Executive summary ...................................................................................................................................................... 3
1. Introduction and context ................................................................................................................................................................. 4
2. Progress so far .............................................................................................................................................................................. 6
3. Challenges and opportunities ...................................................................................................................................................... 11
4. Action Plan .................................................................................................................................................................................. 25
5. References for additional information ........................................................................................................................................ 32
Executive summary

Australian households produce over 13 million tonnes of waste per year and Moonee Valley community leads typical Australian, high-consumption lifestyles. We need to rethink our use of resources and consider the whole life cycle of materials. By first avoiding waste and increasing reuse, recycling and other forms of resource recovery, we can dramatically cut waste disposed to landfill.

In the long-term strategy MV2040, Council has a vision to become a city that rethinks waste and has set an aspirational target to increase resource recovery and to divert 90 per cent of household waste away from landfill by 2040. Council also aims to eliminate food waste disposed to landfill in the medium term, well before 2040.

The plan builds on the achievements of the Waste and Resource Recovery Plan 2014-18 and has analysed the challenges and opportunities for waste avoidance and greater resource recovery in the coming years.

This Waste and Resource Recovery Plan 2018-2022 sets out sustainable waste management and resource recovery actions for the next four years and are presented under the following key action areas:

Engage the community to avoid waste and recover resources
- residents, businesses, schools and community sector

Enhance our services to improve recycling
- landfill, recycling and organic waste services
- branch and pruning collections
- hard waste collection
- Re-new collection
- expanding recycling options
- public place recycling

Planning and infrastructure for sustainable waste management
- Infrastructure to recover wastes
- Transfer station services
- Waste management in apartment buildings

Develop solutions for the future
- advanced waste technologies
- container deposit scheme

Create a cleaner Moonee Valley
- Litter and illegal dumping

Demonstrating leadership within Council's operations

Council's waste management performance and progress towards implementing actions will be reviewed annually and approaches adapted to continue to improve services, reduce waste and improve resource recovery rates.
1. Introduction and context

Australian households produce over 13 million tonnes of waste per year and the Moonee Valley community leads typical Australian, high-consumption lifestyles. If everyone in the world consumed as many natural resources as the average Victorian today, there would need to be three to four planets to sustain the state.

Globally, this level of resource consumption and associated waste generation cannot be sustained and requires major changes in consumption patterns.

1.1 Vision and targets

In MV2040, Council’s long-term strategy for the city, Council aspires to become ‘a city that rethink waste’.

Such a ‘rethink’ in Moonee Valley will need to be part of a change in mindset of the broader community towards becoming stewards of natural resources rather than primarily consumers and consequently, producers of waste.

It necessitates placing a much higher value on natural resources and considering the whole life cycle impacts of products and services. A much stronger focus on avoiding resource use in the first place is needed along with landfilling becoming obsolete. There’s considerable opportunity for sharing, repairing, repurposing and re-gifting before considering lower order options like recycling and energy recovery.

In line with MV2040, Council has set the following aspirational long-term waste and resource recovery targets:

- by 2040, 90% of household waste diverted from landfill to recover resources
- by 2030, zero food waste disposed to landfill.

Council acknowledges that achieving these ambitious targets depends on developments in the waste industry which are outside Council’s control, such as improved recycling technologies and changes to regulations and policies.
Interim targets and key performance indicators

To track progress towards the longer term 2040 targets, Council as set operational targets for 2022, summarised in Table 1 below, and will monitor waste and recycling performance against these indicators.

Note industry trends (outside of Council’s control) may impact on the potential to achieve the targets.

Table 1  Key performance indicators

<table>
<thead>
<tr>
<th>KPIs</th>
<th>Units</th>
<th>2016</th>
<th>2017</th>
<th>2022 target (compared to 2016 levels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling rate (commingled kerbside recycling and organics)</td>
<td>% by weight</td>
<td>42%</td>
<td>43%</td>
<td>56%</td>
</tr>
<tr>
<td>Amounts of recyclables in landfill bins</td>
<td>kg/person/year</td>
<td>32</td>
<td>32</td>
<td>Less than 7</td>
</tr>
<tr>
<td>Amounts of hard waste collected</td>
<td>kg/person/year</td>
<td>14</td>
<td>10</td>
<td>Less than 10</td>
</tr>
<tr>
<td>Contamination rate in recycling bin</td>
<td>% by weight</td>
<td>-</td>
<td>6%</td>
<td>Less than 5%</td>
</tr>
<tr>
<td>Contamination rate in organics bin</td>
<td>% by weight</td>
<td>-</td>
<td>2%</td>
<td>No more than 1%</td>
</tr>
</tbody>
</table>

1.2  Context

The Waste and Resource Recovery Plan 2018-2022 has been developed in the context of federal, state and local government plans, policies and regulations for waste management such as:

- *Moonee Valley’s Council Plan 2017-2021* which prioritises the continual provision of an efficient and effective waste collection system
- Moonee Valley’s *City Sustainability Policy 2013* which provides guidance around waste avoidance and minimisation within the community
- *MV2040* which is the overarching long-term strategy across different council sectors including waste management
- *Metropolitan Waste and Resource Recovery Implementation Plan 2016* which provides strategic guidance on Melbourne’s waste and resource recovery infrastructure
- *Statewide Waste and Resource Recovery Infrastructure Plan 2017-46 amendment consultation draft* which provides the long term strategic roadmap for waste and resource recovery infrastructure in Victoria
- *Environmental Protection Act 1970* which includes the waste management hierarchy (the underlying principle of waste management policies in Australia), establishing the order of preference for waste management

1.3  Role of Council

Moonee Valley City Council is committed to maintaining the municipality in a clean and sanitary state, planning for and providing community services and infrastructure, ensuring
that services are delivered in accordance with best value principles, and striving for continuous improvement in service delivery.

Council acknowledges that achieving the aspirational targets largely depends on developments in the waste industry that are outside Council's control, such as improved alternative waste treatment and resource recovery technologies and changes in the regulatory environment. Council has greater control over the services it delivers directly, such as kerbside collection services for garbage, recycling and organics (food and garden waste).

2. Progress so far

2.1 Performance and achievements

Some of the key actions and achievements by Council over the last four years include:

- kerbside food and garden waste collection trial in early 2016
- roll-out of the food and garden waste kerbside collection service across the municipality from late 2016
- provision of garbage and recycling service to over 48,000 properties
- provision of on-demand white goods pickup service for households
- educating residents about recycling food waste at home through My Smart Garden composting and worm farming workshops and resources
- provision of recycling stations at libraries for phones, batteries, printer cartridges, CD and DVDs
- provision of recycling infrastructure for community facilities and schools
- introducing a requirement for new multi-unit developments to have waste management plans.

The 2015-16 Local Government Community Satisfaction Survey shows high levels of satisfaction with Council's waste management services provided. Council scored 78, performing better than the state wide average (70) and inner metropolitan average (76).

