METROPOLITAN WASTE AND RESOURCE RECOVERY IMPLEMENTATION PLAN 2016

METROPOLITAN WASTE AND RESOURCE RECOVERY GROUP

VICTORIA State Government
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CHAIR FOREWORD

It is with great pleasure that I introduce the Metropolitan Waste and Resource Recovery Implementation Plan. This plan provides a roadmap that will shape Melbourne’s network of waste and resource recovery infrastructure for the next 30 years.

This important piece of work indicates a major shift in our approach to waste planning and management. Waste should no longer be seen as a problem to be managed, instead it is a valuable resource to be harnessed and in doing so will create new industries, new jobs and promote a sustainable and liveable Melbourne.

This plan seeks to reduce the amount of waste we send to landfill, particularly organic waste, and seeks a large improvement in our recycling rates. As a result of this plan, we expect to see a range of new infrastructure to recover materials established right across the metropolitan region. We received widespread support for this approach through the public consultation. This approach will require new, more efficient technologies and will see only the bare minimum of waste sent to landfill. However some waste will continue to require safe management in landfills. The existing landfills across Melbourne can continue to provide this safe disposal service for all of Melbourne. This Metropolitan Implementation Plan does not schedule additional landfills. However new landfill capacity will be required if sufficient resource recovery infrastructure is not coming through the pipeline. We will make this assessment in 2019, when we review the progress of this plan. Our stakeholders will be invited to participate in this review and we will provide various ways for communities, businesses, local and state governments to get involved.

Like all businesses, governments and individuals the waste and resource recovery sector has a role to play in addressing climate change. Solid waste disposal accounted for 1.2% of Victoria’s total greenhouse gas emissions in 2013\(^1\). The decomposition of organic waste in landfills creates greenhouse gases including the potent greenhouse gas methane and it can also produce odours and leachate.

This plan seeks to reduce the amount of organic waste going to landfill – in particular the amount of food and garden waste going to landfill. By doing so, the waste and resource recovery sector can make a meaningful contribution to addressing climate change and we can better protect the environment and amenity of communities living near landfills.

In developing this plan we drew on information, opinions and ideas from a range of stakeholders including the collective knowledge of our staff, our portfolio partners, industry representatives, local councils and the broader community. This input was invaluable and allowed for the development of a plan that is robust, innovative and ambitious. I invite all our stakeholders to visit our website to read through the Response to Comments document to understand more deeply how we have used the feedback themes we received.

We know from this feedback that waste avoidance and minimisation are important to many stakeholders. I acknowledge and applaud the many households, businesses and local governments who actively avoid producing waste in the first place through their purchase choices or the way they work with neighboring businesses; who minimise producing waste through home composting or smart business operations. These activities complement the focus of this Metropolitan Implementation Plan which is about creating value from our waste, building new industries and new jobs and seeing waste not as a problem but as a resource.

To ensure our success in delivering the strategic objectives set out in this plan we cannot work in isolation. It will be critical that community, government and industry work together, sharing information, leveraging ideas and building new relationships.

I would like to thank all individuals, agencies and businesses who contributed to the development of this plan and look forward to a continued and strong working relationship with our stakeholders and the community.

Les Willmott
Chair Metropolitan Waste and Resource Recovery Group

\(^1\)Australian National Greenhouse Accounts State and Territory Greenhouse Gas Inventories, 2013
EXECUTIVE SUMMARY

One of the essential roles of a modern city is managing waste – the materials that are no longer wanted, such as food and garden waste, electronic waste like old phones and computers, plastics, paper and construction materials.

The infrastructure that manages these materials provides an essential community service. Getting the right infrastructure in the right location, at the right time will make sure greater metropolitan Melbourne remains liveable and vibrant.

The metropolitan region of Melbourne is facing both challenges and opportunities. If we don’t make any changes to the way we manage waste we won’t be able to keep up with the growing waste volume.

Every year in the metropolitan region we put around 805,000 tonnes of food and garden waste into landfill, which is approximately 28% of everything we send to landfill. As organic waste in landfill breaks down it generates methane, a potent greenhouse gas. Solid waste disposal accounted for 1.2% of Victoria’s total greenhouse gas emissions in 2013. Sending organic waste to landfill also generates other gases and liquids that can impact both the environment and local communities.

