

# **Draft Whitehorse Waste Management Strategy 2018-2028**

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	Definition
<b>APCO</b>	Australian Packaging Covert Organisation
<b>AWRRT</b>	Advanced Waste and Resource Recovery Technologies
<b>CALD</b>	Culturally and Linguistically Diverse
<b>C &amp; D</b>	Construction and Demolition
<b>C &amp; I</b>	Commercial and Industrial
<b>CPI</b>	Consumer Price Index
<b>EPA</b>	Environment Protection Authority
<b>EP Act</b>	Environment Protection Act
<b>ESC</b>	Essential Services Commission
<b>FOGO</b>	Food Organics Green Organics
<b>Metro Plan</b>	Metropolitan Implementation Plan
<b>MUD</b>	Multi-Unit Developments
<b>MRF</b>	Materials Recovery Facility
<b>MWRRG</b>	Metropolitan Waste Resource Recovery Group
<b>WRWC</b>	Whitehorse Recycling and Waste Centre
<b>SV</b>	Sustainability Victoria
<b>SWRRIP</b>	State-wide Waste and Resource Recovery Infrastructure Plan
<b>WMS</b>	Waste Management Strategy

# 1 Executive summary

The Whitehorse Waste Management Strategy 2018-2028 identifies contemporary challenges and opportunities around waste and litter within Whitehorse which include:

- Increased urbanisation and multi-unit developments
- Changing community
- Minimising and disposing of garbage in the future
- The rise of technology
- Changing economic conditions
- Climate change and organic waste
- Continuous improvements to services

In order to address these, this Strategy has been developed with a future focus looking at policy, industry and data trends in order to take action for sustainable, effective while affordable services to our community in the future. Proposed actions which have been compiled considering expert advice, Council staff and community feedback include:

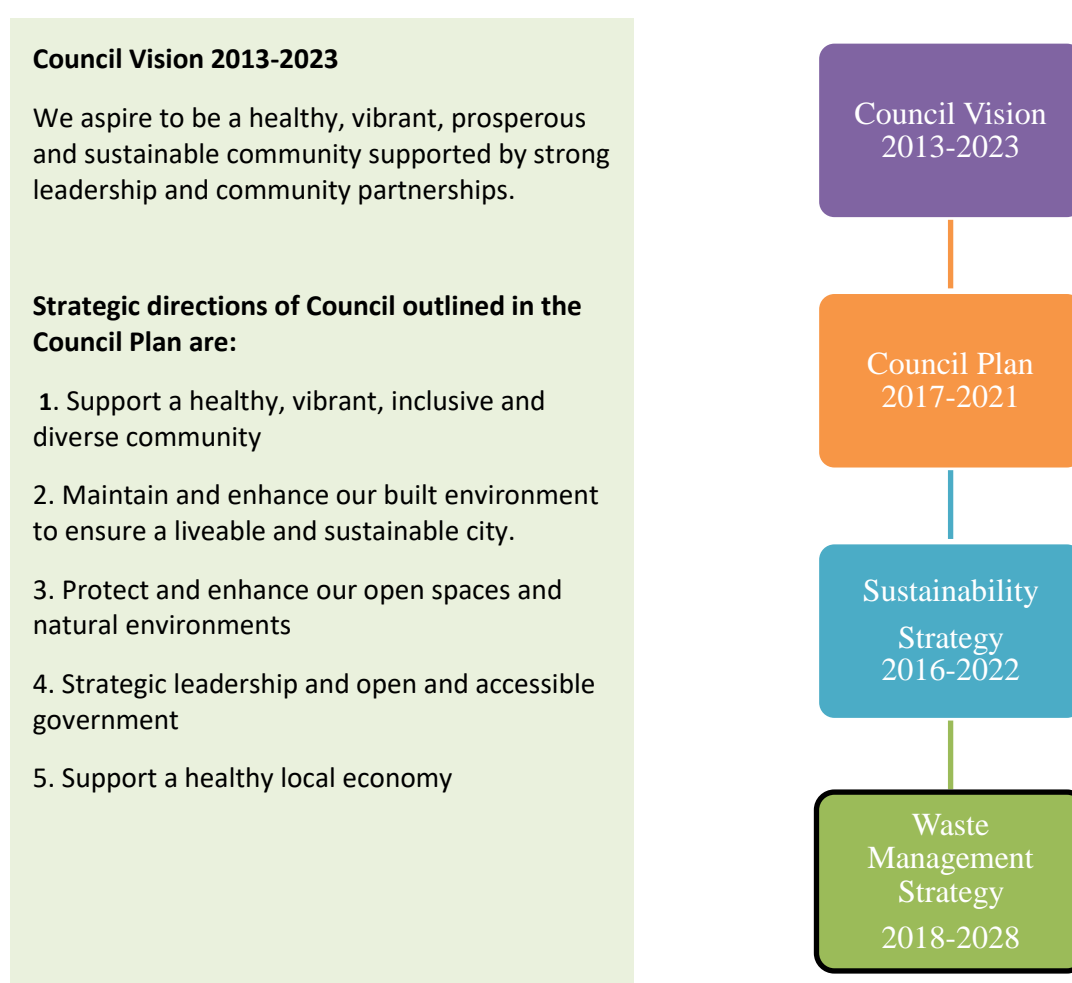
- Kerbside collection of green organics to include food scraps. This will reduce the quantity of waste going to landfill and emission generated. This will involve a move to garden organics bins no longer being optional and may require changing the frequency of garbage collection. Waste bins will likely need to be collected fortnightly, so a new food and garden waste collection can occur weekly
- Investigating options for collecting better data and waste from developed areas including multi unit developments to see better waste practices and improve recycling
- Improving our communication methods to culturally and linguistically diverse communities and those generating the most garbage. Encouraging more waste diversion from landfill and better use of recycling and waste services
- Planning for our future waste needs and looking at alternatives for waste disposal with the closure of landfill sites in the south east of Melbourne
- The need to review and consult the community sooner rather than later with sustainable future management of the rising costs of waste
- Seeking best practice collections and enforcement of hard and dumped rubbish
- Leading the way for the community and increasing environmentally sustainable waste management practices and purchasing in Council operations
- Best practice new kerbside waste and recycling contracts, including opportunities for multi-Council contracts to improve economics
- Strategically aligning contracts for best value and where needed locking in certainty. Especially where recent commodity fluctuations of recycling have impacted cost
- Increasing Council's use of recycled materials as part of our role in developing a circular recycling economy.

## 2 Introduction

The Whitehorse Waste Management Strategy 2018 – 2028 replaces and expands on the seven year Waste Management Plan 2011. It is guided by Council’s Vision and Plan and the Whitehorse City Council Sustainability Strategy 2016 - 2022.

This strategy identifies issues and challenges around waste and determines to expand on the platform developed by the previous Waste Management Plan. It has identified further actions for minimising waste to landfill, maximising resource recovery as well as tackling contemporary challenges related to waste services, education, litter and advocacy.

Figure 1 Council Vision



The Whitehorse Sustainability Strategy 2016-2022 details Council’s six-year plan towards achieving priority sustainability outcomes. It sets a number of targets, including diversion of 65 percent of kerbside waste from landfill by 2022. To work towards this, it outlines a number of actions over three time periods.

Table 1 Actions relating to waste from Sustainability Strategy 2016-2022

Continued actions from existing strategy	<ul style="list-style-type: none"> <li>• continue to promote sustainable gardening and composting/worm farms through the Council website, Whitehorse Leader, Whitehorse News, workshops, events and other relevant media platforms</li> <li>• continue to implement Council projects in accordance with Council's engineering design and construction environmental guidelines which specifies use of recycling materials</li> <li>• continue to offer a range of incentives to the community to encourage greater waste reduction to landfill and increase resource recovery</li> <li>• progressively implement Council's Business Plan for the Whitehorse Recycling and Waste Centre to increase the recovery of waste (particularly construction and demolition waste and other priority streams)</li> <li>• review Council's environmental data management system to ensure accurate data capture</li> <li>• provide occupants of Council leased buildings with information on waste management</li> <li>• continue to liaise with organisations such as MWRRG and advocate to Federal and State Government</li> <li>• continue to support local schools' visits to recycling facilities and recycling/waste reduction projects</li> </ul>
New actions	<ul style="list-style-type: none"> <li>• implement targeted litter campaigns identified in waste management plans</li> <li>• expand Council's existing food waste avoidance/reduction program in line with best practice</li> <li>• expand Council's recycling education materials and community engagement programs (particularly those with access to funding)</li> </ul>
Actions to be considered as part of mid-term review (2019-2022)	<ul style="list-style-type: none"> <li>• consider offering businesses incentives to improve waste diversion practices</li> <li>• develop and implement a recycling strategy for public spaces in Whitehorse (e.g. consideration of additional public place recycling bins and other measures to increase recycling within public spaces)</li> <li>• consider possible composting or recycling options for the excess leaves collected during autumn heavy leaf period.</li> </ul>

While thought possible at the time, 65 percent diversion of waste from landfill was a target set out in past State Waste policy *Towards Zero Waste*. Recent policy has recognised this target isn't achievable with current waste infrastructure and has moved away from this figure, instead with more focus on waste as a resource, building infrastructure and markets to capture and recover materials. Ahead of the mid-term review of the Sustainability Strategy 2016-2022 in 2019 this Waste Management Strategy 2018-2028 elaborates on and identifies new actions and targets.