2.2 Waste generation and material recovery

Around 51,300 tonnes of waste were generated within the municipality in 2016-17. Of this total, approximately 57% was sent to landfill while 43% was diverted for recycling.

Moonee Valley’s waste diversion rate is higher than some neighbouring councils, however Moonee Valley’s diversion rate is considered slightly below average the state average (44%) and metropolitan average (45%) (DELWP 2017a).

The majority of waste generated in Moonee Valley comes from kerbside collections and is equivalent to annual generation of around:

- 490 kg of garbage waste per household
- 216 kg of recyclables per household
- 249 kg of organic waste per participating household.
Compared to other Melbourne metropolitan councils, households in Moonee Valley are considered to be reasonably high waste generators (ranking 15th highest out of 31 metropolitan councils).

Total waste generation rates and population growth in Moonee Valley from 2008 to 2017 are shown in Figure 1. In the last four years, landfill waste tonnages have slightly increased while recyclables have decreased. The decline in recyclables is partly related to the growing trend in lighter packaging material and reduction in newspapers (due to on-line reading). Garden waste, hard waste and materials collected via Re-new have remained relatively steady.

![Figure 1](image1.png)

**Figure 1 Total waste and recycling generated 2008-2017**

Kerbside bin audits were carried out in September 2017. Results from the garbage bin audit (shown in Figure 2) indicate that organic waste comprised the largest proportion (more than 50% by weight), while 16% was recyclable materials. Compared to Sustainability Victoria’s 2013 kerbside garbage bin audit results, proportions of food waste and recyclables in Moonee Valley garbage bins are higher than the state-wide average.

![Figure 2](image2.png)
Results from the kerbside recycling audit are provided in Figure 3. This indicates that paper and cardboard made up the largest proportion (around 44% by weight) in recycling bins, followed by glass (around 30%). The contamination rate in the bins was around 14% which is much higher than the preferred industry maximum of around 5%.

Figure 3 Composition of materials in recycling bins, 2017

Figure 4 shows the results from the organics bin audit. This indicates that organic waste bins were comprised mostly of garden waste (around 97%) and only a small proportion of food waste (1%). The contamination rate in the organics bins was around 2% which is considered within acceptable levels for organics processing.

Figure 4 Composition of materials in organics bin, 2017

Future projections

Moonee Valley has a population of around 123,000. This is expected to grow to around 136,700 by 2027, an 11% increase. To accommodate the growing population, the number of medium-high density dwellings is likely to increase as low-density dwellings decline.

Future quantities of waste generated in Moonee Valley have been projected based on a ‘business-as-usual’ scenario, where the quantity of waste generated per capita and waste
composition are assumed to be constant. Based on these assumptions, it is estimated that by 2027 around 57,000 tonnes of waste would be generated each year (see Figure 5).

![Figure 5 Projected waste and recycling generation 2008-2027](image)

### 2.3 Council’s current services

Council delivers a range of waste and recycling services to over 48,000 properties.

- Kerbside collection services provided include:
  - Landfill: Garbage collections are carried out on a weekly basis using 120 L bins.
  - Commingled recycling: Collected fortnightly using a mix of 120 L, 240 L and 360 L bins.
  - Food and garden organics: Collected fortnightly from properties opting to participate in the service and sent to a compost facility to be turned into compost, reducing landfill disposal costs and highly polluting methane gas emissions.
  - Around two-thirds of properties have a 240 L organics bin and pay an annual fee for the service.
  - Hard waste: Collected once per year.
  - Branch and pruning kerbside collections
  - Re-new: Collected on a quarterly basis using the existing recycling bin until 2017/18.

These services are generally provided to single-unit dwellings and smaller multi-unit developments (MUDs), as new larger developments are usually required to engage a private collection service as part of their planning approval.

Council also offers landfill and recycling collection services to more than 900 local businesses. Businesses that choose to participate in this service are provided with a 240 L garbage bin collected weekly and a 240 L recycling bin collected fortnightly (or weekly).

Other services provided by Council include street sweepings, public place waste bin collections, clean-up of illegal dumping of waste and maintenance of litter traps.
There are also other waste services within the municipality but not provided by Council, such as white goods collections and household chemical collections.

### Table 2 Summary of kerbside collection services

<table>
<thead>
<tr>
<th>Bin type</th>
<th>Bin colour*</th>
<th>Bin size</th>
<th>Charge (2017)</th>
<th>Estimated properties serviced</th>
<th>Collection frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garbage - residential</td>
<td>Body: dark green</td>
<td>120 L</td>
<td>$76.50/year</td>
<td>49,900</td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>Lid: red</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garbage - commercial</td>
<td>Body: dark green</td>
<td>240 L</td>
<td>$90/year</td>
<td>900</td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>Lid: red</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling - residential</td>
<td>Body: dark green</td>
<td>120 L</td>
<td>$76.50/year</td>
<td>49,900</td>
<td>Fortnightly</td>
</tr>
<tr>
<td></td>
<td>Lid: yellow</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling - commercial</td>
<td>Body: dark green</td>
<td>240 L</td>
<td>$90.00/year</td>
<td></td>
<td>Weekly</td>
</tr>
<tr>
<td></td>
<td>Lid: yellow</td>
<td>360 L</td>
<td>$150.00/year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food and garden</td>
<td>Body: dark green</td>
<td>240 L</td>
<td>$71.50/year</td>
<td>33,400</td>
<td>Fortnightly</td>
</tr>
<tr>
<td>(optional)</td>
<td>Lid: light green</td>
<td></td>
<td>(free kitchen caddy)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Industry standard bin lid colours

### 2.4 Infrastructure

Council offers additional recycling opportunities at Moonee Valley transfer station for materials not collected through the kerbside service. This facility is open seven days a week, accepting a range of materials:

- aluminium
- batteries
- cooking oil
- engine oil
- e-waste
- fluorescent tubes and compact fluorescent lamps
- paint
- paper/cardboard
- plastics (codes 1-7)
- polystyrene
- mobile phones
- textiles
- steel and metal (guttering, appliances, whitegoods, bicycles)

The collection of many of these materials is supported by government and industry product stewardship programs such as *MobileMuster* and *TechCollect*, as well as Sustainability Victoria’s *Detox your home* collection of household hazardous waste.
Other materials accepted include:

- carpet
- hard waste
- mattresses
- garden waste
- gas bottles
- furniture items
- timber and fencing
- tyres

Moonee Valley residents are entitled to deposit a free car boot load of garden waste as well as to pick up compost at the transfer station.

Council has set up recycling stations around library facilities on a trial basis for the collection of household batteries, CD/DVDs, fluorescent tubes and globes, mobile phones and charges, printer cartridges and VHS/cassette tapes.