Landfills in the Clayton South precinct that have served Melbourne for many years have reached capacity, and are closing. The scale of this challenge alone compels us to find better solutions.

The metropolitan region is a city of 4.4 million people that is growing; by 2051 population is projected to increase to 7.8 million people. This means our waste volumes will grow too. By 2042 it is projected waste volumes will grow by 63%, meaning we will need to manage 16.5 million tonnes each year. If we don’t make any changes it’s anticipated that around one million tonnes of this extra waste will need to be landfill. That’s the equivalent of needing two more large landfills over this 30 year period.

However it’s not just about having too much waste or relying on landfills to manage those wastes. We have a great opportunity to create value from waste, transforming what we throw away back into something useful and in the process creating new jobs and fueling the development of new industries. Similarly, we have an opportunity to reduce the greenhouse gas contribution of the waste sector.

By planning for and supporting new technologies and processes we can do more with many of the materials we currently throw away. We can create valuable compost, soil conditioners or energy from organic waste. We can use recycled glass in the construction of road bases or recycled plastic content in boardwalks and street furniture. There are opportunities too with other materials – plastics, polystyrene, timber, textiles to name a few. And new technologies will enable other opportunities for getting more value from the materials we currently throw away.

MWRGG has extensively analysed our future needs to understand the volumes of waste we expect to generate over the next thirty years, the capacity of existing infrastructure, and the infrastructure gaps that will need to be addressed. MWRGG also commissioned an economic and transport analysis, and conducted a market assessment to gather information from industry about their plans and aspirations. MWRGG consulted widely with community and stakeholders, and extensive feedback has been considered in preparing this Metropolitan Waste and Resource Recovery Implementation Plan.

This plan is about turning waste into value which will create new industries and new jobs - seeing waste not as a problem but as a resource to keep our city liveable into the future.

The greater Melbourne community has demonstrated their commitment to recycling with current resource recovery rates being 73% in 2013/14. We will build on this solid foundation and will make a step change to our thinking, to the waste and resource recovery network and to the infrastructure and technologies we use. Education is an important part of achieving this step change and this plan includes actions to help households and businesses to use the waste and resource recovery system that will maximise resource recovery. There is no single solution for reducing Melbourne’s reliance on landfills, and some of the challenges we need to tackle will be more difficult than others.

The priority of this Metropolitan Implementation Plan – where we can make the most impact – is to reduce the need for landfilling by making use of resource recovery infrastructure and alternative technologies as well as working to reduce the impact of landfills on communities. We will do this by working with all of our partners and stakeholders.

Community

The Metropolitan Implementation Plan will support the community by:

- boosting resource recovery infrastructure including transfer stations, resource recovery facilities and alternative waste technology facilities, to reduce the pressure on existing landfills and the need for future ones
- providing more opportunities to minimise and recycle household waste, particularly garden and food waste
- encouraging household recycling through education
- ensure new apartments and units provide recycling facilities
- engaging the community in waste and resource recovery decisions.

Local government

The Metropolitan Implementation Plan will support local government by:

- helping local government tender for facilitated group contracts for managing household residual waste (i.e. waste that is currently not being recycled). These contracts will boost infrastructure by recovering 25% of all household residual waste, and by establishing Melbourne’s first alternative waste technology facility
- assisting local government to expand the collection of food and garden waste, and to progress with the rollout of new organic processing facilities across Melbourne
encouraging planning authorities to use land use planning measures to protect essential infrastructure, protect communities, and ensure multi-unit developments support residents to recycle

continuing to support local government to deliver waste minimisation and recycling education programs.

Industry

The Metropolitan Implementation Plan will support industry by:

- increasing certainty and transparency for industry, and community, through defining the future role of waste and resource recovery hubs, and taking measures to establish and protect buffers and separation distances
- opening up commercial collection and recovery opportunities through local government joint contracts
- working with businesses (including restaurants and supermarkets) to recover food waste
- working with commercial waste generators and the waste and resource recovery industry to find new opportunities for aggregating materials
- encouraging the use of innovative, small, on site organic processing infrastructure
- working with operators of waste and resource recovery facilities to minimise amenity impacts through best practice operations and community engagement.