### 3 Council's past strategy performance

Outcomes of the *Whitehorse Waste Management Plan 2011* were reviewed in 2016. The review indicated the plan was well implemented with more than 87 percent of the recommended strategies and actions completed.

Key achievements over the life of the plan were:

- a 30 percent reduction in complaints from the introduction of the new kerbside collection contracts in 2012
- 82 percent of households downsizing kerbside garbage bins from 120 Litres to 80 Litres
- a 15 percent reduction in tonnes of garbage collected per household by 2016
- increased volumes of recycling collected from the introduction of 360 Litre recycling bins
- increased uptake of garden organics collection services by the Whitehorse community (around 62 percent serviced in 2016)
- participation in the development of the south-eastern regional contract for a regional composting facility which proposes to collect food waste
- switch to an 'at call' hard waste collection from the area-based collection service
- expansion of the material range accepted at the Whitehorse Recycling and Waste Centre (WRWC) in response to stewardship programs for fluoro-tubes, domestic batteries, x-rays and televisions
- developed and implemented annual waste and recycling education plans.

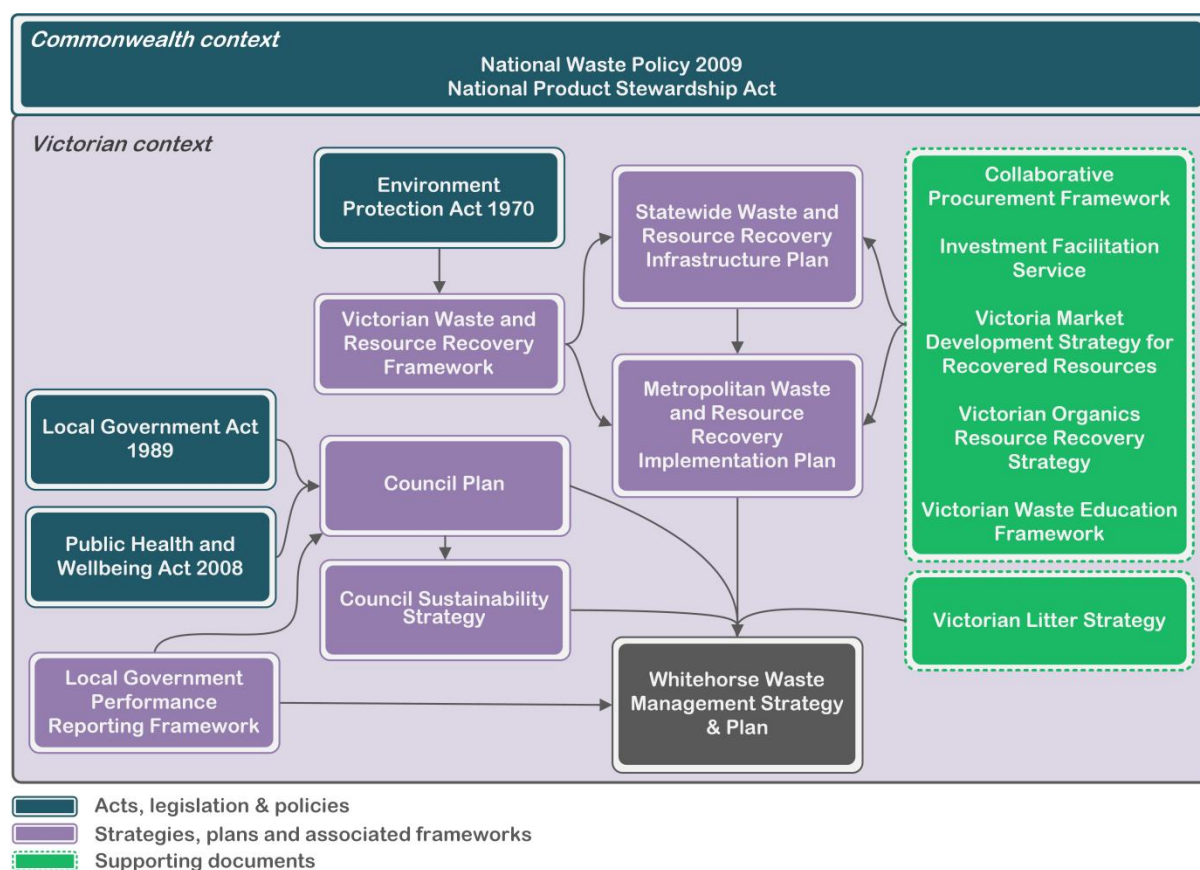
Council achieved a waste diversion rate at around 50 percent at the time of the review. Since then it has stayed close to this but fell short of the revised waste target set at 55 percent. This was mainly due to the State-wide trends where we are seeing recycling weights reducing. Packaging manufacturers are reducing material content needed in items and traditionally heavy recycling materials, including newspapers and glass are being taken up less by consumers. This in many respects is considered a positive environmental outcome, however impacts the calculated rate of diversion of waste away from landfill.

## 4 Context

### 4.1 Legislation and policy

With consumption rising, waste is an issue gaining much attention globally. Council's efforts to manage waste sit within a wider strategic framework at national, state, and more local government levels.

Figure 2 Relationship of Whitehorse Waste Management Strategy and Plan with policies



#### 4.1.1 National

Key policy documents include:

- *Less Waste, More Resources* (2009)
- *National Product Stewardship Act*

In response to China banning imports of mixed plastics and paper for recycling in 2018, *The National Waste Policy: Less Waste, More Resources* review has been brought forward 2 years. The Commonwealth Government have also announced a target of 100 per cent of Australian packaging to be recyclable, compostable or reusable by 2025 which is a positive step. The Australian Packaging Covenant Organisation (APCO) which is a co-regulatory collective of companies in the supply chain and government have gradually been working on packaging design to reduce the environmental impacts and are expected to deliver this. Council supports much needed advancements in this area and shared responsibility by industry that produces packaging or products.

There is a National Product Stewardship Act 2011 which manages the impact of different materials through a shared responsibility model, along with those who produce, sell, use and dispose of that product. Currently, schemes are in place for end-of-life tyres, mercury-containing lamps, mobile phones, paint, televisions and computers, and waste oil. Additional waste types may be introduced in the future, as the Act is reviewed every 5 years. The current Act is under review and Council does and will continue to play an important role in advocating on behalf of the community during consultation.



Container Deposit Schemes (CDS) which incentivise disposing of empty beverage containers for cash (or equivalent) are quickly becoming an approach on a national level. As of 2018 all states except Tasmania and Victoria are implementing or planning to implement the Container Deposit Scheme. Council in principle supports such a scheme for Victoria. If executed well, this will likely have positive outcomes for recycling and litter.

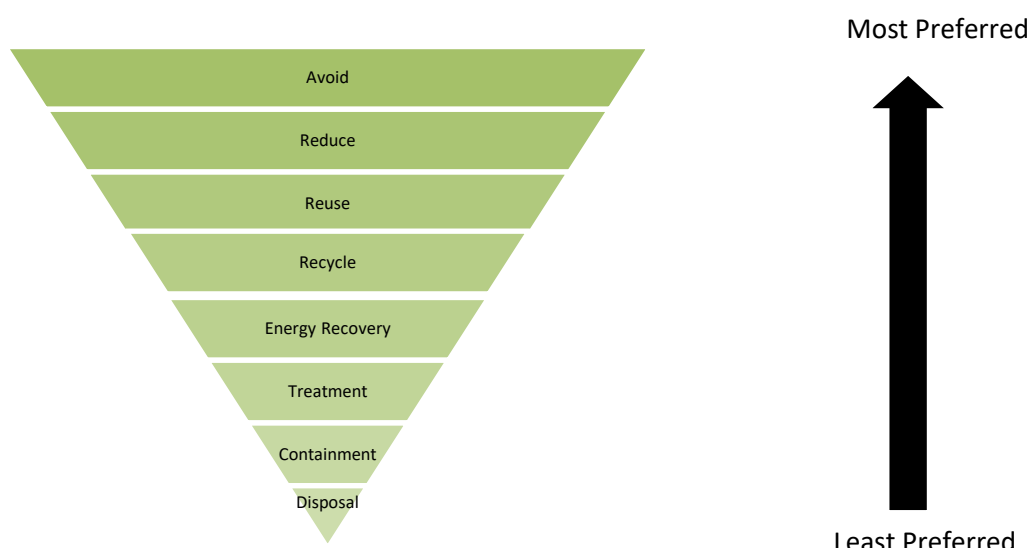
#### 4.1.2 State-wide and Metro Melbourne

Key policy documents include:

- *Environment Protection Act 1970 (EP Act)*
- *Statewide Waste and Resource Recovery Infrastructure Plan (2015-44)*
- *Victorian Organics Resource Recovery Strategy (2015)*
- *Victorian Waste Education Strategy (2016)*
- *Victorian Market Development Strategy for Recovered Resources (2016)*
- *Victorian Litter Strategy 2012-14 (2014)*
- *Metropolitan Waste and Resource Recovery Implementation Plan*

The EP Act is the primary legislation for environmental protection in Victoria. It establishes all important guiding principles of environmental protection and statutory framework. It also outlines the Waste hierarchy which is the preferred approach to waste management.

