compost bin. Sufficient space must also be allocated for future change in waste management needs, particularly in relation to the introduction of kerbside food waste collections via the green waste bin. The provision of donation bins at larger sites to reduce rubbish dumping has proved successful in other areas and has been identified for possible introduction here in Moreland.

The Metropolitan Waste and Resource Recovery Group has developed a toolkit and templates for servicing multi-unit developments.²³ These will be the basis of a heightened focus on this challenging, but increasingly important area.

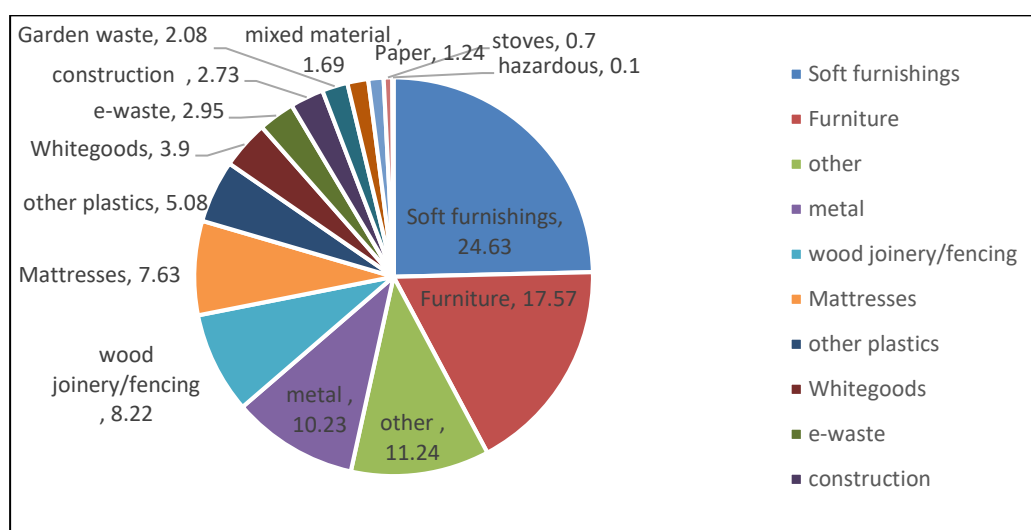
4.8 Hard waste collections

Council currently operates a universal (municipal wide) kerbside hard waste collection. Council will continue to encourage the community to maximise the reuse of goods and will pursue the maximum diversion for recycling by the contractor. The goal will be to achieve a greater diversion of recyclable metals, plastics, and mattresses. The limits on the range of materials presented and the volumes allowed will be more rigorously applied.

4.8.1 What is in hard waste?

An audit of materials presented for hard waste collection in 2017 found materials such as household furnishings, furniture, plastics, textiles and timber were dominant. Nearly half of all hard waste (44%) contained reusable items that could have been donated to charity shops, including sofas, furniture, toys and sporting goods. If these materials were diverted from landfill a diversion rate of 28.7% could be achieved, a substantial increase on the current rate of 15.2%. Non-compliance continues to be an issue with 1050 knock back notices issued over the March/April 2018 hard waste collection. The items most commonly knocked back were cement sheet, tyres, paint and green waste.

Figure 5: Profile of hard waste collection



The universal collection of hard waste generates large volumes of waste at a major cost. These collections are being phased out across Melbourne. Only eleven of 31 metropolitan councils now provide a universal kerbside hard waste service due to the climbing costs, yields and encouraging rubbish dumping on the nature strip year-round. Only three offer more than one collection per year.

A charged 'at call' or booked hard waste service could work well alongside a universal re-use and recycling collection undertaken in partnership with a charity and recyclers. By tying the at call service to the time when it is needed, it should contribute to less dumped rubbish linked to moving house.

²³ Metropolitan Waste and Resource Recovery Group, *Improving resource recovery in multi-unit developments (MUDs) toolkit*, Melbourne, 2017

A system to collect clothing and e-waste for recycling is used by Moonee Valley Council utilising kerbside bins. A more comprehensive annual kerbside collection by partnering with a charity is being planned by Brimbank Council. Under such a partnership, the cost of collection and disposal will be lower than for hard waste, and the diversion yield higher and households will still have a range of opportunities to dispose of their goods. It will likely reduce the practice of dumping waste on the kerb.

Such a collection can be designed to reduce the incidence of residents dumping rubbish in the street scape or in remote locations. If adopted this will be strongly promoted to the community, with a focus on residents living in apartments and those planning to move.

Council will investigate the opportunity to introduce a charity-partnered reuse and recycling collection service and promotion of local waste contractors as an alternative to the collection of hard waste. Information on where to find local waste collection and recycling services will be provided to residents so they have the full suite of options.

4.9 Commercial sites

Waste and recycling services from commercial premises are usually contracted privately by each business. Moreland Council has sought to assist some smaller businesses by providing a collection service with a per pick-up charge through its Commercial Plus service. This service has not been used extensively as some private operators offer a cheaper service.

Council is committed to assist smaller sites that may find it difficult to access a cost-efficient recycling collection. Council will continue to review its recycling and waste collection charges and will work with small businesses, particularly retail traders, to divert recyclables. Alongside Council services, Council will also encourage commercial site take up of specific recycling services for materials such as soft plastics, coffee grounds and food.

Food rescue agencies will also be promoted to match Councils social and environmental objectives by ensuring food suitable for human consumption doesn't go to waste.

Cooperation between traders will be facilitated in smaller shopping precincts. The larger commercial centres of Coburg, Glenroy and Brunswick will see specific strategies developed in consultation with traders' associations. These will cover recycling, street bins, skip and bin condition and placement and littering. Litter and dumped rubbish are identified as priority issues for attention with trader organisations.