Victorian Government organisations

The Metropolitan Implementation Plan will support other Victorian Government organisations, in particular Environment Protection Authority Victoria (EPA Victoria), Sustainability Victoria, and the Department of Environment, Land Water and Planning by:

- identifying the type, general location and timeframe for new resource recovery infrastructure
- identifying existing and required landfill infrastructure
- encouraging a culture of best practice and continual improvement to guide operations at waste and resource recovery facilities
- realising the long term directions of the Statewide Waste and Resource Recovery Infrastructure Plan (State Infrastructure Plan) within metropolitan Melbourne
- helping the land use planning system acknowledge and support long term operations of waste and resource recovery facilities whilst also protecting communities and the environment.

These combined resource recovery initiatives and others in the plan will help us boost recycling, reduce the amount of waste we send to landfills, and help prevent the need to schedule new landfills.

Despite these actions some landfilling will still be needed over the life of this 30 year plan, and beyond. Thirteen landfills are expected to close during the next 10 years, with a total of 16 closing over the 30 year life of this plan. This leaves four significant landfills to meet Melbourne’s needs in the long term that can accept putrescible waste and an additional landfill that is currently licensed to accept only prescribed industrial waste. These landfills are of state importance and critical waste infrastructure for the entire metropolitan Melbourne region. Closure of any of these major landfills would result in insufficient landfill supply and would require new replacement facilities to be established.

The Metropolitan Implementation Plan has scheduled new resource recovery infrastructure to manage the closure of landfills in the south east of Melbourne. New organics facilities, advanced resource recovery facilities and the establishment of transfer stations in the south east will reduce the amount being sent to landfill and will increase our recycling levels.

To achieve a step change in how Melbourne manages waste, we must move towards new alternative technologies and we need to make this change now. Technologies that can transform our waste to green energy, such as anaerobic digesters are likely to feature as part of our future integrated waste and resource recovery network. We are already seeing the establishment of waste to energy facilities in the north of Melbourne, and expect to see a range of new alternative technologies established across the entire metropolitan region to provide an integrated network that can manage our future waste and resource recovery needs. Proven technologies such as those that convert waste to green energy have the potential to significantly reduce the amount of waste we send to landfill and still offer a cost effective, safe, reliable service that protects the community and environment. Ultimately it is up to the market to determine which technology types they will seek to establish to achieve increased resource recovery. We know from the Market Assessment process used to help inform this plan, that there is considerable interest from the resource recovery sector to establish waste to energy and other advance resource recovery facilities as part of the integrated network.

We need to allow the resource recovery sector time to invest and build new infrastructure and to support and develop markets for the products manufactured out of waste materials. MWRGG will review the Metropolitan Implementation Plan in 2019 to:

- assess the impact of the metropolitan and regional implementation plans on the resource recovery market
- assess whether new resource recovery infrastructure will be delivered within the 10 year timeframe
- determine the need for long term landfilling and, if needed, schedule a new landfill.

MWRGG will only recommend a new landfill for Melbourne if it is absolutely necessary.

This is an exciting time, perhaps even a tipping point, in the way we think about and manage our waste. The Metropolitan Implementation Plan is about creating value from our waste and building new industries and new jobs to ensure Melbourne remains liveable. The actions in this plan will boost recycling levels by using new, efficient technologies, (like technologies that convert waste to green energy) and minimise the amount of waste we send to landfill, reducing the pressure on existing ones and the need for new landfills.

By using new technologies, alongside supporting activities like developing markets for recycled products and educating businesses and community, we will send only the bare minimum to landfill. This will help the communities who live close to these facilities as well as our environment.

Achieving this step change to our recycling levels will need everyone’s help:

- the people and businesses who produce waste
- the local governments who collect and process residential waste and plan for how land is used
- the waste and resource recovery industry who invest in technologies to consolidate, treat and recycle materials and to safely manage the waste that must go to landfill
- state government departments and organisations who manage our land use planning and transport systems, who regulate and protect the environment and the amenity of local communities, and who plan for our future waste and recycling needs.