Figure 3 Waste hierarchy



In recent years the Victorian Government has updated, revised or developed a number of strategy documents relating to waste (for details see Appendix). These documents set directions for the next 5-10 years and have shifted away from waste disposal and more towards rethinking waste as a resource. There is particular focus on reducing disposal of electronic waste (e-waste) which is the fastest growing waste stream, plastics, food waste and moving towards more Advanced Waste and Resource Recovery Technologies (AWRRT). Proposed bans by the State Government over this

strategy period on single use plastic bags and e-waste to landfill will likely require additional resources, education and awareness from Council in order to support the success of these initiatives.

Victorian Policy doesn't support the practice of Landfill into the future. Melbourne's expanding population, land availability and planning restrictions prohibit new landfills being established. The economics also aren't sustainable into the future. To discourage the practice and incentivise alternatives, each tonne of waste buried carries a levy. This increased significantly in 2011 from \$9 to \$44 per tonne and continues to increase each year. The landfill levy is currently \$64.30 per tonne which represents more than 50 percent of the cost of disposal to landfill. This sets a real challenge for continuing to manage waste for our community into the future.

**Table 2 Costs of landfill levy from 2010/11 – 2018/19 for municipal waste**

Year	Cost (\$/ tonne)
<b>2010 - 2011</b>	\$9
<b>2011 - 12</b>	\$44
<b>2012 - 13</b>	\$48.40
<b>2013 - 14</b>	\$53.20
<b>2014 - 15</b>	\$58.50
<b>2015 - 16</b>	\$60.70
<b>2016 - 17</b>	\$62.03
<b>2017 - 18</b>	\$63.28
<b>2018 - 19</b>	\$64.30

### **4.1.3 Local Government**

Key policy documents:

- the *Local Government Act 1989*
- *Public Health and Wellbeing Act 2008*
- *Council Plan*
- *Relevant Council Strategies*

There are seven resource recovery groups across Victoria, which provide strategic support to Councils. Whitehorse City Council is one of the 31 member Councils which are part of the Metropolitan Waste and Resource Recovery Group (MWRRG). Some of their work includes: coordinating and managing particular programs and contracts, commissioning research, facilitating information sharing and advising on better practice for waste management.

Council supplies waste services to the community under relevant acts and responsibilities to ensure local amenity and consideration of local issues. Along with the MWRRG and the other 30 Councils there is regular collaboration to get the best collective outcomes for our communities. This includes advocacy around policy and practices that are in the best interest for our community.

## 4.2 What's within Council's control and influence

Managing waste has many challenges and it requires commitment from our communities, State Government, neighbouring Councils and private industry for success.

Some challenges are broader issues outside Council's direct control. We recognise that to achieve desired outcomes for the future we need to foster partnerships and support our community. We will continue to remain focused on what we can control and influence, keeping up with industry developments and challenges, taking up new opportunities and participating in consultation and advocacy where possible.

### Outside of Council's control

- Technologies available .
- Market changes and industry capability.
- Consumption practices.
- Government legislation and policy that's adopted.

### Advocacy opportunities

- Some State and federal policy.
- Regional waste infrastructure .
- Collaboration with industry on Council needs and requirements.

### Within Council control

- Design , implementation and delivery of Council waste services.
- Influence community engagement and behaviour through education and awareness.
- Planning for future for waste and recovery .
- Council waste infrastructure, recovery opportunities and services and technologies used .
- Participating in joint opportunities to secure larger regional facilities.

## 4.3 Overview of Whitehorse

- We are located approximately 15 km east of Melbourne.
- Characterised by tree-lined residential streets, with bushland settings and higher density living around Box Hill.
- We have a mixture of small and busy shopping precincts and are home to a number of tertiary education institutions.
- We estimate to have more than 66,000 households.

- Our estimated residential population is around 172,800.
- We are culturally diverse, almost 40 percent of residents born overseas.
- Most common languages spoken other than English are Mandarin, Cantonese, Greek, Italian and Vietnamese.
- We are made up of 17 percent Seniors aged 65 and over and that is expected to increase to almost 19 percent of the total population by 2036.
- We are abundant with families. 35 percent of our households are couples with children.
- Around 75 percent of our households are detached separate dwellings.
- Traditionally our homes are mostly owner occupier.

Figure 4 Map of Whitehorse Council area



#### 4.3.1 *We're changing*

We're growing quickly. It's expected our population will increase by 13 percent by 2036. More people will mean more waste unless we make real changes to the way we consume, manage our waste in our households, business, and Council operations.

- We are seeing more medium and higher density living, which has increased by 7.4 percent since 2011.
- Separate detached homes which have traditionally made up our neighbourhood, over time are being replaced in favour of terrace, townhouses, flats, units and apartments.
- Reflective in the change in housing, more of our properties are being rented (3.4 percent increase since 2011).

Figure 5 Estimated Whitehorse population over time. Source Australian Bureau of Statics, Census of Population and Housing.

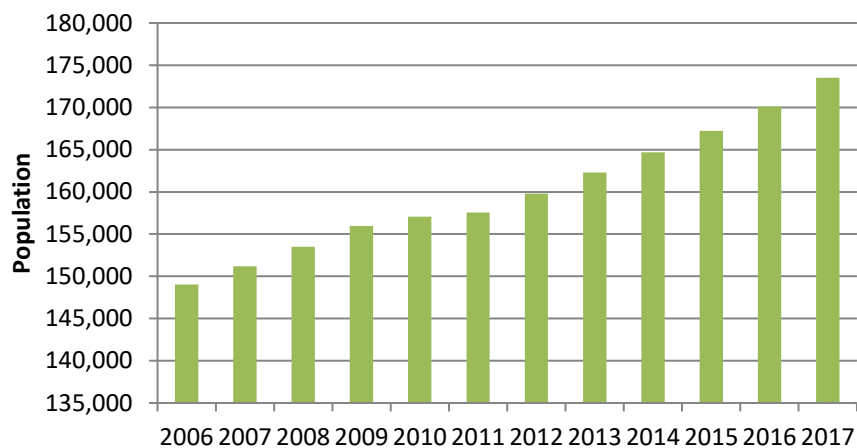
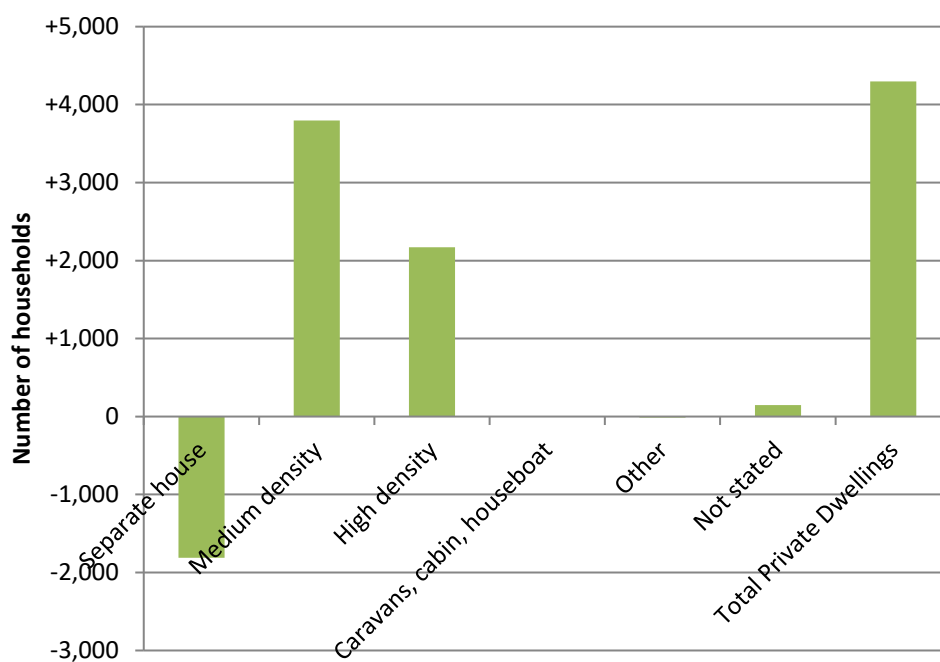


Figure 6. Change in number of Whitehorse households from 2011 to 2016. Source Australian Bureau of Statics, Census of Population and Housing.



Our community is changing too. We have:

- An emerging young population including those in Tertiary education (18-24 years) and in the workforce (24-35 years)
- Growing number of young families
- Growing number of group households
- Growing number of lone person households

## 4.4 Our waste and recycling services

**Household kerbside services** Council provides a weekly collection of waste and fortnightly collection of recycling and garden waste on alternate fortnights from each household. In 2017 this was to more than 65,000 households.

82 percent of households use the 80 litre standard garbage bin.

Cost of services including collection and disposal is included in Council's general rates. Larger garbage bins and garden organics bins are available for a fee.