5. IMPROVING ENVIRONMENTAL OUTCOMES

5.1 Other recycling opportunities

Unlike other municipalities, Moreland Council does not operate a transfer station or recycling centre where residents can take a range of products for recycling. Adjoining councils, Darebin and Moonee Valley, do have sites that can be utilised by Moreland residents. These allow the recycling of a range of materials and products including steel, garden organics, paper and cardboard, mattresses, motor oil, batteries, electronic waste, paint and gas cylinders. The opportunity to recycle these items at nearby sites along with the Sustainability Victoria Detox your Home program, will continue to be promoted to the community to encourage stronger usage.

Within Moreland, residents can bring a limited range of items to Customer Service Centres for recycling, including CDs and DVDs, mobile phones, batteries, CFL globes and eye glasses. Council will investigate opportunities to increase the range of items collected through these existing 'recycling stations' as well as considering additional sites for collection points.

There are a range of retailer takeback recycling opportunities for cartridges, batteries, clothing etc. Council will continue to promote these to the Moreland community. The use of reverse vending machines will also be investigated. Council will also work closely with traders' groups in each activity centre to maximise recycling options and reduce waste and litter.

In the medium-term, Council will investigate and trial partnering with local charities and recyclers to provide an annual collection of reusable and recyclable goods at each house. This will help to maximise unwanted goods being donated to others and the recycling of those products that can't. Council will seek to partner with social or private enterprises to pursue and support reuse and repair opportunities.

5.2 Advocating for waste reduction

Moreland Council sees its role as much broader than as a service provider. Council will advocate for its community with all levels of government and government agencies.

One aspect that Council will advocate for is the release of funding from the Sustainability Fund. There are currently hundreds of millions of dollars in reserves that have come from the landfill levy, and these should be substantially returned to councils and others for well-planned waste and litter reduction programs addressing food waste, electronic waste recovery, and expanded recycling opportunities.

Residents' efforts to reduce waste and recycle is often hampered by the design and performance of consumer products and packaging. This can be through excessive packaging, non-recyclable packaging or products with a short life before failure. Council will add its voice to those advocating for better product design and manufacture to enable more sustainable purchasing. A key aspect of this is brand owners contributing to end-of-life product stewardship through extended producer responsibility programs and funding.

The design of multi-unit developments also often hampers sound recycling diversion and collection. This needs to be addressed in statewide planning guidelines. We will work with the MWRRG to align our upgrading of systems with initiatives identified by multi-council assessment of effective MUD recycling and waste reduction.

5.3 Community Education

A successful waste diversion outcome, with strong waste reduction and low contamination of recycling, can only be achieved if it is matched by a well-planned, well-resourced education program. Council will work with community partners to advocate to residents about the importance of waste avoidance, highlighting the steps that can be taken to achieve this.

Council currently provides information for residents on waste and recycling services, through the kerbside waste services booklet, the annual waste calendar, the website, recycling bin lid sticker and bin inspection program materials, as well as via social media, the local Moreland and Northern Leader newspapers and the Council produced Inside Moreland magazine. These resources promote our kerbside services as well as services and programs available through other providers, e.g. Detox your Home, Battery Back, Drop Zones etc.

The basic information on what to put in each bin, and what can be recycled at other locations, is best displayed on or in the kerbside bins. Clear, up to date stickers on bins also reduces contamination. Keeping people up to date with the rules of recycling is important. With many languages spoken in Moreland, pictorial information is essential for communicating to all. Council will use its multiple communication channels to provide current information and regular updates on services, programs and campaigns. The public will continue to receive more of their news and information through social media channels and this will be a key outlet for Council's messaging. This is an area where other councils have expanded their efforts with good results.

In addition to printed and online information Council will implement a range of best practice behavior change programs targeting waste avoidance, recycling and rubbish dumping. These programs will focus on offering solutions and reducing barriers to change.

Council has found that community organisations often provide a very effective way of communicating to either the whole community or local resident groups, as do individual ethnic communities. These groups will feature strongly in Council's waste reduction education. Council will also give due attention to focusing its education resources and message to traders and other businesses who handle large amounts of waste.

One aspect that is often overlooked is the need to give the community feedback on its achievements. This can be done in innovative ways: rewards, scoreboards and challenges. The achievements may be different in focus, from recycling carbon savings to contaminant rates or reduced litter levels. Council will provide this motivating feedback.

Council is aware that developing good habits early on is important and children can influence the waste outcomes in many homes. For this reason, schools, early learning centres and kindergartens will be key partners in our educational effort. Council will continue to provide waste and litter incursions and excursions to primary, secondary and pre-school aged children as well as supporting participation in the Resource Smart Schools program for schools and pre-schools.

A well-staffed program effort aimed at eliminating contamination from the recycling stream will be a key priority for Council. Initiatives such as Zero Waste for a Week are important in introducing concepts such as waste avoidance to householders across Moreland.

As recycling opportunities are expanded, the success of these will rely on good 'what to recycle where' information. Through initiatives such as Zero Waste for a Week and other programs, Council will spearhead a major focus on waste avoidance and reuse covering product durability, careful purchasing, storage of perishables etc.

Education and enforcement need to go hand in hand. Council will prioritise specific messaging around littering and dumping of rubbish emphasising the alternatives and the high cost of infringement penalties.