MWRGG is proud to present this Metropolitan Implementation Plan to the metropolitan Melbourne community and commits to achieving its objectives.
1 INTRODUCTION

This section at a glance:

- The purpose of the Metropolitan Implementation Plan is to set out how the waste and resource recovery infrastructure needs of the greater Melbourne region will be met over at least a 10 year period.

1.1 Purpose of the plan

The purpose of the Metropolitan Implementation Plan is to set out how the waste and resource recovery infrastructure needs of the greater Melbourne region will be met over at least a 10 year period. This plan looks out to a 30 year horizon to align with other metropolitan planning strategies and plans.

This plan covers the wider metropolitan region, represented by the 31 municipalities shown in Figure 1.

Figure 1. The 31 metropolitan Melbourne municipalities
1.2 Scope of Metropolitan Implementation Plan

The Environment Protection Act 1970 (EP Act) sets out the full scope and requirements of the Metropolitan Implementation Plan including:

- a description and analysis of waste and resource recovery infrastructure within the metropolitan Melbourne region
- a description of how the long term directions in the State Infrastructure Plan will be implemented to meet local and regional infrastructure needs within the metropolitan Melbourne waste and resource recovery region
- a schedule of existing and required waste and resource recovery infrastructure within the metropolitan Melbourne waste and resource recovery region

Appendix A provides a summary of EP Act requirements. In line with the State Infrastructure Plan, the Metropolitan Implementation Plan addresses solid waste only. The State Infrastructure Plan acknowledges that the management of prescribed industrial waste and other waste (liquid or gaseous) can intersect with the management of solid waste, however the strategic planning for liquid, gaseous and prescribed industrial waste are outside the scope of both the State Infrastructure Plan and the Metropolitan Implementation Plan.

MWRRG is responsible for preparing the Metropolitan Implementation Plan in collaboration with Sustainability Victoria (SV), Environment Protection Authority Victoria (EPA Victoria), and all other regional Waste and Resource Recovery Groups (WRRGs) and Department of Environment, Land, Water and Planning (DELWP). There are a number of requirements relating to consultation that must be undertaken in preparing the Metropolitan Implementation Plan. Appendix B provides a description of the consultation processes that informed the development of the Metropolitan Implementation Plan.

The Metropolitan Implementation Plan must align with the six Regional Waste and Resource Recovery Implementation Plans (Regional Implementation Plans). As the EP Act sets different delivery dates for these plans, regional Waste and Resource Recovery Groups (WRRGs) are currently preparing to release public consultation drafts.

This Metropolitan Implementation Plan integrates with the Regional Implementation Plans to the extent possible at the time of publishing. Appendix B outlines some of the ways MWRRG has worked with regional WRRGs to align the Metropolitan Implementation Plan with the Regional Implementation Plans. MWRRG will continue to work with SV, DELWP and regional WRRGs to ensure the Victorian planning framework delivers an integrated network of waste and resource recovery infrastructure for Victoria.

1.3 Strategic objectives

The strategic objectives for the Metropolitan Implementation Plan are:

1. **Reduce waste sent to landfill.** This objective seeks to increase the supply of viable resource recovery infrastructure to reduce pressure on existing landfills and to reduce the need for new facilities

2. **Increase organic waste recovered.** This objective seeks to reduce the environmental and community impact of organics in landfill by minimising food waste and by recovering more food and garden waste

3. **Deliver community, environmental and economic benefits.** This objective seeks to support a liveable and productive Melbourne with a resource recovery and waste network that provides jobs and economic opportunities, while reducing environmental and community impact

4. **Plan for Melbourne’s growing population.** This objective seeks to ensure Melbourne has the right resource recovery and waste infrastructure it needs in the right place, at the right time.

1.4 Legislative and policy context

1.4.1 Legislation


As amended, the EP Act provides the legislative underpinning for Regional Implementation Plans. The legislative objectives are:

- to ensure long term strategic planning for waste and resource recovery infrastructure at state and regional levels
- to facilitate the integration of statewide directions for the management of waste and resource recovery infrastructure and regional infrastructure needs
- to enable waste and resource recovery infrastructure planning to be:
  i. effectively integrated with land use and development planning and policy
  ii. effectively integrated with transport planning and policy
- to ensure SV and WRRGs work together to integrate the State Infrastructure Plan and Regional Implementation Plans to enable waste and resource recovery infrastructure planning decisions to be made at the appropriate level of the Framework.

