

## CITY OF MELBOURNE

### DRAFT WASTE AND RESOURCE RECOVERY STRATEGY - TOWARDS 2030

## PRIORITIES AND ACTIONS

This is an extract of the priorities and actions in the Draft Waste and Resource Recovery Strategy 2030. The actions have not been costed. An economic analysis will be undertaken to develop the final strategy. These actions relate to the first four years of the strategy only.

### Priority 1: Reducing, reusing, recycling and recovering waste

The absence of alternatives to landfill disposal in the short-term means that applying the waste hierarchy levels of reduce, reuse, recycle and recover is the most effective means of reducing landfill volumes and associated environmental impacts.

Actions have been identified across five waste types/categories:

- Organics - which generate the powerful greenhouse gas methane when degrading in landfill.
- Easily recycled materials (paper/steel/aluminium/glass) - which are not being separated and recycled well in some areas (e.g. high rise apartments and small businesses) and for some materials are impacted by the current challenges facing the global recycling industry.
- Plastics and single-use items - problematic due to loss of potentially valuable resources when not recovered and pollution impacts when entering the environment, especially waterways.
- E-waste - high levels of toxicity and loss of valuable resources when not recycled.
- Other (textiles, furniture/hard waste) - increasing volumes of materials not recovered.

The reduction in off-shore recycling markets emphasises the need for further investment in Australian markets for recycled materials. The City of Melbourne will continue to engage with government and peak bodies to resolve this growing problem.

### Priority 1: Actions

1. *Collaborate.* Partner with the Victorian Government and local recycling industry to resolve the recent challenges for recycling collections, particularly for plastics and cardboard.
2. *Implement.* Require a detailed waste reduction and resource recovery plan to be developed or provided for all Council-run, Council financially supported and Council permitted major events and critically assess the plan.
3. *Implement.* Review City of Melbourne's procurement policies and practices to support innovative business models including recycling technologies and use recycled materials.
4. *Implement.* Undertake a review of the City of Melbourne's own operations, assess waste practices and introduce changes that build sustainability into City of Melbourne operations.
5. *Collaborate.* Partner with the local community to investigate the viability of a social enterprise-run reuse centre.

6. *Implement.* Use the City of Melbourne's communications and social media channels to promote waste avoidance, reuse and recycling.
7. *Collaborate.* Ensure that the Queen Victoria Market redevelopment maximises organic waste reduction, food rescue and recovery options.
8. *Collaborate.* Work with the food rescue charity operators to identify ways to help them expand their reach.
9. *Collaborate.* Evaluate the Kensington Town Hall communal composting hub in conjunction with users and expand to other community areas if successful.
10. *Implement.* Assess the potential costs and benefits of a bin-based organic collection for all households within the municipality and other options for managing organic waste.
11. *Collaborate.* Work with MWRRG to negotiate access to one or more organic waste processing sites.
12. *Collaborate.* Develop a plan in partnership with cafes and restaurants using communal compactors to source separate their organic waste.
13. *Collaborate.* Work with food businesses, supermarkets and high volume organic waste generators and precincts to separate and recover organics.
14. *Collaborate.* Support developers, Owners Corporation (OC) committees and/or OC-or building managers to avoid, reuse and recycle and engage with residents including high-rise, students and short-stay residents and residents in low-rise or stand-alone housing areas.
15. *Advocate.* Support the benefits of a container deposit scheme that covers a wide range of packaging items including takeaway coffee cups and advocate to the Victorian Government in favour of this scheme.
16. *Collaborate.* Support the Victorian Government's ban on plastic bags and collaborate with business on its implementation.
17. *Collaborate.* Convene a forum with the retail and hospitality sector to assist with development of a plan to fast track further reductions in the use of single use waste items within the municipality.
18. *Implement.* Establish a network of drop-off recycling hubs for soft plastics and polystyrene, large cardboard and textiles/clothing.
19. *Implement.* Enable residents to comply with the e-waste landfill ban by providing a range of recycling options.