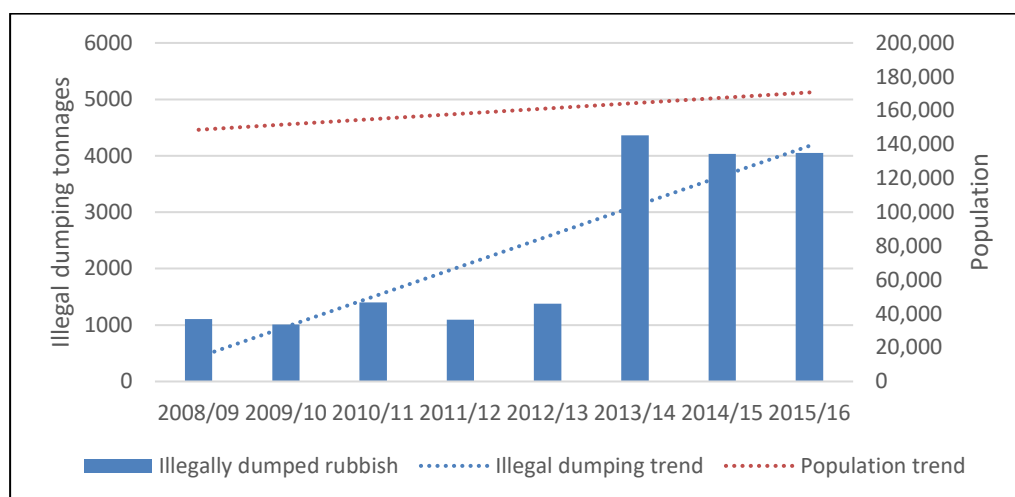
6. ELIMINATING LITTER AND DUMPED RUBBISH

6.1 Dumped Rubbish

Across the municipality, there are a range of sites that attract the illegal dumping of rubbish. Most of this dumping is from residents, but some of it comes from commercial operators who have been paid to collect the material, seeking to avoid disposal costs. This dumping impacts the local community and ratepayers are forced to deal with clean-ups that cost hundreds of thousands of dollars. The annual service cost for dumped rubbish collection and disposal in 2016/17 was \$977,045.

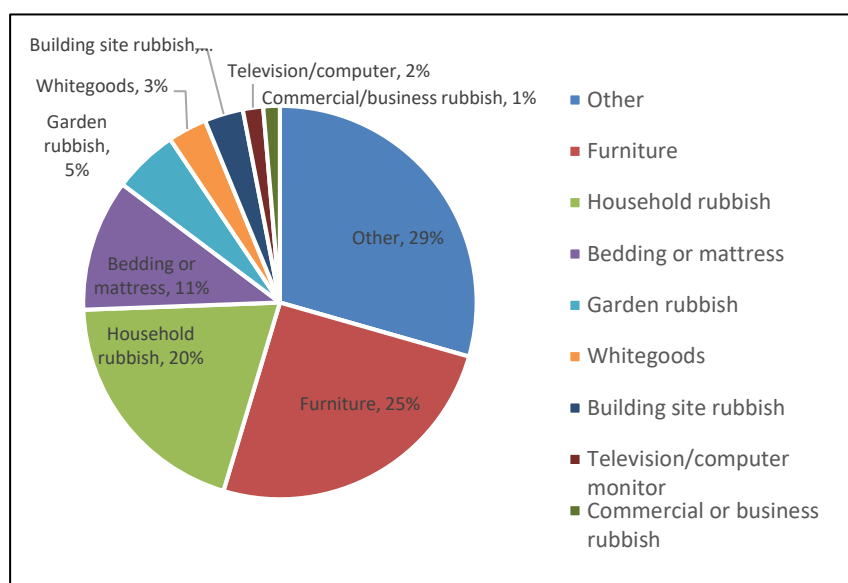
Figure 6 below shows the amount of illegally dumped rubbish has more than tripled in Moreland since 2008-09, increasing by 266%, while population growth only increased by 18%. In comparison, total waste generation within Moreland's three streams only increased by 9% over the eight years. Metropolitan figures are not available for comparisons, however anecdotally Councils across Melbourne have grappled with the issue, with local governments state-wide collecting 19,651 tonnes in 2014-15.

Figure 6: Tonnage of illegally dumped rubbish in Moreland 2008 - 2015



The range of products is broad, but mattresses, household rubbish, appliances and furniture are dominant. Often these are left by departing residents.

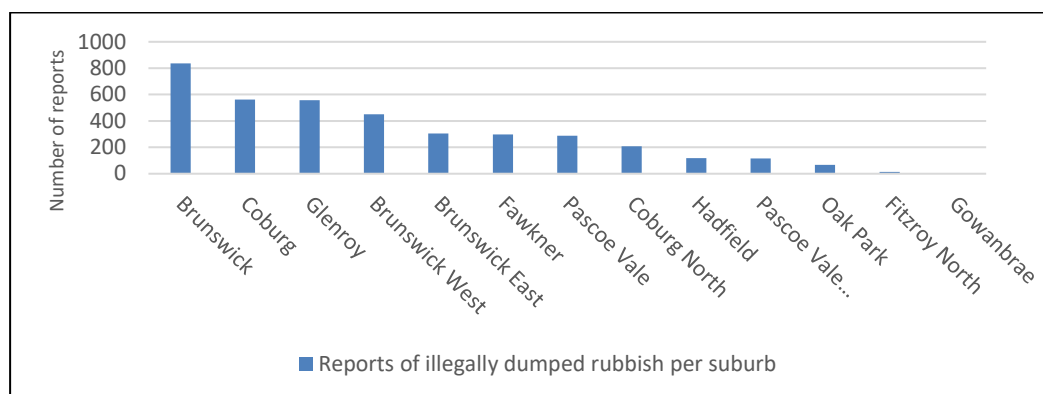
Figure 7: Composition of dumped rubbish 2016/17



*Other: includes a combination of items, such as furniture, household rubbish and mattresses

Figure 8 below shows that based on resident complaints to Council for the collection and disposal of dumped rubbish in the period 2015/16. Brunswick and Coburg continue to have the highest incidence of rubbish dumping when compared to 2013/14 figures. This is partly influenced by the transient population with a higher proportion of residents renting, difference in car ownership and storage limitations for residents in multi-unit dwellings.