All garbage collected from the kerbside is currently sent to Hallam landfill for disposal. Recycling is sent for sorting recovery at Visy's sorting facility in Springvale. Garden Waste is composted at a site in Dandenong South.

**Table 3 Bin numbers and frequency for Council's kerbside residential services**

Bin type	Bin size	Estimated bins serviced	Collection frequency
Garbage	80 L	49,875	Weekly
	120 L	12,750	
	240 L	805	
Recycling	240 L	73,800	Fortnightly
	360 L		
Garden organics	140 L	39,700	Fortnightly
	240 L		

**Table 4 Contracts for Collection and disposal of Councils kerbside collections**

Service	Contractor	Start	Length (yrs)	End	Extension options (yrs)
Garbage collection	JJ Richards	July 2012	7	June 2019	1+1
Recycling collection	Visy	July 2012	7	June 2019	1+1
Green waste collection	JJ Richards	July 2012	7	June 2019	1+1
At call hard waste collection	WM Waste Management	July 2012	7	June 2019	1+1
Garbage disposal, landfill	Suez	April 2011	6	April 2019	2+2
Recycling processing	Visy	July 2012	7	June 2019	1+1
East organics processing contract	Biogro & Enviromix	Sep 2018	15	June 2033	Up to 5 yrs

<b>Business kerbside service</b>	The Kerbside garbage and recycling collections are also extended to small and medium sized local businesses and community organisations. Larger businesses and organisations who produce high volumes of waste, for which Council's service is not suited engage one of many private waste collections contractors who operate locally.
<b>Hard and Green Waste Collection</b>	<p>Hard waste and garden prunings are collected on an 'at call' basis. Council offers two free collections per financial year. Additional collections are available for a fee.</p> <p>Hard waste is any larger general household waste that will not fit in a kerbside bin. This is usually furniture, mattresses, whitegoods etc .</p>
<b>Renew Once a year collection</b>	Once a year collections of reusable household goods and clothing collected from kerbside recycling bins (Renew service). This once a year collection is complemented by a drop-off event for larger reusable goods such as furniture and white goods at a nominated facility within Council. The last few years this has operated from Council's Operations Centre in Box Hill South.
<b>Whitehorse Recycling and Waste Centre (WRWC)</b>	<p>Council owns and operates the Recycling and Waste Centre, located opposite the corner of Burwood Highway and Morack Road, Vermont South. It's open daily from 6:30am to 4:00pm, 7 days per week, all year round except for Christmas Day and Easter Friday.</p> <p>The centre receives materials from commercial and industrial (C&amp;I) sources (70 percent) and the rest from domestic and other Council services, including street sweepings, illegal dumping collections, public place collections, etc.</p> <p>Around 40 percent of all material deposited is recycled; the remaining is transported to the Melbourne Regional Landfill at Ravenhall for disposal.</p> <p>A range of recyclable materials are supported by product stewardship programs and accepted free of charge. A fee applies for other materials.</p>
<b>Public bins</b>	<p>Public litter and recycling bins are located on shopping strips, in parks and recreation areas. In general, this litter consists of food waste, packaging, animal waste and cigarette butts. All litter from public bins is sent to landfill.</p> <p>Some public recycling bins are available in certain locations such as shopping strips and open spaces, but often these can be highly contaminated, which makes collection difficult.</p>
<b>Cleaning streets and public spaces</b>	Council provides services to ensure our streets are swept regularly and public spaces are kept clean.

Dumped waste has been a continual battle which is consistent with other Councils in Metropolitan Melbourne. Our dumped rubbish services are carried out through:

- A reactive service which responds to customer requests to investigate and collect.
- A pro-active service in known problem or hot-spot areas.

Council community laws officers investigate instances, conduct letter drops and install education signage to help reduce the occurrence of illegally dumped waste.

Street sweeping and clearing of gross pollutant traps and litter baskets also occurs regularly.

#### **Drop off collections**

Council accepts a number of recyclables such as household batteries and light globes at each Customer Service Centre in Nunawading, Box Hill and Forest Hill. This is only available to residents.

## **4.5 Our other waste responsibilities**

Council jointly owns Clayton South Regional landfill which closed in November 2015. There are ongoing cost implications to Council from monitoring and management of the closed landfill.

Council offers a range of waste education programs and initiatives to encourage residents to minimise consumption and maximise recycling. Some most recent include:

- CALD waste and recycling education support program. Including (CALD) school and community group sessions, materials recovery facility (MRF) tours, quarterly e-newsletters and other education resources through the Get it Right on Bin Night program.
- Gold star recycling program. This rewards the community for correct use of the kerbside recycling bins following a bin inspection for prizes.
- Home composting incentive program. Households can claim a \$30 rebate for purchasing home composting products worth up to \$100.
- Love Food Hate Waste. This campaign encourages residents to avoid food waste.
- Waste education videos and hard copy collateral that explain how to correctly use kerbside collection services including in different languages.
- Other waste avoidance campaigns and events including Smarter Living series, Garage Sale Trail, Plastic Free July, and various waste education and themed events as part of Council's annual Sustainable Living week.
- Community group and school waste education support, including: incursions and excursions, educational materials.

Council also supports State-wide Waste initiatives including promotion of mobile *Detox Your Home* collections at other Councils for hazardous chemicals. There are currently no permanent collection points in Whitehorse.

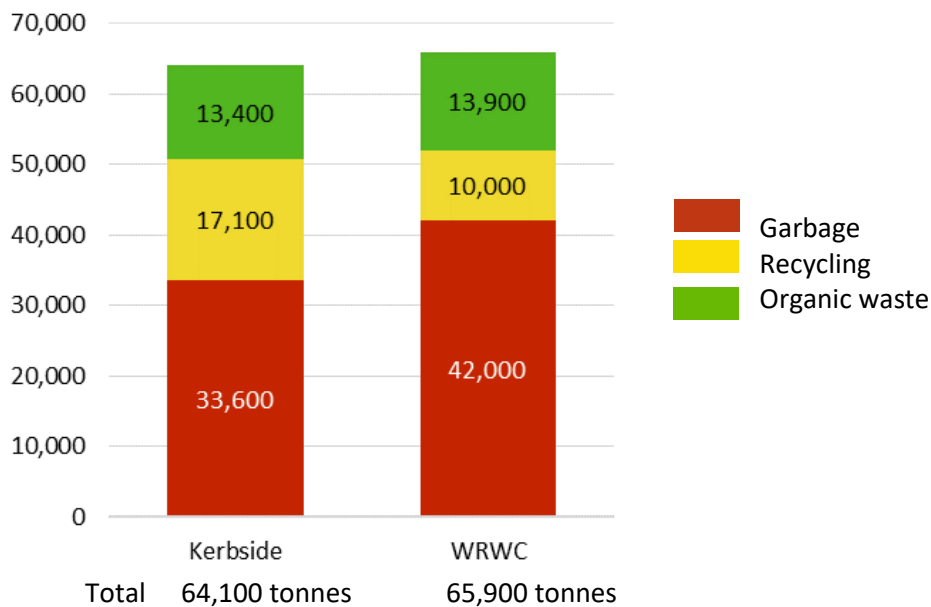
## **4.6 The waste picture now**

- In 2017 our community generated around 130,000 tonnes of waste
- 50 percent was collected from kerbside services

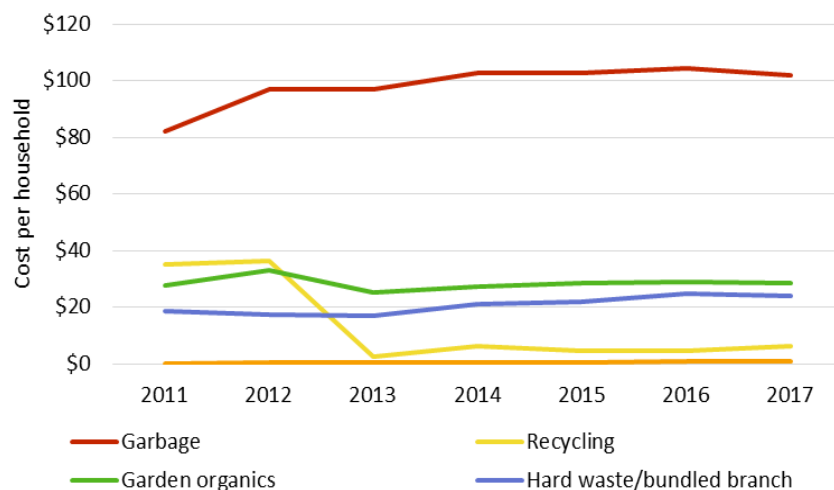


- 50 percent from commercial and industrial (C&I) sources from the WRWC, gross pollutant traps, illegal dumping, public place collections and street sweepings.