## Priority 2: Developing landfill alternatives

The availability of the right mix of collection and processing infrastructure is a key element of the waste management system. Residual waste from all waste sources will continue to go to landfill in the short-term due to the absence of alternative options. If the City of Melbourne is to reach its landfill diversion target, it must radically change how it processes waste. Establishment of alternative waste and resource recovery technology (AWRRT) infrastructure should enable this in the mid-term.

AWRRTs provide an opportunity to recover materials and/or energy from material that is currently being landfilled<sup>1</sup>. The three main types of technology are:

- Sorting, including material recovery facilities, mechanical biological treatment or mechanical heat treatment technologies
- Biological treatment, including anaerobic digestion or composting
- Waste to energy, including combustion, gasification and pyrolysis.

AWRRTs can divert up to 90 per cent of waste from landfill while producing useful products and/or energy. Some technologies have a strong commercial and technical track record, such as mass burn combustion with energy capture, anaerobic digestion and mechanical biological treatment. Ensuring that commercial and industrial waste can also be accepted at any new facilities will be important to ensure the sector target can be achieved.

The City of Melbourne is partnering with City of Port Phillip, Metropolitan Waste and Resource Recovery Group (MWRRG) and South-East Water to investigate the feasibility of a sustainability hub with shared infrastructure at Fishermans Bend. This would support the Fishermans Bend Draft Framework which included targets for 70 per cent of household waste diverted from landfill and 50 per cent of all food waste diverted from landfill by 2050<sup>2</sup>. Food organics and bio-solids can be processed through an anaerobic digester to generate electricity and an AWRRT facility could process residual waste from both City of Melbourne and City of Port Phillip municipal areas. The concept of a sustainability hub is strongly supported.

The City of Melbourne is also involved in the development of a business case and procurement model for the establishment of an AWRRT facility through the auspice of the MWRRG. This may provide an alternative or addition to the proposed sustainability hub.

Given that the vast majority of waste within the City is generated by the commercial and industrial sector, it is important that the City of Melbourne negotiate for AWRRT facilities to cater for this sector as well as the residential sector.

The MWRRG has undertaken three collective procurement processes that enable 24 metropolitan councils to access organic waste processing sites. City of Melbourne will need to negotiate access to one of these or an alternative facility if a source separated collection service for food organics is to be established.

The proposed actions will contribute to achieving the 2030 targets and outcomes by establishing AWRRT facilities that can process residual waste from households, public places, City of Melbourne operations and businesses and other organisations.

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<sup>1</sup> MWRRG. (2017). *Collective procurement of municipal residual waste processing technologies: Background paper*. (Unpublished)

<sup>2</sup> State Government of Victoria. (2017). *Fishermans Bend Framework. Draft for consultation*. [www.fishermansbend.vic.gov.au/framework](http://www.fishermansbend.vic.gov.au/framework)

## Priority 2: Actions

1. *Implement.* Subject to budget, commit to procurement arrangements that will lead to the processing of residential and commercial/industrial waste through Advanced Resource Recovery Technology facilities.
2. *Collaborate.* Partner with City of Port Phillip, MWRRG and South-East Water to develop the Fishermans Bend Sustainability Hub.
3. *Collaborate.* Partner with the Victorian Government and other Councils in the establishment of an AWRRT that services the City of Melbourne.
4. *Advocate.* Ensure that any future AWRRT facility developed in partnership with City of Melbourne can accept waste generated by the commercial and industrial sector.

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### Priority 3: Stimulating innovation

Innovation in technologies for separation and collection, new business models and products and community initiatives all provide opportunities for achieving the Strategy outcomes.

New technologies can improve service delivery. Our solar-powered litter bins provide real-time information on bin-fullness enabling collection efficiency and our communal garbage compactors track the waste deposits made by each user. Further application of smart and digital technologies could provide many other service improvements. High-rise building managers surveyed in 2017 suggested that automated notifications before collection, ability to track the collection truck and a mobile phone application to book hard waste collections would improve our services<sup>3</sup>.