---

3. **Challenges and opportunities**

Over the next four years, Council will face a number of challenges in improving waste management and resource recovery. This section summarises these challenges and the opportunities to facilitate greater waste avoidance and resource recovery and improve waste service delivery.

3.1 **Community engagement and education**

Becoming a community that rethinks waste will require a change in mindset to place a much higher value on natural resources and a stronger focus on avoiding waste in the first place. To make strong progress towards the targets set, community engagement and education needs to be a prominent element of Council’s effort. Alongside recycling education where Council has long had a role, there’s considerable opportunity to engage the community around waste avoidance through sharing, repairing, repurposing and re-gifting. Council will pursue opportunities to:

- promote existing avenues for sharing, such as tool and equipment libraries or online sharing platforms
- work with the community on initiatives that enable repairing, reuse and skill sharing, such as swap parties, repair and upcycling workshops

While lower down the waste hierarchy, there is still considerable opportunity to reduce environmental impacts through increasing kerbside recycling rates. Recycling services and
approaches to behaviour change need to be adapted over time to accommodate changing demographics, such as more apartment living and lone-person households. A number of measures show the potential to improve community engagement and education around commingled recycling and the use of kerbside organics bins for food waste:

- higher than desirable contamination rates in kerbside recycling bins (around 14%)
- low proportions of food waste in kerbside organics bins (less than 2%)
- 42% of waste in landfill bins is food waste and 16% is recyclable material
- low participation rates in a number of Council waste services, including the Re-new collection (around 5% in 2017).

A 2017 survey of the community also indicated there are opportunities to improve understanding of correct bin use and the types of waste services available to residents, especially the ability to place food waste in organics bins to be turned into compost. Key results from the survey identified:

- over 40% of respondents were unaware food waste can be placed into kerbside organics bins
- over 40% were unaware that 240 L kerbside recycling bins can be upgraded to 360 L
- significant confusion about which materials could be recycled, especially plastics.

There are significant opportunities to enhance and expand community engagement and education programs by working with various groups (e.g. schools, businesses, community groups) as well as continuing to advocate for waste avoidance and minimisation. Community engagement and education campaigns need to be adapted to address these issues and provide more cost-effective services to the community.

Low levels of community engagement and education have both financial and environmental impacts. There’s opportunity for Council to increase organics and commingled recycling rates to gain better value for money for the services provided and to meet future waste targets (greater diversion rates, reduced contamination). It is proposed this will be done by:

- enhancing communications and education campaigns to improve reach
- developing targeted materials and distributing across various platforms and community networks
- providing feedback to the community on waste and recycling performance.

### 3.2 Improving kerbside services

**Increase use of organics bins for food wastes**

In addition to educating the community about placing food waste in the organics bin, there’s potential to improve food waste recycling rates through transitioning from the existing voluntary service to a universal service, whereby all households are provided an organics bin.
Council proposes to carry out trials of weekly organics collection and fortnightly garbage collection services with target group of households. Depending on the results of the trial, Council would then seek to transition to a universal organics collection for all households and fortnightly garbage collection service.

Bin contamination rates are generally higher for universal services which may impact the quality of outputs from organics processing. Tolerable levels of contamination levels can be achieved through community engagement and educational effort. Higher participation rates would increase the efficacy of the service.

There are two options available for the universal organics collection service, differing according to the frequency of bin collections:

- Option 1: Fortnightly organics bin collection and weekly landfill bin collection
- Option 2: Weekly organics bin collection and fortnightly landfill bin collection.

For each option, the cost of the service and tonnes of organics diverted from landfill have been estimated based on the assumptions outlined in Table 3 below.

A much less viable third option is to offer weekly services for both organics and landfill bin collection. This would be considerably more expensive and is not expected to be warranted given the projected amount of residual landfill waste would decline significantly once most food waste is sent for recycling via the organics bin.

### Table 3 Universal organics service assumptions

<table>
<thead>
<tr>
<th>Option 1</th>
<th>Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Around 50,000 properties have an organics bin</td>
<td>• Around 50,000 properties have an organics bin</td>
</tr>
<tr>
<td>• Organics bins are collected fortnightly, landfill bins collected weekly</td>
<td>• Organics bins are collected weekly, landfill bins are collected fortnightly</td>
</tr>
<tr>
<td>• 80% participation rate (around 39,900 properties serviced)</td>
<td>• 90% participation rate (around 44,900 properties serviced)</td>
</tr>
<tr>
<td>• Tonnes of organics generated per property and composition of organics remains the same</td>
<td>• Tonnes of organics generated per property and composition of organics remains the same</td>
</tr>
<tr>
<td>• 50% of food waste generated is diverted per household</td>
<td>• 80% of food waste generated is diverted per household</td>
</tr>
<tr>
<td>• 80% of garden waste generated is diverted per household</td>
<td>• 90% of garden waste generated is diverted per household</td>
</tr>
<tr>
<td></td>
<td>• Additional 20% of recyclables recovered from garbage bins</td>
</tr>
</tbody>
</table>

Under Option 1, around 13,500 tonnes of organic waste are estimated to be collected (which is an additional 5,200 tonnes per year). This could potentially increase the total diversion rate of municipal waste by 10% (from 43% to 53%) assuming quantities of waste generated from other streams remains constant.

Under Option 2, more than 17,000 tonnes of organic waste are estimated to be diverted from landfill, which is more than double the amount diverted in 2017. The total diversion rate
could increase by 17% (from around 43% to 60%). Similar to Option 1, this assumes that the quantities of waste from other streams remain the same.

There is currently one bin size available to all households who opt in to the organics service - 240 litres. With a growing portion of households living in dwellings with smaller garden spaces, Council could investigate offering smaller organics bin size (80 or 120 litres) to meet the needs of households who generate very little garden waste but need a food waste recycling option.

Advantages and disadvantages of the current voluntary service and universal services are summarised in Table 4 below. This analysis indicates moving to a universal weekly organics collection and fortnightly garbage collection service as the preferred option.

Table 4 Advantages and disadvantages of kerbside organics collection services

<table>
<thead>
<tr>
<th>Service</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| Voluntary organics (base case) | • Maintains level of service to community  
• No change to service and additional costs  
• Reduced greenhouse gas emissions from landfill | • Low participation rates and value for money  
• Low diversion of food waste from landfill  
• Requires more community engagement and education |
| Universal organics (fortnightly) | • Potential increase in diversion rate (around 10%)  
• Reduced greenhouse gas emissions from landfill  
• Increased level of service to community | • Requires supply of organics bin to properties without a bin  
• Potential increase in bin contamination  
• Requires community engagement and education programs |
| Universal organics (weekly)  | • Potentially larger increase in diversion rate (around 17%)  
• Reduced greenhouse gas emissions from landfill  
• Increased level of organics service to community | • Reduced level of landfill bin service to community  
• Requires supply of organics bin to properties without a bin  
• Requires community engagement and education programs  
• Potential increase in bin contamination |

Branch and pruning collection

For many years Council has offered a range of avenues for the disposal of garden waste within Moonee Valley including twice-yearly branch and pruning collections, kerbside organics bins and free boot-load drop-offs at Moonee Valley transfer station.