The Framework, and the Regional Implementation Plans, are primarily governed by the EP Act, but regard has also been given to other relevant legislation in the preparation of this document, as appropriate, including the Planning and Environment Act 1987 (Vic) and the Transport Integration Act 2009 (Vic).
1.4.2 The Victorian Waste and Resource Recovery Framework

This Metropolitan Implementation Plan, together with the State Infrastructure Plan and the six Regional Implementation Plans forms the Victorian Waste and Resource Recovery Infrastructure Planning Framework. This framework enables Victoria to establish a waste and resource recovery system that:

- effectively manages the expected mix and volumes of waste;
- reflects the principles of environmental justice to ensure the impacts on the environment and public health are not disproportionately felt across communities;
- supports a viable resource recovery industry;
- reduces the amount of valuable materials going to landfill.

The strategic directions listed in the State Infrastructure Plan (Figure 2) guide the development and delivery of the Metropolitan Implementation Plan. The long term strategic directions are to:

- maximise the diversion of recoverable materials from landfills;
- support increased resource recovery;
- achieve quantities for reprocessing;
- manage waste and material streams;
- maximise economic outcomes, provide cost effective service delivery and reduce community, environment and public health impacts (based on evidence);
- facilitate a cost effective statewide network of waste and resource recovery infrastructure.

The Victorian Waste and Resource Recovery Framework is supported by complementary strategies that guide the development and delivery of this plan. At the time of writing this Metropolitan Implementation Plan:

- the Victorian Organics Resource Recovery Strategy, the Victorian Market Development Strategy for Recovered Resources and the Victorian Waste Education Strategy were published;
- the state’s second Climate Change Adaptation Plan (required under the Climate Change Act 2010) was being prepared.

Victorian Organics Resource Recovery Strategy

This strategy sets out the government’s vision for organic resources, and the steps needed to achieve this vision. The strategy’s goals are:

- reduce the impact of climate change;
- protect the environment, human and animal health and amenity;
- risk based and proportionate approach;
- strong and sustainable markets.

Victorian Market Development Strategy for Recovered Resources

The Victorian Market Development Strategy for Recovered Resources is a key element in the delivery of the Statewide Waste and Resource Recovery Infrastructure Plan. It has been developed to support Victoria to:

- Meet community expectations for resource recovery activities that improve the environment, community amenity and public health, while stimulating markets for the use of recovered materials for positive economic return.
- Support conditions for the resource recovery and manufacturing sectors to grow and create jobs, by maximising the value of recovered materials and developing quality products for end markets.
- Increase investment in and the purchase of products made from recovered materials by promoting their qualities and functionality.
- Provide a 30 year vision, 10 year strategic outlook, and five year action plan.

Victorian Waste Education Strategy

The strategy provides a consistent and coordinated approach to waste and resource recovery education. It supports best practice programs so that Victorians:

- are well informed and taking practical action to reduce waste, minimise its environmental impact and maximise its value;
- understand the importance of effective waste management and recovery of valuable resources.

The Metropolitan Implementation Plan aligns to and supports these strategies.
Figure 2. State Infrastructure Plan

Statewide Waste and Resource Recovery Infrastructure Plan vision, purpose, goals, strategic directions and outcomes

**State Infrastructure Plan Vision**
Victoria has an integrated statewide waste and resource recovery system that provides an essential community service to:
- protect the community, environment and public health
- recover valuable resources from our waste
- minimise long term costs to households, industry and governments.

**State Infrastructure Plan Purpose**
To provide strategic direction for the management of waste and resource recovery infrastructure to achieve an integrated system that effectively manages the expected mix and volumes of waste, reflects the principles of environmental justice to ensure that impacts on the community, environment and public health are not disproportionately felt, supports a viable resource recovery industry and reduces the amount of valuable materials going to landfill.