New business models are facilitating waste reduction. City of Melbourne could support the adoption of these business models through procurement decisions, policy and regulation and direct funding support for start-ups or businesses taking on new approaches. For example, Keep Cup, one of the first widely-used reusable coffee cup products, was supported by City of Melbourne in their early stages.

Community initiatives provide an opportunity for local action. An innovative proposal has been received by the City of Melbourne for the establishment of a reuse and repair centre within the municipality. This would involve the creation of a social enterprise where items are repaired for reuse and possibly on-sold at a later date. The City of Melbourne's community grants have previously provided funding to support waste reduction and recycling projects.

A key principle of this waste strategy is to harness the innovation and creativity of the people of Melbourne through the establishment of a Waste Minimisation Innovation Fund that will ask other organisations to propose and implement solutions to divert waste to landfill. The principle here is that government is not 'picking winners' and running programs that could be better run by entrepreneurs, community groups or other organisations.

A key element of this fund will be the development of a robust evaluation tool that enables proposals to be measured against the key criteria of:

- Environmental benefit including
  - greenhouse gas emissions reduction including transport CO<sup>2</sup> emissions and methane from landfill
  - reduced harmful metals and chemicals stored in landfill
  - reduced damage to productive land and habitat through use as landfill.
- Cost to City of Melbourne ratepayers.
- Acceptability to users and stakeholders.
- Scalability across the City.

The fund would be delivered by City of Melbourne through a combination of existing and new initiatives. The City of Melbourne has provided financial support to community organisations, social enterprises and businesses through a range of grant programs over many years. City of Melbourne's Startup Action Plan 2017-21 provides a platform to support and enhance this support to innovators and entrepreneurs. The CityLab team within City of Melbourne's Smart City Office have conducted 'open innovation challenges' that stimulate the development of prototype solutions for the problems facing the city.

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<sup>3</sup> Colmar Brunton (2017) *City of Melbourne. Waste services research.* (Unpublished).

These actions will contribute to achieving the 2030 targets and outcomes by establishing a fund to support community and business initiatives that meet a set of agreed criteria and supporting new business models through the delivery of the Start-Up Action Plan.

### **Priority 3: Actions**

1. *Implement.* Establish a Waste Minimisation Innovation Fund. This Fund will be delivered through existing City of Melbourne grants programs.
2. *Implement.* Identify opportunities to support new business models through the delivery of City of Melbourne's Start-Up Action Plan.
3. *Collaborate.* Identify community-generated data sets relating to waste and litter behaviour and use these to engage the community.
4. *Advocate.* Advocate to the Victorian and Australian Government to apply extended producer responsibility requirements to drive innovation in packaging design.

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## **Priority 4: Reducing amenity impacts from waste collection**

Waste storage and collection has a large impact on amenity due to odour and visual amenity from bins stored in public spaces, noise from waste collection and congestion caused by the large number of collection trucks. These issues are expected increase in waste generation is likely to exacerbate these issues.

City of Melbourne's Activities Local Law 2009 places requirements on waste generators and waste collection companies in the central city. Waste generators may only store their bin in certain locations and when given permission by the City of Melbourne. Waste collectors are not able to collect waste from three 'restricted access areas' between the hours of 11pm and 6am daily. The implementation of this law and other central city waste programs has greatly reduced the number of bins stored permanently in the public space.

Despite these gains, there are still 40 waste and recycling companies collecting material within the central city. Whilst the same amount of waste needs to be collected, a lesser number of collectors would lead to synergies in collection and transportation and improvements in amenity.

Other stakeholders such as the Melbourne Metro Rail Authority also need to be engaged to ensure that waste management in the impacted precincts is well managed and long-term waste collection arrangements are optimal.

### **Priority 4: Actions**

1. *Implement.* Review the existing waste collection permit system and 'restricted access areas' to identify the potential to further improve amenity.
2. *Collaborate.* Review waste collection in the central city in conjunction with the waste industry and other stakeholders.
3. *Implement.* Extend the existing network of central city waste compactors and recycling hubs, focusing on areas where there are high numbers of cafes and eateries.