Quantities of garden waste collected via the branch and pruning service has declined since 2011 as shown in Figure 6.
Figure 6 Quantities of branch and pruning collection, 2008-2017

Community survey results indicate more than 70% of Moonee Valley respondents dispose of garden waste via their organics bin while a diminishing number are using the branch and pruning service (Figure 6). There is also a trend towards residents living in dwellings with smaller garden areas and spending less time gardening. This trend is consistent with other comparable councils, where usage levels of similar branch and pruning services diminish as more residents make use of the more frequent kerbside collection service.

As this trend continues, service costs are likely to increase, providing lower value for money to the community. There is an opportunity to provide more cost-effective garden waste services with higher environmental benefits to the community by focusing on improving existing services, such as kerbside organics bins, which provide a higher level of service to the community.

To best meet the changing needs of the community, Council proposes to:

- trial reducing the branch and pruning collection frequency to one collection per year
- continue to enable residents to deposit a boot load of green waste at the transfer station
- continue to offer 240L green-lid organics bins
- determine whether resident needs are met sufficiently with organics bins and transfer station services and consider offering an at-call branch and pruning collection as part of an at-call service for hard waste.
**Hard waste collection**

In 2015, almost 65% of metropolitan councils (20 out of 31 metropolitan councils) offered an ‘at call’ hard waste collection service, while only seven councils including Moonee Valley offered the staged collection across the municipality by collection area. Many Melbourne metropolitan councils are moving to an ‘at call’ hard waste collection service to create more opportunities for resource recovery, improve amenity and minimise health and safety risks.

In 2017, around 1,500 tonnes of hard waste were collected and landfilled in Moonee Valley. There is an opportunity to increase waste recovery and provide a more convenient community service by moving to an ‘at call’ hard waste collection service. ‘At call’ services by other Councils generally result in recycling rates of around 20-30% (the metropolitan average is around 24%).

Council proposes to transition to an ‘at-call’ service for hard waste services, with 1-2 free collections per household per year. Council could consider additional collections being provided at full cost.

Residents would be entitled to more collections throughout the year as needed which can reduce the number of dumping incidences, particularly around apartment buildings. The service needs to be promoted to ensure residents, including tenants, know how to take up the service.

Advantages and disadvantages of blanket and ‘at call’ hard waste collection services are summarised in Table 5 below. This indicates contracting out an ‘at call’ hard waste collection would be the preferred option. Note that the collection of branch and pruning together with the booked hard waste collection was considered. However, this would be an added cost which may not be warranted given that there are already other existing avenues for garden waste disposal (e.g. organics bins, transfer station drop-offs).

**Table 5 Advantages and disadvantages of hard waste collection services**

<table>
<thead>
<tr>
<th>Service</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| Blanket collection | • Residents are familiar with the current service  
• No changes to service required | • Collections limited to one per year  
• Untidy streets from hard waste being out on streets for longer periods creating amenity issues  
• Residents are allowed 2cm³ of hard materials, however this is unregulated and often materials exceeding this amount are put out for collection and cannot be attributed to one specific residence  
• Large amounts of material on the footpath block access for residents and create a road safety hazard  
• Blanket collections (unmonitored) invite the dumping of hazardous materials |

---

16
• Materials left out for collection over long periods of time invite illegal dumping from residents of other municipalities
• Hard waste materials left for collection over longer periods of time results in scavenging and litter (materials being moved from outside residences)
• Materials left for collection by residence not paying a ‘waste charge’ cannot be identified i.e. from multi-unit dwellings
• Very low diversion rates, almost all of the material collected is landfilled
• Presentation rates and bench line data are unmonitored

At-call collection (external)

• Collections better match resident’s needs
• The amount of materials left for collection can be monitored to ensure only 2cm³ are placed on the kerbside
• Reduction of litter and scavenged materials
• Discourages illegal dumping of large amounts of materials from outside the municipality
• Booked collection means any hazardous materials can be identified and communicated to the resident
• Good opportunity for recycling and increased material diversion
• Improved amenity - hard waste out for shorter periods
• Opportunity to collect data and monitor trends

• Requires tendering
• Change in service needs to be promoted

Re-new collection

Known as the ‘Re-new’ initiative, every three months residents can place recyclable household goods (including clothing, shoes, toys, books, mobile phones, printer cartridges) into their existing recycling bin for collection by Council's recycling contractor.

In 2017, around 80 tonnes of material were collected, with 83% recovered and 17% landfilled. Most of the materials recovered were textiles and shoes (around 65%) followed by electrical items (10%), paper and books (4%) and plastics (3%).

Average usage rates have declined in the last two years from 8% in 2015 to around 5% in 2017. Likely reasons for declining usage rates include:

• other services and charity groups collecting the same materials. There are around 65 bins located across the municipality that accept the same materials as the Re-new service, and residents regularly receive free coloured plastic bags in their mail boxes to be filled with household items and left at the mail box for pick up. The community survey also indicated that many households (89% of respondents) donate smaller household waste items, such as clothes and toys to charities.
• low community awareness of collection dates and materials accepted, as shown by community survey results.
Maintaining or increasing usage rates in the future may be challenging given that there are other services and charity groups collecting the same materials. As such, usage rates may continue to decline, reducing the value for money of the service.

Discontinuing the Re-new service provides greater opportunities to promote alternative services that are more cost effective while maintaining the level of service to the community (i.e. mobile recycling hubs, existing recycling bins across the city).

To provide more cost-effective services to the community, Council proposes to discontinue the Re-new initiative and promote alternative options to recover these wastes including:

- rolling out additional recycling hubs at libraries to accept small e-waste items (phones, DVDs/CDs, printer cartridges)
- promote existing options, such as charity bins, sharing platforms and other options for reuse of clothing, footwear and household items especially those that support charities.
- explore the use of mobile recycling hubs at key locations that accept the same range of wastes as the Re-new service.

**Expanding kerbside recyclables**

This year the Australian recycling industry has been impacted by the Chinese ban on importing certain wastes for reprocessing, including plastic and mixed paper. The future impact on plastics recycling is uncertain, however there is likely to be a decrease in the commodity prices of recyclables, decreased revenue from recyclables for Councils and increased usage of virgin materials until alternative markets are identified or local reprocessing options are established.

As recycling technologies develop further with reliable recycling facilities and markets, there are opportunities to increase the range of materials recycled. Soft plastics are the fastest growing packaging material, making up around 5 per cent of the total proportion of landfill bins by weight, due to an industry trend towards lighter packaging material and away from heavier packaging, such as glass. This proportion is anticipated to increase in landfill bins after the high proportions of organics is diverted.