Figure 8: Illegally dumped rubbish hot spots 2015/16



The strategy is to reduce resident dumping of rubbish through a combination of education, enforcement and infrastructure. In the shorter term, Moreland Council will provide residents with information on hard waste services and private collection operators. The modest cost of private collections will be contrasted against the high cost of littering fines, which can be many hundreds of dollars.

Council will also advocate to State Government agencies for greater regulation of waste operators and correct disposal documentation. We will also seek the ability to impose higher penalties and encourage greater cooperation between council and agencies such as Melbourne Water, VicRoads and Vic Track for improved site fencing, security cameras and signage.

Council will continue its current enforcement activity and consider employing a Litter Prevention Officer dedicated to the investigation and prosecution of litter and dumped rubbish offences. Additionally, the use of surveillance cameras at litter hot

spots will be investigated. The community will be encouraged to assist with reporting of litter and dumping activity. Partnering with real estate agents to link rubbish dumping by departing tenants with bond retention will continue to be investigated.

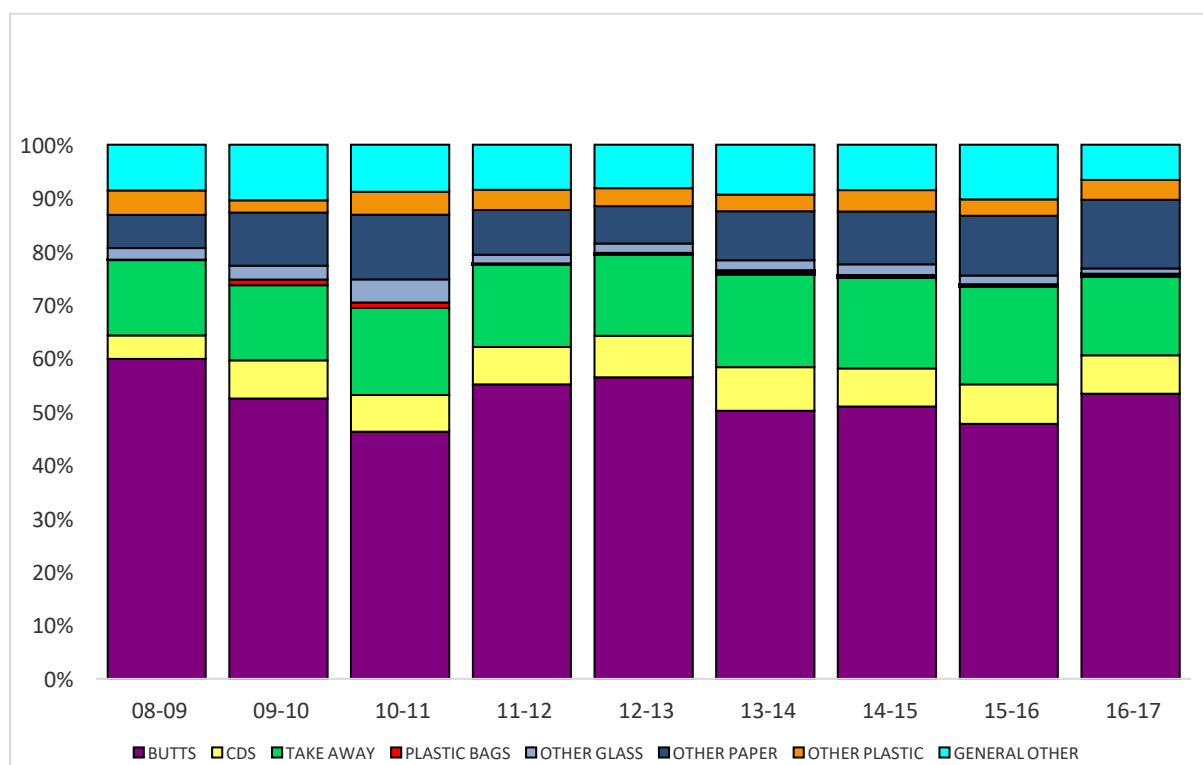
6.2 Litter

Litter management will see a focus on education to lower the incidence of careless or deliberate littering. Council will increase our efforts to ensure litter is not emanating from waste bins or waste collections. To reduce litter from overfilled bins, Council will seek to match garbage capacity with household size as well as crack down on overfilled bins, refusing collection. Council staff and contractors will also be trained to minimise litter generation during bin collection.

Another prime source of litter is poor waste management storage and handling by traders in activity centres, Council will conduct a program with traders and trader associations, to prevent litter from this source. Reducing litter in sporting reserves will also be prioritized in arrangements with sporting clubs.

Figure 9 below shows that cigarette butts have consistently been the most littered item in Victoria since 2008.²⁴ Council will identify hot spots for cigarette butt litter and trial the installation voting bins to measure whether this has an impact on littering behavior for this item. Council will also actively support community litter clean-up efforts.