**Figure 7 Tonnes of Council kerbside collections and the Whitehorse Waste and Recycling Centre**



**Figure 8 Costs of Councils kerbside waste services per household**



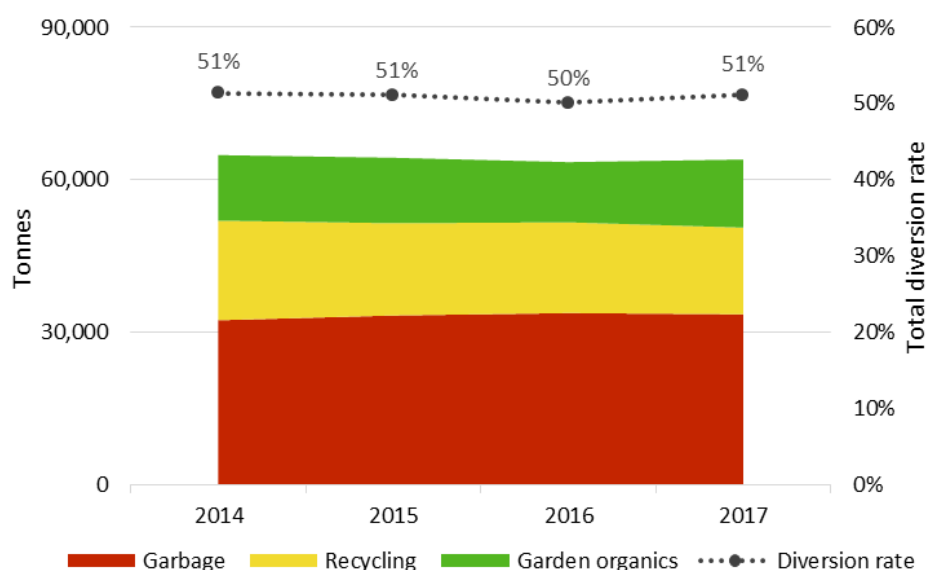
Kerbside garbage is the most costly service with collection and disposal accounting for approximately 56 percent of the total waste costs in 2017. Disposal of waste alone being the most costly component at around \$3.5 million out of a total \$11.8 million in 2017. Costly waste disposal has consistently been the trend for the last seven years, increasing over time along with the landfill levy. For recycling, the cost per household reduced in 2013 due to the income earned from recyclables. However, following market uncertainty arising from Chinese import bans in 2018 this

situation will not continue into the future. Income received by Council from its contractor to process recyclable material will cease during 2018. All other services have remained fairly consistent.

### 4.6.1 Telling the full story

Our community is doing well diverting approximately 51 percent of kerbside waste from landfill for a number of years, which is well above the state average of 45 percent. This is a great effort considering recycling by weight (tonnes) is decreasing due to trends towards lighter weight packaging. The introduction of the standard smaller 80L bin in 2013 has been a big contributor to this with a steady reduction in our garbage.

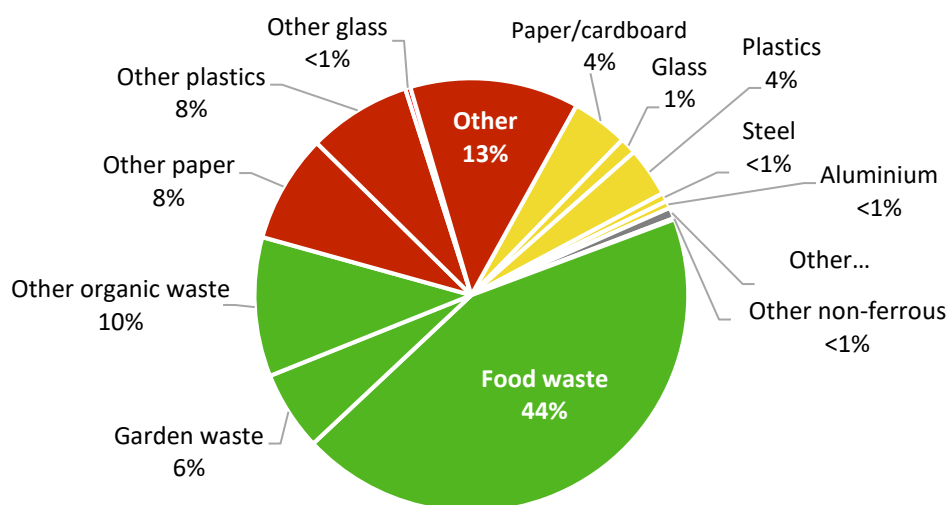
Figure 9 Total waste generated and diverted from kerbside bins 2014-17



However, this may not be telling the full story. With growth we are seeing more traditional separate homes in our neighbourhoods being replaced with multiunit-developments (MUDs) which often, due to planning, space limitations, traffic and other restrictions, have communal or private waste collections. Amongst other issues, this means we don't necessarily have all the data on how much waste is generated by our community. A typical separate home which Council can easily service, loses on average 10 percent of recyclable material in garbage, however for MUDs this goes up to 42 percent.

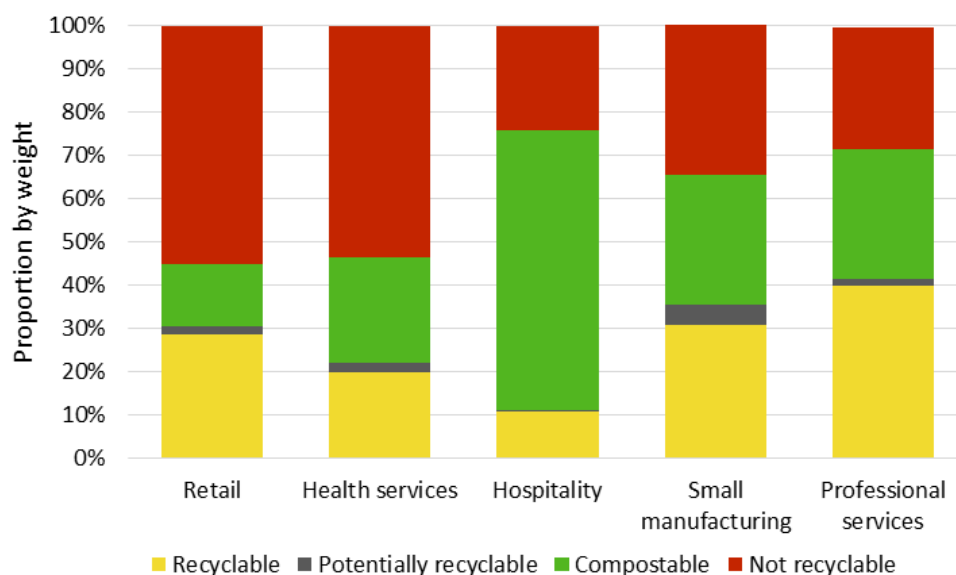
## 4.6.2 We throw away lots of organic waste

Figure 10 Residential kerbside garbage bin audit results, 2015



Our kerbside garbage bins contain 44 percent food waste, while all organic waste collectively adds up to 60 percent. This is higher than the Victorian average which is around 35-38 percent for food waste and around 50 percent for all organics. Although 60 percent of our community have the optional garden waste bin, there is a real opportunity to do better.

Figure 11 Commercial garbage bin audit results, 2013

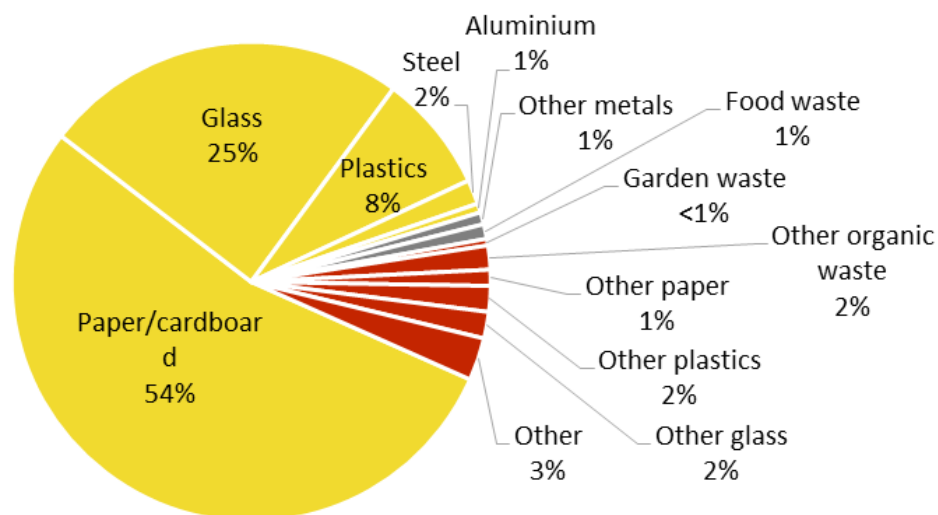


Businesses that Council services, also have varying proportions of food waste and recycling in their garbage bins, which highlights future opportunities.