Commencing with a trial through the Metropolitan Waste and Resource Recovery Group (MWRRG), four Councils introduced flexible plastics collection as part of their kerbside recycling services. Since then, demand for soft plastics has reduced and local recyclers are unlikely to accept soft plastics in the near future. For soft plastic recycling to be viable, there may need to be upgrades at recycling facilities, local markets developed and considerable consultation with stakeholders. Council will continue to monitor opportunities and liaise with MWRRG to work towards improving recovery rates of kerbside wastes currently sent to landfill.

There are also other avenues available in the municipality for recycling plastic bags, such as major supermarkets. Council can promote existing recycling points as well as investigating alternative soft plastic recycling options as they become available.

**Businesses**

Council currently provides collection services to around 900 businesses, which represents around 9% of the total businesses in Moonee Valley. Increasing business participation rates could further minimise waste and increase recycling.

There is a near term opportunity to deliver waste reduction programs, supported by an engagement and education component to businesses that focuses on priority wastes, such as trialling the use of organics bins for food waste by cafes and restaurants.
Council could also engage further with businesses in key commercial areas to determine their priority wastes, service needs and jointly develop initiatives that avoid waste and increase resource efficiency. (e.g. central recycling hubs).

3.3 Infrastructure

Infrastructure for e-waste recycling

The Victorian Government is developing regulations to ban e-waste from landfills by July 2018. The ban will cover any items with a cord or utilising batteries and could result in large quantities of e-waste (such as televisions, computers, mobile phones, whitegoods, etc.) being sent to recycling facilities for temporary storage and sorting.

Across the state, there will be a need for permanent drop-off points and a series of e-waste collection events. Moonee Valley transfer station is currently the primary recycling facility in the community and needs to have adequate capacity in the short to medium term, to accept additional e-waste as well as other recyclables in the future.

Transfer station services

Located in Moonee Ponds, the transfer station currently services the community seven days a week, accepting a wide range of waste streams (as described in Section 2.4). In its prime location by the Maribyrnong River and adjacent to the Incinerator Gallery, the Transfer Station is on land with great potential for other higher value cultural and open space uses. Since the establishment of the transfer station, environmental standards and siting requirements have become more stringent. There are limited suitable locations to site a new, modern transfer station in the City of Moonee Valley.

There is an opportunity for Council to reassess the location, condition and operation of the transfer station to better meet the needs of the community. Council proposes to conduct a detailed study on options for managing wastes currently received by the transfer station, analyse alternative service models and locations that would achieve strong social, environmental and economic outcomes.

Community reuse or repair hubs

Temporary spaces where people come together to repair and repurpose materials, such as Repair Cafes, are becoming increasingly popular. There’s potential for Council to work with community champions, existing groups and facilities, such as community centres and the Men’s Sheds, to provide such spaces.

The potential for a permanent resource recovery hub (e.g. a tip shop) can be considered within the scope of the options study for Transfer Station services.

Advanced waste technologies

There is an industry trend towards establishing advanced waste technologies (AWT) such as anaerobic digestion, pyrolysis and other waste to energy technologies, and away from
landfilling operations. AWTs processing municipal solid waste generally have high capital costs and require large throughput volumes (typically more than 100,000 tonnes per year) to be financially viable. As such, regional facilities are more likely to be established and are being explored by the MWRRG. Council will continue to stay involved in opportunities for regional collaboration via the MWRRG and other partners.

**Container Deposit Schemes**

All states except Victoria and Tasmania have established or plan to introduce a container deposit scheme and there may be pressure on the Victorian Government to follow. It is uncertain how a Victorian scheme would work and what the impacts would be, however based on findings from other states:

- Council could see lower yields through kerbside recycling as residents send eligible containers to refund collection points. This could negatively impact revenue from the sale of recyclables which currently offsets recycling collection and processing costs.
- Council could see an increase in containers at the transfer station or other approved collection points. In this case, data monitoring and reporting systems would need to be improved.

### 3.4 Waste and recycling in apartment buildings

Providing waste and recycling services to apartment buildings can be challenging due to access issues and typically higher contamination levels as a result of higher turnover in occupancy.

At present, Council typically provides kerbside services to smaller Multi-Unit Developments (MUDs). Larger MUDs are required at the planning permit stage to incorporate private collection arrangements and they do not pay a waste management charge.

The number of larger MUDs in Moonee Valley is predicted to more than double within the next five years, from 760 MUDs in 2017 to 1,700 by 2020.

Council’s ability to influence or control the management of waste from MUDs could be more difficult in future as more high-density developments would be serviced by private collectors. There is an opportunity for Council to provide collection services to MUDs through contracting appropriately sized vehicles and services. Council intends to pilot the approach with one development to assess the feasibility of servicing larger MUDs.

Council will also periodically review and update the Waste Management Plan Guidelines for Planning Applicants to ensure that new developments are designed, built and operated to enable resource recovery, such as requiring on-site recycling infrastructure.
3.5 Public place recycling

There is some inconsistency in the approach to recycling in Moonee Valley with recycling access provided to the community within most environments - homes, schools, workplaces and some shopping centres - but not in public places. PPR bins are common in some councils and have been successful in diverting some recyclables from public waste bins, however contamination is often a key issue. Given the recent uncertainty in the recycling industry, any discussions with recycling contractors around public place recycling options for Moonee Valley would be best once there’s clarity around markets and processing facilities in the longer term.

These dual bins can be expensive to install and service, so in future Council could consider leasing PPR bins on a trial basis, educating the public and monitoring the effectiveness (i.e. contamination and recycling rates) prior to full roll-out. Trial PPR bins could be located in litter hotspot areas identified from litter audits, such as sporting grounds or shopping strips.

3.6 Litter and illegal dumping

Litter and illegal dumping remains a challenge for Moonee Valley with around 70 incidences reported each week. Litter is currently collected by Council and sent to landfill for disposal. There are opportunities to minimise the number of incidences by:

- monitoring illegal dumping, analysing data and developing targeted interventions at each identified hotspot (e.g. installation of cameras, regular clean-up patrols)
- improving education programs to raise awareness and encouraging the community to report illegal dumping
- improving infrastructure (e.g. public place waste and recycling bins, gross pollutant traps, litter fences) in key locations to minimise litter.

3.7 Demonstrating leadership in Council’s operations

Council is committed to demonstrating leadership by reducing waste within its own operations, and achieving the associated environmental and financial benefits. Council sees the following as opportunities:

- continuing to focus on sustainable procurement by requiring suppliers to demonstrate waste minimisation and evaluate responses in the standard procurement documentation
- actively seeking opportunities to reduce waste and increase recycling in day-to-day operations through the Green@Work initiative
- promoting ‘waste-wise’ council events
- implementing Council’s sustainable buildings policy to require new buildings to minimise waste, reuse and recycle waste across the full building lifecycle
- periodically assessing Council’s waste streams to determine recycling rates and levels of contamination, provide feedback to staff and roll out waste initiatives to improve performance.
3.8 Scenarios

Based on the review of waste services and actions to be implemented as per the Action Plan, the following scenarios have been assessed:

- Scenario 1 – ‘business as usual’ (BAU)
- Scenario 2 – kerbside garbage, recycling and organics bin services stay the same, with other service changes
- Scenario 3 – universal organics service (weekly organics, fortnightly landfill bin collection) with other service changes.