Figure 9: Composition of litter in Victoria 2008 - 2017

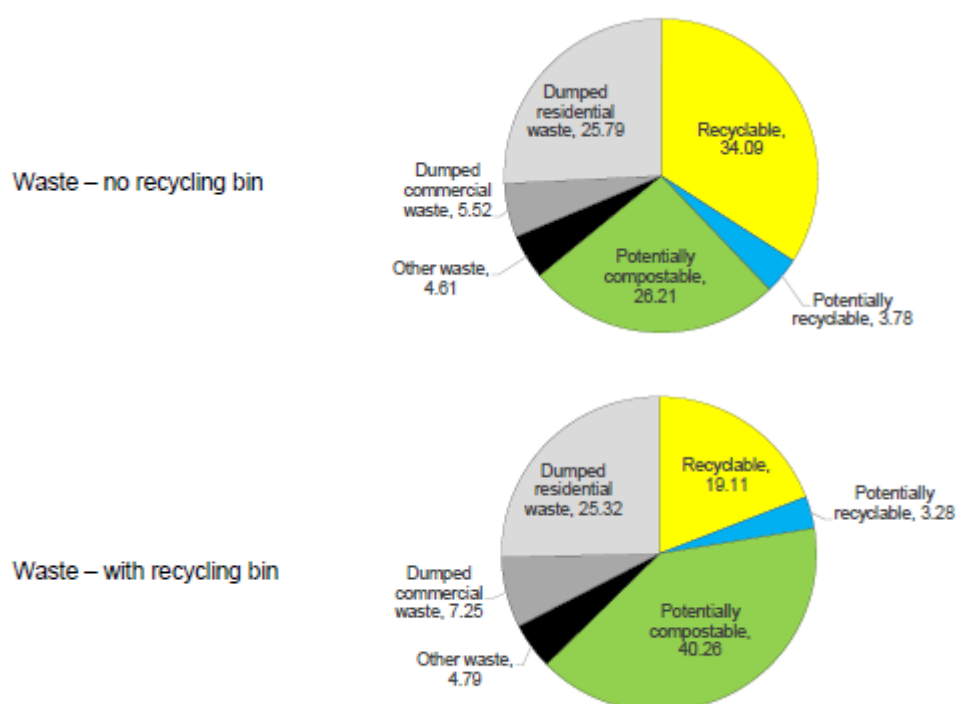


²⁴ Keep Australia Beautiful, *National Litter Index*, Melbourne, 2016

6.3 Public litter bins

An audit of public litter bins in 2016 shows that the profile of a litter bin is influenced by whether it is co-located with a recycling bin. Figure 10 below shows that only 19% of recyclable material is wasted where a recycling option exists compared to 34% when there is no recycling option. However, public place recycling bins have a very high contamination rate of 21%, most of which is potentially compostable material. Litter bins are also a target for dumping, with household waste making up a quarter of the contents of the average litter bin and commercial waste accounting for on average 6% of the contents.

Figure 10: Comparison of litter bin composition when placed with a recycling bin 2016



In combination with education efforts, there will be reviews of our litter infrastructure from public place bins to side entry pits in gutters and the network of gross pollutant traps. This infrastructure will be upgraded as required with a focus on litter hotspots and preventing flows into local waterways.

Council will also continue to advocate to State Government for a container deposit scheme and other measures for brand owners and retailers to reduce highly littered items such as takeaway food and drink packaging.

The combination of advocacy, infrastructure, enforcement and education actions should see an ever-cleaner Moreland and a reduction in clean-up costs.

7. PUBLIC PLACES AND COUNCIL SITES

7.1 Public places

Council recognises that embracing sustainable practices start with its own operations. Council is committed in the shorter term to providing comprehensive recycling opportunities at all council buildings. To prevent litter, council will continue to provide convenient waste disposal in council reserves and public spaces. Dedicated dog waste bins will be considered in reserves where appropriate.

The provision of both waste and recycling options across the public spaces of Moreland is very costly to introduce and to service. Council will investigate whether a sorting facility is available that can take mixed public litter bin waste and sort and divert the recyclable component. This is already in place in other municipalities, such as Yarra and Yarra Ranges, and large venues such as Docklands Stadium. If such a facility can be utilised this service could also be used for council events. If this option is not available, where appropriate Council will continue to install public place recycling bins to divert take away packaging from landfill.

7.2 Plastic wise policy

The global concern about plastic litter in waterways and subsequent environmental damage, has resulted in Council adopting a Plastic Wise policy. This will see the elimination of single use plastics from Council festivals and other sponsored events. Restrictions on the release of balloons will also be addressed.

7.3 Council sites

To reduce waste and material consumption, Council managed venues, where food and drink are served at functions, will be equipped with durable crockery and washing facilities. This reusable crockery provision will also be extended for use at Council functions at smaller council venues and outdoor locations.

For regular community groups using Council venues, provision will be made for organisations to store their reusable crockery. For hall hiring functions at Town Halls, Council will require groups to provide reusable crockery. For smaller venues, groups will be encouraged to provide crockery or pay a waste charge.

Council will undertake regular audits of the waste outcomes at civic sites to ensure waste generation is kept to a minimum. Waste avoidance will be a high priority and sustainability objectives will be incorporated into procurement guidelines from stationery to vehicle fleet.

8. WASTE AND LITTER STRATEGY ACTION PLAN

8.1 Municipal food waste

Strategic direction

Increase the range of services and programs available to residents to reduce the amount of food waste currently going to landfill.

Objectives

- Introduce a kerbside food and garden waste collection service
- Increase the number of households composting their food waste
- Reduce the percentage of food waste in the waste to landfill stream.