### 4.6.3 Our recycling bins contain the wrong things

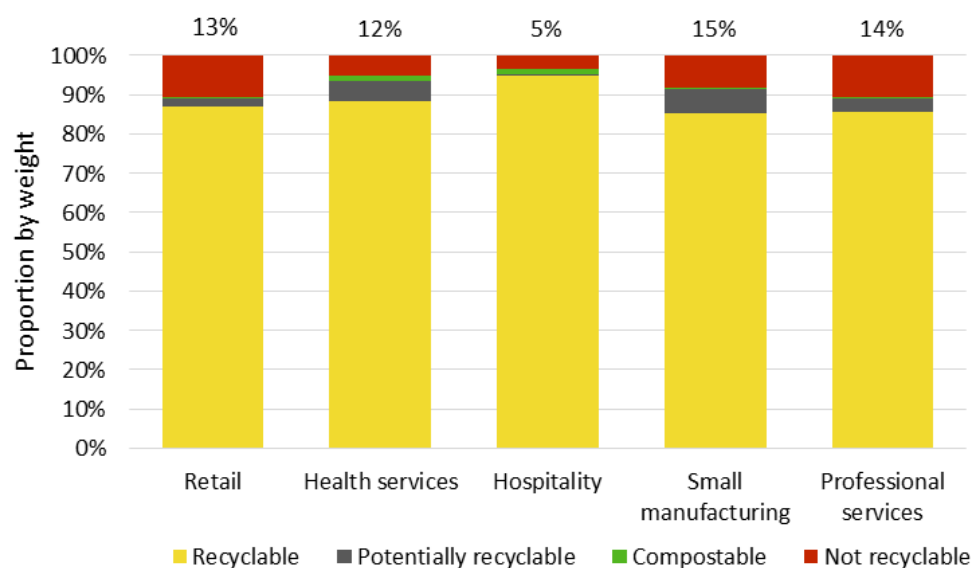
Of what we put in the recycling bins, around 11 percent is wrong (contaminate) which is behind the rest of Victoria (2014-15 averaged 5.6 percent) and way above the preferred industry level of 3-5 percent and we need to do better. Mainly this is organic waste, non-recyclable paper, plastics, glass, wood/timber and textiles. Generally bin contamination rates are higher in MUDs at about 25 percent, compared to separate households at 11 percent. We should be conscious of how our neighbourhoods are changing to more medium and high density development and how this will impact upon the future and do what we can do to mitigate it.

Figure 12 Residential kerbside recycling bin audit results, 2015



In our kerbside green waste bins, it's a very different story with only 2 percent contamination. Those who choose the service, who often are separate households, are using it well.

Figure 13 Commercial kerbside recycling bin audit results, 2013



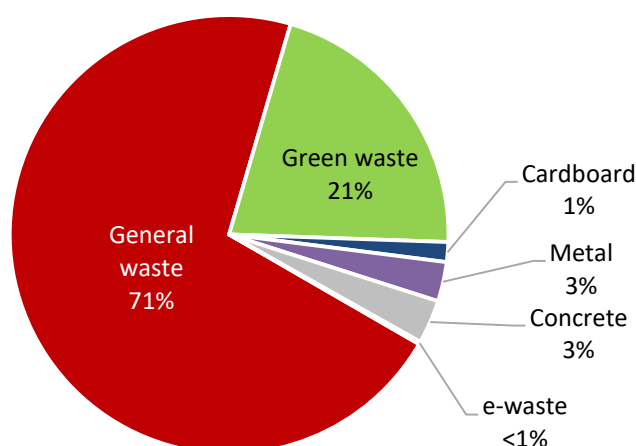
For businesses that use a Council service their recycling bins have varying levels of contamination, which in 2013 looked all relatively high except hospitality.

#### 4.6.4 *There are more opportunities*

While our community are trying to do what they can, there are still opportunities for us to help them do better.

The Whitehorse Recycling and Waste Centre collects and recycles a lot of materials but by weight 71 percent of material is still general waste. Due to safety issues it is difficult to determine the composition of material that enters the disposal pit, which is where waste is deposited. However, we believe we can be doing more to reduce waste to landfill into the future with some development of the site. Increased infrastructure and space allowance, which is currently an issue, will open up opportunities. Our masterplan for the site in the long term should help us get there.

Figure 14 2017 Waste generation by material at the Whitehorse Recycling and Waste Centre



We could be doing more to encourage and facilitate more recycling. In our hard waste services we can work towards diverting more away from landfill. Away from home in our open spaces, shopping areas and facilities we can be capturing more recycling and encourage our community to do the right thing by not littering or dumping. There could be more investigation and investment in community recycling points and innovative ideas to increase recycling and reuse opportunities. More guidance and standards on where and what type of bins should be located in our shopping strips, parks or playgrounds.

We have many Council facilities and events where we can be leading the charge and setting the standards of good waste minimisation and recycling practices.

## 4.7 What our community told us

In 2018 Council engaged community engagement specialists to assist with understanding our communities concerns around waste, to help develop this draft Strategy. A number of engagement activities were conducted from February-June including: Listening posts, drop-ins, workshops, interviews, surveys (online and hard copy) and online ideas forums.

Our community are passionate about the environmental issues around waste and are looking to Council to take leadership in addressing these, but recognise that solutions require work from individuals and with others.

### 4.7.1 What we heard

Our community:

- Report high levels of satisfaction with Council's Waste Management services
- Want households to take greater responsibility in reducing and managing waste
- Have growing concern about the impact of high density development on waste
- Want better recycling outcomes

- Have concerns about the level of food waste

We also heard that our community understand there are complexities with the cost of waste. They are open to paying more for waste services that reduce waste to landfill rather than reducing services. However, residents believe that efforts should be made to reduce waste where possible first. The community also responded that those who produce more waste should pay more.

## 5 Challenges and opportunities

### 5.1 Increased urbanisation and Multi-unit developments

Whitehorse is becoming more densely populated, especially in the Box Hill and Burwood area with a rapid increase in high rise unit developments and apartments. This puts pressure on waste infrastructure, and with a planning system in Victoria that doesn't always result in best practice waste management for multi-unit developments, this brings about a unique set of issues including:

- Traffic congestion and access issues for collection of waste services
- Limited available space for bins or hard waste
- Apartment buildings that have not been designed to make it easy for residents to recycle
- A high percentage of renters and people that move often
- Poor bin presentation practices that impact collection and neighbourhood amenity
- Poorly used bin areas that attract dumping
- Loss of recyclables in garbage

Although Council has been progressively trying to tackle the issues, more needs to happen. We will continue to advocate for better State planning systems and work closely with planners, developers and management bodies to proactively build capacity and capability around waste. We will do more to underpin local laws, investigate and enforce where people aren't doing the right thing.

### 5.2 Changing community

Our community is quickly changing and we need to keep up. We have more students, young families and young professionals choosing to call Whitehorse home. With busy lifestyles, and through establishing and upgrading their homes, they have the potential to generate a lot of waste. We need to find new and exciting ways to educate to reach out and engage with our community. At the same time we have an increasing population of seniors who have specific needs.

Our community are culturally and linguistically diverse and over time are becoming more so, with overseas arrivals reaching all-time high numbers in the last 5 years. This presents a range of challenges in and around waste. New arrivals can be unfamiliar with Australian waste and litter practices and services. Effectively communicating and engaging around what can seem like complex issues surrounding waste even for native English speakers presents a challenge for Council. Our community reports slightly higher numbers of speaking language other than English and English not well or at all (7.5 percent) compared with Greater Melbourne (5.6 percent). Council will communicate and educate our community in ways that suit their needs and responds to new trends and changing demographics.

### 5.3 Minimising and disposing of garbage in the future

Minimising garbage in Whitehorse with our growth, change in community and way of living will be a challenge in the next 10 years.

We believe in leading the way for our community by continuing and expanding our commitment to reduce waste to landfill. We will:

- Empower our community to do the right thing
- Lead the way and seek better ways to track and reduce waste in Council operations
- Support the local economy and recycling industry by purchasing green and recycled products
- Ensure that Council events and facilities look to reduce waste, especially single use plastics
- Use education and awareness approaches that engage those who are generating the most waste

Although we anticipate this will help, it's unlikely it will be enough. Capacity in what landfill there is left in Melbourne, is quickly diminishing. Over half of the remaining landfills are set to close in the next 0-15 years and those in the South-East are set to run out of space sooner rather than later. To mitigate having to transport waste longer distances in the short term, which has negative environmental impacts and will likely incur additional costs, we will need to seek alternatives.

### 5.4 The rise of technology

Electronic waste (e-waste) is the fastest growing waste stream in the country. In 2019 a proposed ban on these items to landfill will mean the way our community chooses to dispose of electronic items at the end of their useful life needs rethinking. Council's methods of collecting and storing e-waste will need to be increased and more support needs to come from State Government, manufacturers and the electronic recycling industry for our community during this change and into the future.

New and alternative technologies which dictate how well we can recover recyclable items and treat waste are quickly evolving. These will be key to us increasing recycling and reducing the reliance on landfill and mitigating the impacts of waste on the environment. We will embrace this moving forward, specifying innovation in Council contracts and working with others to ensure these technologies and facilities are available to us.

### 5.5 Changing economic conditions

The global recycling industry for many years has relied on China importing and manufacturing recycled materials into new products. In 2018 China placed tighter restrictions on waste imports particularly of mixed plastics and paper that significantly impacted the sector locally. This has negatively impacted the commodity price of recyclables and put pressure on recyclers and Councils. Councils have changed from receiving money (income) for recycled material to having to pay for processing services. This shift could see more opportunities towards more viable local processing and a circular economic approach. A circular economy approach is one with better flow of materials from raw material providers, manufacturers and recyclers in a closed loop. Council supports local industry and a circular economic approach and will continue to advocate for better and affordable provision of services locally.