The service changes for each scenario are outlined below.

Scenario 1- ‘Business as usual’

Under the ‘business as usual’ (BAU) scenario, no changes would be made to the existing services provided in Moonee Valley.

The level of community engagement and education programs would also remain the same. Based on this, participation rates for particular services (i.e. Re-new and branch and pruning collections) would continue to decrease.

To achieve Council’s future aspirational target of 90% waste diversion by 2040, Council would need to achieve an interim target diversion rate of around 56% by 2022. However, under Scenario 1, the diversion rate is estimated to remain around 43% which equates to roughly 23,600 tonnes of waste diverted from landfill.

Industry trends are also likely to impact on future waste diversion rates achieved as well as revenue from recyclables under BAU. The proposed ban by the Chinese Government will impact the viability of recycling, as recycling costs increase for Council.

Scenario 2 – Kerbside garbage, recycling and organics bin services stay the same with other service changes

Under Scenario 2, kerbside garbage, recycling and organic bin collection services would remain the same. Main service changes for this scenario would include:

- Enhancing community engagement campaigns to increase usage/participation across all services and reduce contamination rates.
- Transitioning to a booked hard waste collection provided by a private contractor. It is assumed that two free collections per household would be provided; additional requests would be available for a fee. A number of issues would need to be considered in implementing this service such as:
  - tendering to contract out the service
  - working with charities to increase recycling
  - ensuring adequate systems are in place to record and respond to collection requests
  - allowing sufficient time between promoting the service change within the community and implementing the service (to minimise the potential for illegal dumping)
  - promoting the service across a wide spectrum of platforms including Council website, social media, local newspapers, e-newsletters, letters to householders, etc.
• Reducing branch and pruning service to once per year.
• Discontinuing Re-new collection and trial pop-up events. The kerbside Re-new service collects the same materials as other recycling companies and charity groups in the municipality. By promoting the existing services by these groups and providing alternative community opportunities for recycling (e.g. pop-up events), Council could maintain the level of service provided to the community even if the Re-new service is discontinued.
• Continuing to monitor opportunities to expand recycling.
• Conducting a detailed study of the transfer station. This would involve a two-stage process: a siting analysis followed by a detailed investigation of the feasibility of the site including a sustainability assessment and cost benefit analysis.
• Trialling Council collection services for larger MUDs.
• Trialling public place recycling bins. Five PPR bins would be leased for a duration of six months. Public place waste bin audits would be conducted to assess the outcomes. If the trial is successful, additional PPR bins would be installed across the municipality.

Based on Scenario 2, around 25,500 tonnes of waste would be diverted from landfill which equates to a diversion rate of roughly 47% by 2022. This is less than the internal interim target of 56% outlined in MV2040.

Scenario 3 – Universal organics service (weekly organics, fortnightly landfill bin collection) with other service changes

This scenario involves similar service changes to Scenario 2 however a weekly universal organics collection and fortnightly landfill bin collection service would be implemented. A summary of the key changes/actions are outlined below:

• Enhanced community engagement and education campaigns to encourage higher usage rates of Council services (including local businesses), raising awareness levels to reduce illegal dumping, contamination rates and increase recycling.
• Weekly universal organics collection and fortnightly garbage collection. A range of issues would need to be considered such as:
  - provision of organics bins to properties that do not have a bin and those without a garden
  - equity issues related to costs and introducing new bin size options for landfill and organics bins
  - the feasibility of reducing landfill bin collections from a weekly service to fortnightly
  - ensuring contracts allow for trials and expansion of services
  - education programs for new users.

It is envisaged that a 12-month trial would be conducted before fully implementing the service. This would allow any servicing issues to be addressed early to minimise the financial impacts, better gauge program scheduling and allow communication and education programs to be fine-tuned. Bin audits would also need to be conducted as part of the trial to assess the outcomes and feasibility of rolling-out the service across the municipality. Note collection contracts would need to allow for trials to be conducted as well as full roll-out across the municipality if successful.
• Discontinuing branch and pruning collection. The timeframe for implementing the weekly universal organics service would be set up to coincide with the discontinuation of the branch and pruning service. This would ensure the level of service to the community is maintained (or possibly increased) given that organics collections would be more frequent.

• Transitioning to a booked hard waste collection provided by a private contractor. Similar to the previous scenarios, it has been assumed that two free collections per household would be provided; additional requests would be available for a fee.

• Discontinuing Re-new collection and trialling mobile recycling options.

• Continuing to monitor opportunities to expand recycling.

• Conducting a detailed study of the transfer station. This would involve a two-stage process: a siting analysis followed by a detailed investigation of the feasibility of the site including a sustainability assessment and cost benefit analysis.

• Trialling Council collection services for larger MUDs.

• Trialling public place recycling bins. Five PPR bins would be leased for a duration of six months. Public place waste bin audits would be conducted to assess the outcomes. If the trial is successful, additional PPR bins would be installed across the municipality.

Note Scenario 3 would require ramped up community engagement and education campaign to provide greater value for money of the services provided.

Based on Scenario 3, it is estimated around 34,000 tonnes would be diverted from landfill by 2022. This would be a diversion rate of around 63% which is estimated to meet the ambitious interim target of 56% by 2022 in accordance with MV2040.

3.9 Monitoring and evaluation

Approach to monitoring and evaluation

The action plan should be reviewed annually to assess Council’s performance and identify the next set of actions to be implemented in the following years. A detailed review of the 2018-2022 waste and resource recovery plan would need to be conducted in the third year (2021) to inform the next four-year plan.

Key indicators

Council should continue to monitor and report on waste and recycling performance indicators to relevant statutory authorities in accordance with mandatory reporting requirements. These include:

• annual kerbside waste and recycling services data to Sustainability Victoria
• kerbside waste data for ‘Know your Council’ developed by the Department of Environment, Land, Water and Planning.