**Goals**
What we want to achieve in 30 years

**GOAL 1**
Landfills will only be for receiving and treating waste streams from which all materials that can be viably recovered have been extracted.

**GOAL 2**
Materials are made available to the resource recovery market through aggregation and consolidation of volumes to create viability in recovering valuable resources from waste.

**GOAL 3**
Waste and resource recovery facilities including landfills are established and managed over their lifetime to provide best economic, community, environment and public health outcomes for local communities and the state and ensure their impacts are not disproportionately felt across communities.

**GOAL 4**
Targeted information provides the evidence base to inform integrated statewide waste and resource recovery infrastructure planning and investment at the state, regional and local levels by industry, local government, waste and resource recovery groups, government agencies and the broader community.

**Long Term Strategic Directions**
What we want to do differently

**Five Year Outcomes**
What will be different in five years

- Material streams for recovery will be diverted from landfills (where appropriate) if it is economically viable and if it can improve community, environment and public health impacts.
- Resource recovery will be prioritised in procurements for waste management and resource recovery services (where appropriate).
- A consistent statewide process will be used to assess the need for, and the schedule of, landfill airspace that includes:
  - a robust analysis of viable opportunities to maximise resource recovery and minimise volumes of residual waste requiring landfill
  - identification of any remaining airspace needed, including allowance for contingencies and identification of alternatives
  - prioritisation of sites with long term mechanisms to preserve against encroachment, resulting in amenity impacts on the surrounding communities.
- Collaborative procurements between local governments and/or industry, for waste management and resource recovery services, will be developed.
- Local government will be supported to develop waste and resource recovery plans that maximise local recovery opportunities.
- Industry will be proactively engaged and identify waste and resource recovery management options that are economically viable and minimise community, environment and public health impacts.
- Victorian Government strategic approach to determine where to intervene to stimulate markets for recovered resources.
- Suitable sites and buffers will be progressively protected through planning schemes.
- Planning will ensure unsuitable land uses are not established with or near waste and resource recovery facilities.
- Complimentary land uses that can support the waste and resource recovery industry by generating or using feedstock, or creating markets for products, will be encouraged.
- Closing or closed landfill sites will be utilised for alternative resource recovery activities where appropriate.
- Victorian Government strategic approach to determine where to intervene to stimulate markets for recovered resources.
- Identification and analyses of opportunities will include assessments of:
  - community service needs
  - economic community, environment and public health costs
  - benefits and risks and the costs associated with rehabilitation (where appropriate).
- Assessment of alternatives for the local management of residual waste will consider:
  - transitioning small landfills to resource recovery and consolidation activities prior to transporting the material streams
  - transporting remaining residual waste to appropriate facilities including regional landfills if a viable business case can be demonstrated.
- Planning by government departments, agencies and local government will be aligned with the long term strategic directions of the SWRRIP and the relevant regional waste and resource recovery implementation plans.
- Government departments, agencies and local government will actively engage the community when planning for waste and resource recovery infrastructure.

Metropolitan Waste and Resource Recovery Implementation Plan 2016
2 RESOURCE RECOVERY AND WASTE ACTION PLAN FOR MELBOURNE (ACTION PLAN)

This section at a glance:
- This Metropolitan Implementation Plan sets out how we can meet the recycling and waste needs of metropolitan Melbourne over the next 10 years, and provides a vision and strategy for moving Melbourne towards a future in which landfills are the last option.
- MWRRG will work to reduce the need for scheduling new landfills, and to reduce reliance on existing metropolitan landfills. The pathway to achieve this is to:
  - avoid scheduling additional landfills
  - establish new transfer stations and resource recovery facilities to recover large quantities of residual household waste materials, and to reduce the volumes of remaining waste (and therefore transport) through compaction. MWRRG will target a 25% recovery of all municipal residual waste material that is received through its facilitated group landfill contracts
  - establish an alternative technology facility that processes residual waste to recover materials for reprocessing
  - establish new municipal food and garden waste processing plants, complemented by commercial food waste processing facilities
  - optimise use of existing landfills to meet needs and address community expectations of amenity and environmental outcomes.
- Four strategic objectives guide this plan:

One of the essential roles of a modern city is managing its waste – the materials that are no longer wanted by its residents. The infrastructure that supports the management of waste provides an essential community service. Getting the right infrastructure in the right location, at the right time will make sure metropolitan Melbourne remains liveable and vibrant.