	Program/Activity	Timing	Responsibility	Budget required	Measure
8.1.1	<i>Kerbside food waste collection</i>				
a	Undertake a trial prior to establishing a kerbside food waste collection service for residential properties through the green waste service. Determine service model (opt-in or universal) and costs for roll out across the municipality. <ul style="list-style-type: none"> • Trial and evaluate • Initiate roll out • Ongoing monitoring to refine service 	2018/19 2019/20 to 2021/22 2020/21 to 2021/22	Waste Services (lead) with ESD and Communications support	Trial - \$100,000 (within existing budget) Roll out – est \$6,000,000 (full universal, cost recovery via waste charge)	Reduction in volume of food waste to landfill
b	Employ Food and Organics Program Lead Officer to: <ul style="list-style-type: none"> • Evaluate food waste trial and undertake cost / benefit to inform service model for municipal-wide service roll out (including potential phasing); • Coordinate service roll-out including intensive community engagement and education; • Support or establish a food waste avoidance program and deliver other food waste related projects; • Investigate opportunities to facilitate and/or pilot complementary organic waste recycling services or infrastructure/facilities (eg in-vessel composting) with a particular focus on food businesses, 	2018/19 to 2020/21 2020/21 2020/21 to 2021/22 2020/21 to 2021/22	ESD (lead) with Waste Services support	Up to \$120,000 salary (inc oncosts) plus \$70,000 - \$100,000 p.a. for program development, pilots and delivery (OPEX budget bid) Approx. \$100,000 (OPEX budget bid 21/22 for infrastructure pilot)	Additional position created/filled and uptake of kerbside food waste service. Feasible options available to medium-size food waste generators.

	<p>residents and organisations that are not able to access municipal waste services (e.g. businesses and multi-unit developments).*</p> <ul style="list-style-type: none"> • Provide education and support to residents at MUDs to improve waste management and increase resource recovery. 	2021/22			
8.1.2	<i>Reduce food waste and increase composting</i>				
a	<p>Promote and support residential composting and food waste avoidance programs.</p> <ul style="list-style-type: none"> • Continue to provide a service to subsidise home composting equipment and education. • Continue to support existing Community Composting Hubs for people unable to compost at home. • Establish new hubs at community gardens as opportunities arise. • Increase promotion of Share Waste. 	<p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>	ESD	<p>Within existing budget</p> <p>Within existing budget</p> <p>Within existing budget</p> <p>Within existing budget</p>	Reduction in volume of household food waste generated

* These actions have previously been endorsed by Council

8.2 Avoiding waste and increasing resource recovery

Strategic direction

Council is committed to the waste hierarchy of *Avoid, Reduce, Reuse, Recycle* and will work with residents and businesses to help drive down waste levels through greater emphasis on waste avoidance. In addition, Council will expand recycling and reuse opportunities for products and packaging across household and commercial sites in Moreland.

Objectives

- Aim for zero waste to landfill by 2030.
- In the shorter term to achieve 60% waste diversion (recycling and organic waste) by 2022.
- To be a leading council in sustainable waste management and the best in the North of Melbourne by 2022.

	Program/Activity	Timing	Responsibility	Budget required	Measure
8.2.1	<i>Behaviour change</i>				
a	Establish capacity to develop and deliver behaviour change programs using best practice methodology to target key waste/resource recovery issues. <ul style="list-style-type: none"> • Employ a behaviour change officer to support program and campaign delivery • Carry out research to inform the development of Moreland Zero Waste behaviour change program and sub-campaigns. • Design, deliver and refine targeted campaigns (to specific audiences) across the municipality. • Reduce recycling bin contamination through the review and enhancement of the Bin Inspection Program. • Work with the Communications team to utilise Council's communication channels for mass media and social marketing campaigns. * • Run/mobilise a volunteer community waste champion initiative – may involve waste champions at festivals and events. * 	2019/20 2019/20 2020/21 to 2021/22 Ongoing 2020/21 – 2020/21 – 2019/20	ESD (lead) with Communications, Research and Events support	\$120,000 p.a. (new staff member) \$60,000 in 2019/20 and \$150,000 p.a. thereafter (subject to OPEX budget bid)	Reduced contamination rates in recycling bins, reduced resource loss to landfill
8.2.2	<i>Diversion from landfill</i>				
a	Target disposable nappies <ul style="list-style-type: none"> • Investigate costs and resourcing associated with introducing a cloth nappy rebate and/or cloth nappy library service and roll out if feasible. 	2019/20 Ongoing	ESD	TBC pending investigation Within existing budget	Reduce volume of nappy waste to landfill

	<ul style="list-style-type: none"> Liaise with Maternal and Child Health team to include collateral in New Parents info packs. 				
b	Promote and support reuse programs/services and repair opportunities: <ul style="list-style-type: none"> Facilitate the establishment, operation and/or expansion of repair cafes within the municipality.* Promote Kids off the Kerb for white goods refurbishment /recycling throughout the year and particularly during hard waste collection. 	2019/20 - ongoing	Eco Dev (lead) with ESD and Waste Services support	\$20,000 TBC (OPEX budget bid in 20/21)	
8.2.3	Education through schools and early years				
a	Expand support for schools, early learning centres (ELC) and kindergartens to increase student and school community participation in waste-related sustainability learning and behaviour. <ul style="list-style-type: none"> Support an expanded range of sustainability incursion and excursion options. Increase support for participation in ResourceSmart Schools program 	2019/20 - 2019/20 -	ESD (lead) with CERES and other service providers	\$30,000 p.a. (OPEX budget bid)	
8.2.4	Infrastructure/services enhancement				
a	Support commercial site take up of specific non-council recycling services for materials such as soft plastics and coffee grounds.	Ongoing	ESD (lead) with Waste Services & Eco Dev support	Within existing budgets	
b	Trial recycling infrastructure: <ul style="list-style-type: none"> Conduct and complete public recycling trial of 30 public place recycling (PPR) bins along Sydney Rd, Brunswick, including an education program.* Conduct a trial with 5 soft plastic recycling bins at key locations/centres with proactive communications at each location/centre.* 	2018/19 2018/19	Waste Services (lead) with ESD support	Within existing budgets	
c	Increase resource recovery: <ul style="list-style-type: none"> Subject to outcomes of trial determine roll out of further PPR bins. Investigate ways to increase diversion of reusable and recyclable goods from hard waste to local charity and/or recycler. Investigate options to increase range of items recycled through Recycling Stations in Council facilities. Promote statewide recycling programs in adjoining municipalities to encourage stronger usage, such as Battery Back and Detox your Home. 	2019/20 2019/20 - Ongoing Ongoing	Waste Services ESD ESD ESD	TBC Within existing budgets TBC Within existing budgets	