Council should also consider monitoring non-mandatory performance indicators set out in MV2040 which are summarised in Table 6. These are interim targets that work towards achieving the ambitious waste target of 90% diversion by 2040. Note industry trends (outside of Council’s control) may impact on the potential to achieve the targets.
### Table 6  Key performance indicators

<table>
<thead>
<tr>
<th>KPIs</th>
<th>Units</th>
<th>2016</th>
<th>2017</th>
<th>2022 target (compared to 2016 levels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversion rate (recycling and organics)</td>
<td>% by weight</td>
<td>42%</td>
<td>43%</td>
<td>56%</td>
</tr>
<tr>
<td>Amounts of recyclables in landfill bins</td>
<td>kg/person/year</td>
<td>32</td>
<td>32</td>
<td>Less than 7</td>
</tr>
<tr>
<td>Amounts of hard waste collected</td>
<td>kg/person/year</td>
<td>14</td>
<td>10</td>
<td>Less than 11</td>
</tr>
<tr>
<td>Contamination rate in recycling bin</td>
<td>% by weight</td>
<td>-</td>
<td>6%</td>
<td>Less than 5%</td>
</tr>
<tr>
<td>Contamination rate in organics bin</td>
<td>% by weight</td>
<td>-</td>
<td>2%</td>
<td>No more than 1%</td>
</tr>
</tbody>
</table>

## 4. Action Plan

Appendix A shows the four-year action plan setting out the timeframes, responsibilities for implementation and estimated resources. This action plan will be reviewed annually to assess Council’s waste management performance and approach to ensure continual improvement in the following years.
### Action Plan 2018-2022

<table>
<thead>
<tr>
<th>Action description</th>
<th>Timing (year)</th>
<th>Responsibility</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community engagement and education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Increase communications and education activities to engage the community to</td>
<td>2018/19 onwards</td>
<td>Environment Communications Operations</td>
<td>In 2018/19 budget</td>
</tr>
<tr>
<td>avoid waste and increase resource recovery. The approach will include broad</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>communications across various platforms as well as targeted programs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 Engage the community to value resources and avoid waste in the first place</td>
<td>2018/19 onwards</td>
<td>Environment Communications</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>through:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>promote existing avenues for sharing, such as tool and equipment libraries or</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>online sharing platforms</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>work with the community on initiatives that enable sharing, repairing and skill</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>transfer, such as repair workshops</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3 Partner with others and leverage off other major communications educational</td>
<td>Ongoing</td>
<td>Communications, Environment Operations</td>
<td>Within existing</td>
</tr>
<tr>
<td>initiatives, such as the state government’s Get It Right on Bin Night and Planet</td>
<td></td>
<td></td>
<td>resources</td>
</tr>
<tr>
<td>Ark’s Recycling Near You.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4 At Council’s events and events on Council land, implement measures to reduce</td>
<td>Ongoing</td>
<td>Environment Arts and Culture</td>
<td>Within existing</td>
</tr>
<tr>
<td>waste and litter, encourage recycling, including providing infrastructure,</td>
<td></td>
<td>Communications Operations</td>
<td>resources</td>
</tr>
<tr>
<td>working with event holders and vendors, providing sustainable events guidance,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>updating events procedures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5 Continue to implement Council’s Wipe Out Waste education program to schools,</td>
<td>Ongoing</td>
<td>Environment</td>
<td>In 2018/19 budget</td>
</tr>
<tr>
<td>providing waste auditing supporting, incursions and recycling infrastructure.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6 Through the Early Years Environment Network support family and children’s</td>
<td>Ongoing</td>
<td>Environment Family and Children’s</td>
<td>Within existing</td>
</tr>
<tr>
<td>centres to avoid waste, increase recycling and engage young people around waste</td>
<td></td>
<td>Services</td>
<td>resources</td>
</tr>
<tr>
<td>reduction.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.7 Through Council’s Sustainability Champions program and community grants,</td>
<td>2018 onwards</td>
<td>Environment</td>
<td>Within existing</td>
</tr>
<tr>
<td>support local people with initiatives to reduce waste.</td>
<td></td>
<td></td>
<td>resources</td>
</tr>
<tr>
<td>Action description</td>
<td>Timing (year)</td>
<td>Responsibility</td>
<td>Resources</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>1.8 Carry out kerbside bin spot checks to determine levels of bin contamination and provide feedback to households and the wider community.</td>
<td>Ongoing</td>
<td>Operations</td>
<td>In 2018/19 budget</td>
</tr>
<tr>
<td>1.9 Work with local cafes and restaurants to trial the use of organics bins for food waste recycling.</td>
<td>2018/19</td>
<td>Environment Operations</td>
<td>In 2018/19 budget</td>
</tr>
<tr>
<td>1.10 Engage with local businesses to determine other priority waste streams to be reduced and opportunities to avoid waste and increase resource efficiency (e.g. recycling hubs within commercial developments / shopping centres).</td>
<td>2019/20</td>
<td>Environment Operations</td>
<td>In 2018/19 budget</td>
</tr>
<tr>
<td>1.11 Continue to deliver waste education events and workshops, including upcycling, reuse and repair through Council’s Green Living program, and composting and worm farming workshops through the My Smart Garden program.</td>
<td>ongoing</td>
<td>Environment</td>
<td>Within existing resources</td>
</tr>
</tbody>
</table>

**Kerbside services**

<table>
<thead>
<tr>
<th>Action description</th>
<th>Timing (year)</th>
<th>Responsibility</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Ensure future waste disposal and collection contracts have strong performance targets and provide for trials and modification and expansion of services over the life of the contracts.</td>
<td>2018-19</td>
<td>Procurement Operations Environment</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>2.2 Undertake annual kerbside bin audits in order to track recycling rates and levels of contamination.</td>
<td>2018-19 onwards</td>
<td>Environment</td>
<td>In 2018/19 budget</td>
</tr>
<tr>
<td>2.3 Continue to limit the provision of an additional landfill bin to residents with special circumstances. Undertake annual checks of residents with an additional bin to ensure needs are still met.</td>
<td>ongoing</td>
<td>Operations</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>2.4 Implement a weekly organics collection and fortnightly garbage collection trial to a targeted group of households with changes to bin sizes as necessary.</td>
<td>2018-19</td>
<td>Environment Operations</td>
<td>In 2018/19 budget</td>
</tr>
<tr>
<td>2.5 Review the outcomes from the organics trial and assess the feasibility of transitioning to a universal weekly organics collection for all households.</td>
<td>2019-20</td>
<td>Environment Operations</td>
<td>Future operating budget</td>
</tr>
<tr>
<td>2.6 Investigate organic waste recycling options that meet the needs of residents in apartments or with limited outdoor space, such as smaller organic bin sizes or communal food waste recycling facilities.</td>
<td>2018-19</td>
<td>Environment Operations</td>
<td>In 2018/19 budget</td>
</tr>
<tr>
<td>Action description</td>
<td>Timing (year)</td>
<td>Responsibility</td>
<td>Resources</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>-----------</td>
</tr>
<tr>
<td>2.7 Transition to an 'at call' hard waste collection service, with roll out to commence in 2019.</td>
<td>2018-19</td>
<td>Operations Procurement Communications</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>2.8 Discontinue the Re-new service and promote alternative options, including supporting local charities and the use of Council's recycling stations.</td>
<td>2018-19</td>
<td>Operations Communications</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>2.9 Periodically review Council’s garbage charge, based on the costs of providing waste services and other developments in the waste sector.</td>
<td>As needed</td>
<td>Operations Finance</td>
<td>Within existing resources</td>
</tr>
</tbody>
</table>