Our population is growing, and this means our waste will grow in volume too. In 30 years’ time we expect to need to manage 16.5 million tonnes a year – 63% more than we manage in Melbourne today. Our network of infrastructure is also changing. Landfills in the south east of Melbourne that have served the city for many years have reached their full capacity, and are closing. And the waste sector has an important contribution to make to reduce greenhouse gas emissions, particularly methane which is produced in landfills when putrescible waste decomposes.

These changes challenge us to continue to safely manage our waste, but are also an opportunity. The community, industry and government share a goal of reducing reliance on landfill. Landfill closures provide an opportunity to do things differently, and to achieve a major step change in how we manage Melbourne’s waste.

This Metropolitan Implementation Plan sets out how we can meet the recycling and waste needs of metropolitan Melbourne over the next 10 years, but it also sets out a vision and strategy for moving Melbourne towards a future in which landfills are the last option.

MWRRG will work to reduce the need for scheduling new landfills, and to reduce reliance on existing metropolitan landfills. The pathway set out in this plan for managing the expected waste tonnages for the metropolitan region is to:
- avoid scheduling additional landfills
- establish new transfer stations and resource recovery facilities to recover large quantities of residual household waste materials, and to reduce the volumes of remaining waste (and therefore transport) through compaction. MWRRG will target a 25% recovery of all municipal residual waste material that is received through its facilitated group landfill contracts
- establish alternative technology facilities that process residual waste to recover materials for reprocessing
- establish new municipal food and garden waste processing plants, complemented by commercial food waste processing facilities
- optimise use of existing landfills to meet needs and work with the community and operators to reduce the impact of existing landfills on communities and improve environmental outcomes. MWRRG will review the Metropolitan Implementation Plan in 2019 to:
- assess the impact of the Metropolitan and Regional Implementation Plans on the resource recovery market
- assess whether new resource recovery infrastructure will be delivered within the specified 10 year timeframe
- determine the need for long term landfilling and, if needed, schedule a new landfill.
Scheduling landfills is MWRRG’s least preferred option for providing Melbourne with the infrastructure it needs to manage its waste. MWRRG will only recommend a new landfill for Melbourne if it is absolutely necessary.

In delivering the key actions above, we will work with local government and other planning authorities, waste generators (households and businesses), the waste and resource recovery industry, communities living near waste and resource recovery sites and our Victorian Government environment portfolio partners.

There are 13 actions described in the tables below that bring together the infrastructure listed in Section 2: Infrastructure Schedule, and the opportunities explored in Section 4 of this plan. They are also mapped to the applicable State Infrastructure Plan strategic long term directions.

Table 1 shows how these actions will achieve the strategic objectives to:
1. reduce waste sent to landfill
2. increase organic waste recovery
3. deliver community, environmental and economic benefits
4. plan for Melbourne’s growing population.

These strategic objectives will together achieve the long term directions of the State Infrastructure Plan in metropolitan Melbourne. The alignment of the actions to the State Infrastructure Plan’s long term directions is shown in Table 2.

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**Climate change and the waste and resource recovery sector**

The waste and resource recovery sector has an important role to play in addressing and responding to climate change.

As a result of climate change, Victoria faces a warmer and drier future*, resulting in:
- harsher fire weather and longer fire seasons
- fewer frosts
- more frequent and more intense downpours
- more hot days and warm spells
- less rainfall in winter and spring south of the Great Dividing Range, less rainfall in autumn, winter and spring north of the Great Dividing Range
- sea storm surges and coastal erosion that are expected to increase with sea level rise

Climate change is already being experienced in Victoria, with a rise in temperature and fall in rainfall across the state since 1950; and the sea level around the Victorian coast is approximately 225mm higher than in 1880.

A changing climate presents us with risks and opportunities. The risks include things such as hotter days and sea level rise, the opportunities include the creation of new jobs and a skilled workforce, boosting new economic sectors and reducing our emissions while growing our economy.