Rate capping introduced by the State Government in 2016 means there is increased pressure on Council's financial resources to deliver services. The cap was matched to the consumer price index (at 2-2.5 percent per year) and unfortunately waste costs even before the recycling crisis, were calculated to be beyond the rate cap (on average 4.5 percent). Whitehorse is one of only a few Councils in Victoria who don't have a separate waste service charge. 72 out of 79 Victorian Councils already have a separate waste services charge, while reasons vary this does include:

- a more clear way of showing ratepayers all of the kerbside waste and recycling service costs
- allows for only those accessing Council waste services to pay for the services
- allows Councils to better manage the highly variable costs of collecting and disposing of waste

As the cost of providing waste services and infrastructure is increasing consistently above inflation, we will have to find new ways to pay.

Future labour, fuel and landfill costs and closures over the next 10 years as well as changes in the recycling and waste industry will likely continue to negatively impact costs. Council will explore a waste service charge to align our waste services and infrastructure needs with our community's expectations, so our neighbourhoods and environment are sustainably managed for the future. We will work with the Essential Services Commission (ESC) who are an independent regulator that administer the rate capping system to ensure such a proposed change is clear and considering our community.

## **5.6 Climate change and organic waste**

Although waste in landfill eventually breaks down, the process of covering and compaction means any organic waste including garden or food breaks down slowly. This releases methane, which is a potent greenhouse gas 20 times stronger than carbon dioxide. These emissions contribute to the wider issues of climate change. Home composting is a great step in the right direction. It reduces emissions from organic waste in landfill, with the added benefit of reduced environmental impact of transporting waste to landfill or recycling facilities. However, we understand this isn't practical for all of our community with space and lifestyle restrictions. We will continue to provide support for our community to compost at home to get organics out of their garbage bin. We will also look to implement a food and organics waste collection service sooner rather than later in line with availability of those services through Council's contracts.

## **5.7 Continuous improvements to services**

Although the rate of satisfaction with Council's waste services has remained high over the years we need to continue to ensure that Council's waste and recycling services reflect the changing needs of our community. Better technologies in capturing recyclables and data and monitoring contractor and resident waste performance is quickly advancing and we need to utilise these to see that we stay ahead. We will foster more continuous improvement in Council's waste services, systems, processes and pursue more innovative approaches to achieve our targets while keeping costs minimal. We will pursue partnerships and contracts with emphasis on technology and innovation.

Where it's feasible and with the highest impact we will increase the opportunities to expand items for recycling. In our hard waste we will look for best practice and options to divert more away from

landfill. With illegal dumping in our neighbourhoods, which is often confused with hard waste, and has been a rising problem for almost all Councils in Victoria, we will look to better educate, collect and enforce.

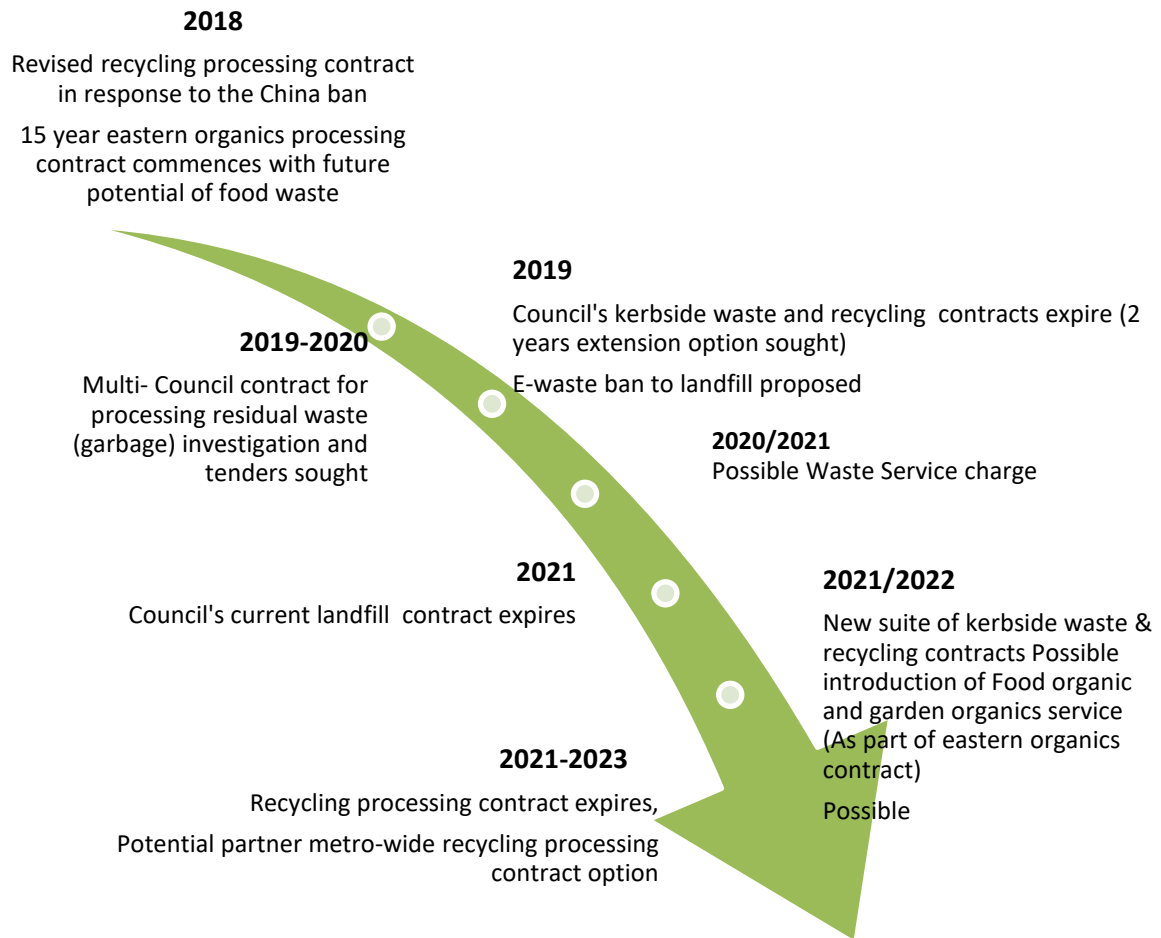
We will do more to investigate how the impact of our changing housing stock impacts our waste and what the best way of managing this is and will continue to be in the future.

## 6 The journey to get there

To ensure that we are successful in managing waste and recycling services appropriately, we have to consider the long term. Some of the waste facilities that will need to be in place to reduce waste to landfill and increase the resources recovered for recycling are yet to be built. We will consider our current contracts and timing of new ones. There is flexibility in some contract arrangements with opportunities to extend or vary the processes, but for some contracts Council needs to lock into long-term processes simply to provide the facility operators certainty over time at an affordable processing cost. Typically, Council achieves this by partnering with other Councils in long-term contracts that deliver reliable services, treating large volumes of waste in an affordable manner. We must think now and work in a manner to get the best environmental and economic outcomes for our community.

We will align our waste collection contracts so that future opportunities for economies of scale can be sought and potential arrangements for collections of more materials can be worked through. We will look for alternatives to landfill and work with partners on Advanced Waste Resource and Recovery Technology (AWRRT) facilities to process what garbage we have left after maximising our recovery of resources.

We will continue to be a strong voice and advocate on behalf of our community on waste to all levels of government. We will continue our advocacy efforts to the State Government to provide more funding from the Sustainability Fund for investment back into waste and resource recovery initiatives.



## 6.1 What we will strive for

In order to tackle our challenges we will aim to achieve:

	Where we are now	Where we want to be mid term 2-5 years	Where we want to be long term 6-10 years
<b>Minimal waste to landfill</b>	51 % waste diverted from landfill	Increase diversion of kerbside waste from landfill to 60%	Increase diversion of kerbside waste from landfill to 75%
<b>Better resource efficiency</b>	11% recycling bin contamination rate	Achieve a recycling bin contamination rate below 7%	Achieve a recycling bin contamination rate to below 5%

We will achieve this through actions for under the banner of five priority outcomes:

1. Minimising Waste to landfill
2. Maximising resource efficiency
3. Leading the way
4. Continuous improvement to our services
5. Being agile in responding to modern challenges.