**Infrastructure to increase reuse and recovery**

**Transfer station**

<table>
<thead>
<tr>
<th>Action description</th>
<th>Timing (year)</th>
<th>Responsibility</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Ensure Council’s recycling infrastructure and services have sufficient capacity to meet future demands from the e-waste landfill ban.</td>
<td>2018</td>
<td>Operations</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>3.2 Conduct a detailed study on options for providing services currently met by the existing transfer station in Moonee Ponds.</td>
<td>2018-19</td>
<td>Operations</td>
<td>In 2018/19 budget</td>
</tr>
<tr>
<td>3.3 Investigate short term options to improve efficiency of operations at the transfer station, such as polystyrene compaction.</td>
<td>2018</td>
<td>Operations</td>
<td>Within existing resources</td>
</tr>
</tbody>
</table>

**Other resource recovery options**

<table>
<thead>
<tr>
<th>Action description</th>
<th>Timing (year)</th>
<th>Responsibility</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4 Develop new partnerships to establish repair and reuse hubs (e.g. local community centres, cafes and Men’s Shed) and identify funding / grant opportunities.</td>
<td>2019-20</td>
<td>Environment Operations</td>
<td>Future operating budget</td>
</tr>
<tr>
<td>3.5 Install additional specialty recycling stations at libraries (as space permits) and consider recycling hubs in other high profile locations in the city.</td>
<td>2018-19</td>
<td>Environment Operations</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>Action description</td>
<td>Timing (year)</td>
<td>Responsibility</td>
<td>Resources</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>---------------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>3.6 Monitor industry trends and proposed government regulation and plan for future waste management needs (e.g. Alternative Waste Technology, container deposit legislation.)</td>
<td>ongoing</td>
<td>Operations Environment</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>3.7 Promote existing recycling options for soft plastics and explore kerbside soft plastic recycling options as they become viable.</td>
<td>As options become viable</td>
<td>Operations Environment</td>
<td>Within existing resources</td>
</tr>
<tr>
<td><strong>Multi-unit developments</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Determine waste services to provide for larger Multi Unit Developments, carry out trial services and establish requirements for broader roll out in time for collection contract renewal in 2019.</td>
<td>2018-19</td>
<td>Operations Environment</td>
<td>Within existing resources</td>
</tr>
<tr>
<td><strong>Public place recycling</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1 Carry out a trial of public place recycling bins in key locations, such as sports clubs and shopping strips (timing is dependent on certainty of markets and processing facilities for recyclables).</td>
<td>Depends on certainty of recycling options</td>
<td>Operations</td>
<td>In 2018/19 budget</td>
</tr>
<tr>
<td>5.2 Assess the PPR bin trial to determine the feasibility of expanding the service across the municipality.</td>
<td>Depends on certainty of recycling options</td>
<td>Operations</td>
<td>Operational</td>
</tr>
<tr>
<td><strong>Litter and illegal dumping</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1 Monitor illegal dumping, analyse data and develop targeted interventions at each identified hotspot (e.g. installation of additional cameras and regular clean-up patrols).</td>
<td>Ongoing</td>
<td>Local Laws</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>6.2 Implement targeted litter reduction initiatives at key locations, such as sports clubs and shopping strips.</td>
<td>2018/19</td>
<td>Environment</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>6.3 Carry out a litter trap study to identify litter hotspots and strategic locations for additional gross pollutant traps. Work with relevant organisations to install gross pollutant traps where necessary.</td>
<td>2018/19 onwards</td>
<td>Environment</td>
<td>Within existing resources</td>
</tr>
<tr>
<td><strong>Advocacy and partnerships</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Action description</td>
<td>Timing (year)</td>
<td>Responsibility</td>
<td>Resources</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>--------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>7.1 Stay abreast of developments in the waste industry and regulatory environment and advocate for the best outcomes for Council (e.g. alternative waste technologies, container deposit legislation).</td>
<td>ongoing</td>
<td>Environment Operations</td>
<td>Within existing resources</td>
</tr>
<tr>
<td>7.2 Engage in regional partnerships and forums to identify and develop emerging waste recovery options and the provision of waste at services at an appropriate scale.</td>
<td>ongoing</td>
<td>Operations</td>
<td>Within existing resources</td>
</tr>
</tbody>
</table>

**Waste management within Council’s operations**

| 8.1 Through Council’s Green@Work initiative, engage staff around waste avoidance, reuse and recycling, such as reducing single use items, paper and other resources and reinforcing recycling education. | ongoing       | Environment Green@Work champions    | Within existing resources     |
| 8.2 Assess Council’s waste streams to determine recycling rates and levels of contamination, provide feedback to staff and roll out waste initiatives to improve performance. | annually      | Environment Green@Work champions    | Within existing resources     |
| 8.3 During Council’s procurement of products and services, consider the whole lifecycle impacts and require suppliers to demonstrate waste avoidance and efficient use of resources. | ongoing       | Procurement Environment              | Within existing resources     |
| 8.4 Implement Council’s Sustainable Buildings Policy to require new buildings minimise waste, reuse and recycle waste across the full building lifecycle. | ongoing       | Major Projects Environment           | Within existing resources     |

**Construction and demolition waste**

| 9.1 Continue to reduce the impacts of construction and demolition waste, through requirements in Construction Management Plans for new developments along with education and compliance activity | ongoing       | Statutory Planning                   | Within existing resources     |

**Monitoring and evaluation**

<p>| 10.1 Monitor waste amounts managed through each waste service, report on key indicators and review effectiveness annually | Ongoing       | Operations                           | Within existing resources     |
| 10.2 Undertake annual kerbside bin audits in accordance with best practice guidelines in order to track recycling rates and levels of contamination. | Ongoing       | Environment                          | In 2018/19 budget             |</p>
<table>
<thead>
<tr>
<th>Action description</th>
<th>Timing (year)</th>
<th>Responsibility</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.3 Continue to monitor community satisfaction with Council’s waste services though the community survey</td>
<td>Ongoing</td>
<td>Operations</td>
<td>Within existing resources</td>
</tr>
</tbody>
</table>
5. References for additional information

DELWP (2017a) *Know your Council Moonee Valley City*, State of Victoria, Melbourne
Moonee Valley City Council *Council Plan 2017-2021*
Sustainability Victoria (2016) *Victorian Waste Education Strategy*, Sustainability Victoria, Melbourne
Sustainability Victoria (2017) *Statewide Waste and Resource Recovery Infrastructure Plan 2017-46 Amendment Consultation draft*, Sustainability Victoria, Melbourne