8.2.5	Collaboration and advocacy				
a	Seek collaboration to deliver on zero waste target from local government and state government agencies. • Partner with neighbouring councils on zero waste strategy/programs. *	Ongoing	ESD	Within existing budgets	
		Ongoing	ESD	Within existing budgets	
b	Advocate to State Government and/or agencies for: • Landfill Levy to fund local government and regional waste initiatives; • Policy, legislative and program support for the transition towards a circular economy; • Greater regulation of waste operators and their correct disposal documentation; • A Victorian Container Deposit Scheme; • Numerical state-wide targets to increase recovery rate; • Support for the Planet Ark National Recycling Label.	Ongoing	Waste Services (lead) ESD	Within existing budgets TBC for individual campaigns	

* These actions have previously been endorsed by Council

8.3 Council service delivery

Strategic direction

As the central form of household waste diversion, the kerbside collection service will need to address key household wastes, particularly food organics. It will need to be evolved to match product and packaging profiles, the quality requirements of recycling end markets, and changing household types.

Objectives

- To enable households to reduce the amount of material presented as waste to below 7kg/hh/wk (currently 8.3kg/hh/wk) by 2022.
- To increase diversion of material into a broad range of recycling opportunities.
- Kerbside recycling diversion to increase to over 60% (currently 45%).

	Program/Activity	Timing	Responsibility	Budget required	Measure
8.3.1	Contracts				
a	Actively evaluate the benefits of regional contracting for garbage services and for the establishment of Advanced Waste and Resource Recovery Technologies	2021/22	Waste Services (lead) ESD and Procurement	Within existing budget	
b	Ensure all waste service contract tenders reflect Australian-excellence in environmental management, including performance targets for diversion, resource recovery, emissions, monitoring and reporting, and that tender evaluation weights sustainability criteria (at least) equal to cost in 'best value' assessment.	2021/22	Waste Services (lead) ESD and Procurement	Within existing budget	
c	Investigate utilising a contracted collection service for medium to high density housing, where Council is unable to deliver a kerbside collection service.	2021/22	Waste Services (lead) ESD and Procurement	Within existing budget TBC for implementation	Review through tender process
d	Seek to identify a sorting facility that can take mixed street waste to sort and divert the recyclable component.	2020/21	Street Cleansing	Est \$100,000 p.a. (OPEX budget bid in 2020/21)	
8.3.2	Procurement				
a	Review Council's procurement policy and practice to increase the purchase of materials with recycled content to support strong market destinations for the materials Council collect and recycle	2018/19 -	Procurement (lead) with ESD support	Within existing budget	

b	Amend Council technical notes to ensure officers have the ability to select products with high recycled content.	Ongoing	Capital Works planning and delivery Urban Design	Within existing budget	
8.3.3	Monitoring				
a	Continue to audit all kerbside waste services to measure composition, resource loss and potential for diversion	Ongoing	Waste Services	Within existing budget	
8.3.4	Kerbside services				
a	<p>Monitor and review the hard waste collection to optimise resource recovery and reduce non-compliance and illegal dumping.</p> <ul style="list-style-type: none"> During hard waste collections more rigorously apply the limits on the range of materials presented and volumes allowed. Review collection options for e-waste to ensure compliance with e-waste to landfill ban beginning 2019. Undertake analysis of the impact on dumped rubbish following the change to two Hard Waste collections per year. Following second annual hard waste collection in Oct/Nov 2018 report on dumped rubbish CRS numbers compared with previous year's data. * Review hard waste collection service with a view to providing an "At Call" service to more effectively link the service to when it is needed by residents e.g. when moving house. 	<p>2018/19 –</p> <p>2019/20</p> <p>2019/20</p> <p>2021/22</p>	<p>Waste Services Local Laws Waste Services</p> <p>Street Cleansing</p> <p>Waste Services (lead) with ESD support</p>	<p>Within existing budget</p> <p>Within existing budget</p> <p>Within existing budget</p> <p>Within existing budget</p>	Inclusion of At Call option in tender process
b	<p>Review garbage bin sizes with a view to better matching household need with bin size.</p> <ul style="list-style-type: none"> Investigate options to support households with reduced waste such as smaller garbage bins or less frequent collections. Introduce a strict program of non-collection of overfilled bins including training for drivers and education for residents to reduce litter generation during bin collection. 	<p>2019/20 –</p> <p>2019/20 -</p>	<p>Waste Services (lead) with ESD support</p> <p>Waste Services (lead) with ESD support</p>	<p>Within existing budget</p> <p>Within existing budget</p>	
c	<p>Review the Commercial Plus service to consider options for:</p> <ul style="list-style-type: none"> Small businesses, particularly retail traders, to divert recyclables and potentially food waste. A fee for service option for those residents not captured by a waste charge e.g. multi-unit developments and apartments. 	2019/20 -	Waste Services (lead) with ESD and Eco Dev support	Within existing budget	