	Minimising Waste To Landfill	Timeframe			Details
	Actions	0-2	3-5	6-10	
1.	Participate in and promote relevant national, regional and State-wide education	✓	✓	✓	Includes product stewardship schemes, Detox Your Home , e-waste ban, Clean Up Australia Day, National Recycling Week and similar events and regional or state-programs
2	Advocate and work with partners to expand the range of materials and opportunities where items can be easily reused or recycled	✓	✓	✓	This may include: <ul style="list-style-type: none"> <li>• extra options in the kerbside recycling for soft plastics and other materials in line with contracts, available technologies and end markets for products</li> <li>• investigate possible innovation opportunities for recycling collection points or events with charities/social enterprise/ or community organisations</li> <li>• recycling difficult items in convenient locations including recycling banks or recycling vending machines</li> </ul>
3	Annually review, develop and deliver Waste and Recycling Education Plan with a focus on dumping, waste reduction and contamination	✓	✓	✓	Existing resources within operational budget
	Regularly review waste and recycling communications including Councils website for relevance and community needs	✓	✓	✓	Considering CALD communities and emerging populations
4	Continue to promote and incentivise change over from 120L bins to use of smaller 80 L garbage bins	✓	✓		Use of smaller 80L garbage bin has reduced waste to landfill.  Review effectiveness and future need after 5 yrs
5	Review alternative options and expand promotion channels to increase home/ onsite composting as the preferred option to deal with food waste	✓	✓	✓	Allow for schools and community groups to have up to 3 compost rebates per group to encourage composting on site

					<ul style="list-style-type: none"> <li>Test and research into other advanced composting equipment available and viable</li> </ul>
6	Further promote garden organics services and benefits of keeping out of landfill in preparation for introduction of a food waste collection	√	√		Run targeted community education programs about the importance of recovering and reprocessing food to reduce emissions and impact on climate change
7	Review contracts and develop services to allow diverting food waste from landfill in 2021	√	√		Costs of delivering new services determined as part of review.
8	Work with partners to secure alternatives to landfill beyond 2021	√	√	√	Prices for alternatives to landfill available at tender, but likely to be more expensive due to higher technology and improved environmental outcomes. This decision will be referred to Council for agreement to participate as details and opportunities are further identified.

	<b>Maximise resource efficiency</b>	0-2	3-5	6-10	
9	Continue to incentivise use of recycling bins over garbage bins to encourage maximum recovery of resources	√	√		Existing resources within operational budget
10	Seek opportunities for better support for community led litter and waste initiatives	√	√	√	Including schools, community groups, education institutions, businesses or commercial areas with identified problems
11	Review network of public recycling and litter bins and draft guidelines on best practice requirements		√	√	
12	Review current bin inspection program and investigate further strategies to target and assist those contaminating recycling and generating the most garbage	√	√		Conduct truck audits biannually and consider social research to target groups better

	<b>Leading the way</b>	0-2	3-5	6-10	
<b>13</b>	Undertake internal review of Waste and Recycling at Council run or supported facilities for better services and use		√	√	Any costs in additional to operational budget determined in review
<b>14</b>	Advocate for and expand purchase of recycled products in Council operations	√	√	√	Existing resources within operational budget
<b>15</b>	Support Council staff to minimise waste and recycle right in staff induction and on-going communications and training	√	√	√	Existing resources within operational budget
<b>16</b>	Improve methods of data collection and systems for Council's bins, recovery rates and other waste and littering trends	√	√		Existing resources within operational budget. Explore the collection of waste data from Council run or supported facilities.  Conduct an in-depth bin audit for accurate data on bin numbers for residential properties
<b>17</b>	Advocate and implement reduction of single use plastics at Council events and facilities	√	√	√	Possible cost implications across Council teams depending on actions taken

	<b>Being agile in responding to modern challenges</b>	0-2	3-5	6-10	
<b>18</b>	Review and consult charging of waste services for sustainable management of rising cost of waste in future	√	√		Actively consult with the community and reach a decision regarding the introduction of a separate waste services charge in a timely manner
<b>19</b>	Develop and review Whitehorse specific guidelines to proactively assist with and continue to consider	√	√		Includes Whitehorse planning scheme

	best practice waste management within developed areas including multiunit developments				
<b>20</b>	Run and participate in waste and recycling education programs and forums for planners and other stakeholders for better waste outcomes for multi-unit developments	√	√	√	Sustainability to pursue collaboration and information sharing between Councils and attend and present at MWRRG and SV related events
<b>21</b>	Investigate options for improved services to medium to high-density developments including Identified commercial/business areas	√	√		Review current services and opportunity for improved recycling or communal/shared waste services
<b>22</b>	Continue to encourage communal use of the at call hard waste collection services and support owners corporations and/or real estate agents where possible	√		√	Consider longer term options after review of options for improved services to medium to high-density developments

	<b>Continuous improvement to our services</b>	0-2	3-5	6-10	
<b>23</b>	Continue active participation in the Clayton South User Group in managing the closure, rehabilitation and post closure, maintenance and monitoring of the landfill	√	√	√	Existing operational budget
<b>24</b>	Continue to standardise bin lid colours in line with Australian standards for ease of use and consistency	√	√	√	Costs built into contracts
<b>25</b>	Align waste collection contracts to allow for best practice specifications and innovation for new technologies, collection methods and materials and value to the community	√	√		Existing resources within operational budget, prices to be assessed at tender
<b>26</b>	Explore options to improve hard waste amenity through working with other Councils on best practice tender specifications and /or considering synergies with dumped rubbish service	√	√		Existing resources within operational budget, prices to be assessed at tender



<b>27</b>	Review dumped rubbish reporting investigations and education process along with hard waste for improved opportunities and service delivery	√	√		Existing resources within operational budget
<b>28</b>	Review bin configurations at properties and update and improve Council systems	√	√		Existing resources within operational budget
<b>29</b>	Review this action plan annually in line with business planning	√	√	√	Existing resources within operational budget
<b>30</b>	Review and update this action plan at mid-point in 2023	√	√	√	Existing resources within operational budget

## 6.2 References for additional information

Commonwealth of Australia (2009) National Waste Policy: Less waste, more resources, Department of the Environment, Water, Heritage and the Arts, Australia

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DELWP (2017a) Plan Melbourne 2017-2050, DELWP, Melbourne, available from: <http://www.planmelbourne.vic.gov.au/>

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MWRRG (2016) Metropolitan Waste and Resource Recovery Implementation Plan, Metropolitan Waste and Resource Recovery Group, Melbourne

MWRRG (2017a) Improving resource recovery in multi-unit developments (MUDs) toolkit, MWRRG, available from: <https://mwrrg.vic.gov.au/planning/multi-unit-developments-toolkit/>

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Sustainability Victoria (2017b) Guide to best practice for waste management in multi-unit developments, Sustainability Victoria, Melbourne, available from: <http://www.sustainability.vic.gov.au/Government/Waste-and-Resource-recovery/Waste-management-in-multi-unit-developments>

Victorian Statewide Garbage Bin Audit 2013 prepared by EC Sustainable for Sustainability Victoria  
<http://www.sustainability.vic.gov.au/Government/Victorian-Waste-data-portal/Victorian-statewide-bin-audits>

Whitehorse Waste Management Review (May 2018) by Blue Environment

Whitehorse Waste Management Strategy Community Engagement Report (June 2018) by i.e. community

## Appendix

Table 5 Further information on Victorian waste policy

Strategy/plan	Outline
Statewide Waste and Resource Recovery Infrastructure Plan (2015-44)	A long-term roadmap for future planning and investment in waste and resource recovery infrastructure in Victoria. Key strategic directions outlined in the amended draft SWRRIP prioritise viable recovery, reduce landfill reliance, aggregate materials, utilise land, adopt evidence-based decision making and integrated planning.
Collaborative Procurement Framework	Supports local governments introducing collaborative procurement of waste and resource recovery services and infrastructure by providing guidance to identify, assess and plan for collaborative procurement.
<i>Victorian Organics Resource Recovery Strategy</i> (2015)	Focuses on best practice environmental, human and animal health management, sustainable markets, leveraging existing markets, future needs, education, building collective knowledge and streamlining governance and strong leadership. The strategy outlines five-year actions to be implemented by the Victorian Government in each of these areas.
<i>Victorian Waste Education Strategy</i> (2016)	Guided by the following strategic directions and outlines actions for the first five years to work towards state-wide goals. <ul style="list-style-type: none"> <li>• Increase the state's community and business perception of waste management as an essential service.</li> <li>• Increase the community awareness of waste and support and encourage waste avoidance to reduce waste generation rates in Victoria (particularly food waste and waste minimisation from businesses).</li> <li>• Improve resource recovery and reduce contamination of waste streams</li> <li>• Reduce litter and illegal dumping.</li> <li>• Support waste and resource recovery education for schools.</li> <li>• Strengthen Victoria's waste and resource recovery education capabilities to ensure programs are delivered in an effective and efficient manner.</li> </ul>

Strategy/plan	Outline
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Investment facilitation service	This service provided by Sustainability Victoria aims to promote Victoria's waste and resource recovery infrastructure investment opportunities to prospective investors locally and abroad as well as the delivery.
<i>Victorian Market Development Strategy for Recovered Resources</i> (2016)	This strategy aims to improve and expand sustainable markets for resource recovery by reducing existing barriers and supporting conditions for markets to grow and maximise the value of end-products. It identifies the strategic directions, goals, outcomes and actions related to the supply and demand sides of market development.
<i>Victorian Litter Strategy 2012-14</i> (2014)	<p>This strategy aims to help prevent and manage litter through education, infrastructure and enforcement.</p> <p>It focuses on the following priorities:</p> <ul style="list-style-type: none"> <li>• the litter policy</li> <li>• littering and illegal dumping</li> <li>• increased enforcement emphasis</li> <li>• partnerships and community engagement</li> <li>• education and resources.</li> </ul>