d	Investigate ways to actively reduce private waste collection referrals and provide ways to encourage body corporates to adopt Council waste, recycling and organics collection services.	Ongoing	Waste Services (lead) with ESD and Development Advisor support	Within existing budget	
8.3.5	Planning policy				
a	Ensure site waste management plans and enforcement is sought for all building developments over a set threshold (to be determined). *	2018/19 to 2019/20	ESD with Planning and Development Advisor support	Within existing budget	
b	Undertake research required for an ESD policy (version 2.0) including a review of international examples. This includes consideration of policy to improve source separation opportunities within multi-unit developments/apartments. *	2018/19 to 2021/22	ESD with Planning support	TBC OPEX budget bid pending Amendment process	
8.3.6	Council facilities and community events				
a	Refer to 8.2.1 employ a behaviour change officer to develop, deliver and embed sustainable policy and practice including: <ul style="list-style-type: none"> Eliminate single use plastics and balloons from Council festivals and other sponsored events. Continue to update festival and events procedures to ban all disposable plastic items. * Produce an educational resource for stall holders with information and advice on how to trade at waste wise events. Review and improve the provision of recycling and reuse opportunities at all Council buildings. Review terms and conditions for Council venues and leased facilities. Where feasible, provision of crockery and washing facilities at Council sites where food and drinks are served. Change Facilities 'take out' packs to reusable melamine cups rather than disposable, and ensure process for use, cleaning and return is updated. Ensure the bin lid colour combination of any waste contractors bins hired for events matches the Council colour scheme of red – waste; yellow – co-mingled recycling; green – food organics green organics. 	2019/20 to 2021/22	ESD (lead), Cultural Events Facilities Property Services Street Cleansing	\$15,000 p.a. allowance for alternatives to single use plastics (subject to OPEX budget bid) \$100,000 - \$250,000 TBC for purchase of crockery & cutlery plus p.a. allowance for replacement (subject to OPEX budget bid)	Additional staff member employed
b	Investigate amendment to the <i>General Local Law</i> to enable enforcement of the single use plastics ban.*	2018/19 to 2019/20	Amenity and Compliance with ESD support	Within existing budget	

* These actions have previously been endorsed by Council

8.4 Litter and dumped rubbish

Strategic direction

Moreland aims to keep streetscapes, commercial centres and public places free of litter and dumped rubbish. This will require a combination of infrastructure, education and enforcement measures.

Objectives

- Reduce the incidence of litter and dumped rubbish streetscapes and public places, improving amenity
- Reduce operational cost of litter and dumped rubbish clean up (currently approx. \$977,000 p.a.)
- To become a leading Council in waste reduction practices at Council sites, public spaces and Council sponsored festivals and events.

	Program/Activity	Timing	Responsibility	Budget required	Measure
8.4.1	<i>Community action</i>				
a	Continue to actively support residents and groups in self-organised litter collection activities. Continue to work with Merri Creek Management Committee (MCMC) on the Merri Creek Litter Collection Program.	2018/19 -	ESD with Open Space and Street Cleansing support	Within existing budget	
8.4.2	<i>Education</i>				
a	Trial the distribution of waste education material with selected real estate agents to raise awareness of how new/existing tenants can manage their hard waste and co-mingled recycling.*	2018/19	ESD (lead) with Street Cleansing support	Within existing budget	
8.4.3	<i>Infrastructure</i>				
a	Increase litter capture through enhanced infrastructure: <ul style="list-style-type: none"> • Finalise tender for roll out of solar compactor litter bins. • Undertake a review of litter infrastructure from public place bins to side entry pits in gutters. • Undertake a review of gross pollutant traps and develop an action plan to deal with gross pollutants and plastic pollution from stormwater within Moreland. 	2018/19 2019/20 2019/20	Street Cleansing Street Cleansing ESD with support from Street Cleansing	TBC \$30,000 (OPEX budget bid) \$30,000 (OPEX budget bid)	

	<ul style="list-style-type: none"> Identify hot spots for cigarette but litter and trial the installation of 'voting bins' or other innovative program at a selection of these locations. * Identify hot spots for beverage container litter and trial reverse vending machines in at least 2 appropriate locations. * 	2019/20 to 2020/21	Street Cleansing	\$50,000 (OPEX budget bid - \$25k in 19/20 + \$25k 20/21)	
		2019	Waste Services	Approx. \$150,000 (OPEX budget bid - \$50k 19/20 + \$50k 20/21 + \$50 20/21)	
8.4.4	Enforcement				
a	<p>Increase enforcement activity for litter and rubbish dumping offences.</p> <ul style="list-style-type: none"> Employ a permanent Litter Prevention Officer to increase enforcement and education activity targeting litter and dumped rubbish offences. * Invest in additional signage and surveillance cameras for litter hot spots. Advocate to other agencies such as Melbourne Water, VicRoads and VicTrack to improve site fencing, security cameras and signage. 	2019 (seeking that the role is cost neutral)	Amenity and Compliance (lead) with Street Cleansing support	Up to \$120,000 p.a. (subject to budget bid and cost offset through fines) \$50,000 tbc (OPEX budget bid)	<p>Additional staff member employed</p> <p>Enforcement fines / prosecutions</p>

** These actions have previously been endorsed by Council*

Additional items for further consideration:

- Motivate increased recycling through feedback to householders on environmental achievement.
- Consider extending recycling opportunities through the introduction of temporary 'pop up' recycling points in key community centres such as Glenroy, Fawkner, Coburg and Brunswick.
- Develop partnerships and utilise existing domestic and international standards to influence private waste management firms.
- To prevent litter, ensure waste disposal facilities in Council reserves and public spaces are located where they are convenient for the users and close to where litter/waste is generated.