Every year in the metropolitan region we put around 805,000 tonnes of food and garden waste into landfill, or just under half (42%) of all municipal solid waste and commercial industrial waste we send to landfill. As organic waste in landfill breaks down it generates methane, a potent greenhouse gas. Solid waste disposal accounted for 1.2% of Victoria’s total greenhouse gas emissions in 2013**.

The waste and resource recovery sector (encompassing government and commercial entities) has a number of opportunities to contribute towards action on climate change including:
- incorporating climate resilient considerations into the design and management of waste infrastructure
- contributing to effective reductions in Victoria’s greenhouse gas emissions from the waste sector across operations and facilities, landfills and reprocessing of materials such as organics
- assisting the development of markets for reprocessed materials
- reviewing the risk factors and current assumptions about remediation and containment methods in light of climate change impacts
- considering current waste management capacity, including interim capacity, to handle surges in treatment and disposal of waste generated from climate events (floods, bushfires etc)
- contributing to improvements in soil quality through the provision of compost
- continuing to engage to increase the community’s adaptive capacity and resilience to climate change impacts.

The impacts of climate change on Victoria’s waste and resource recovery industry will be varied and may include issues such as changes in the timing, form and amount of precipitation, as well as potential increases in extreme events such as droughts and floods. These impacts can affect waste infrastructure, remediation and containment strategies as well as local water quality. Managing these risks is discussed in Chapter 17.

This Metropolitan Implementation Plan helps to position the waste and resource recovery sector to make a meaningful contribution to addressing and responding to climate change.

---

Notes
** Australian National Greenhouse Accounts State and Territory Greenhouse Gas Inventories, 2013
2.1 Objectives and actions

Table 1. Metropolitan Implementation Plan actions and objectives

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Reduce waste sent to landfill</th>
<th>Increase organic waste recovered</th>
<th>Deliver community, environmental and economic benefits</th>
<th>Plan for Melbourne’s growing population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1.</td>
<td>Facilitate and establish new infrastructure that can recover resources from residual municipal waste through the re-tendering of MWRRC’s landfill services contracts</td>
<td>Build the metropolitan organic recovery and processing network and maximise the network’s productivity by:</td>
<td>6. Encourage best practice operations for the resource recovery and waste network</td>
<td>9. Identify the roles and functions of waste and resource recovery hubs across the metropolitan network</td>
</tr>
<tr>
<td>2.</td>
<td>Create opportunities for aggregating priority commercial waste material streams and other place based recovery solutions</td>
<td>accepting household and commercial food waste</td>
<td>7. Engage community and stakeholders in waste and resource recovery decision making</td>
<td>10. Facilitate appropriate land use planning protection of sites of strategic importance for metropolitan Melbourne’s waste and resource recovery system</td>
</tr>
<tr>
<td>3.</td>
<td>Support local government to progressively increase recovery of materials from municipal waste streams</td>
<td>engaging and educating Melburnians</td>
<td>8. Support the implementation of best practice litter prevention programs</td>
<td>11. Facilitate and support aligning waste and resource recovery system needs with land use planning and transport systems</td>
</tr>
<tr>
<td>4.</td>
<td>Facilitate the growth of the metropolitan resource recovery centre/transfer station (RRC/TTS) network in order to manage future waste volumes and increase resource recovery</td>
<td></td>
<td></td>
<td>12. Ensure the metropolitan network of landfills has sufficient capacity to accommodate an emergency or unexpected event (contingency capacity)</td>
</tr>
<tr>
<td>5.</td>
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<td></td>
<td>13. Review the Metropolitan Implementation Plan in 2019 to assess whether new resource recovery infrastructure will be delivered within 10 year timeframe</td>
</tr>
<tr>
<td>State Infrastructure Plan long term directions</td>
<td>Metropolitan Implementation Plan</td>
<td></td>
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<td>-----------------------------------------------</td>
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<tr>
<td></td>
<td>Reduce waste sent to landfill</td>
<td>Increase organic waste recovered</td>
<td>Deliver community, environmental and economic benefits</td>
<td>Plan for Melbourne’s growing population</td>
</tr>
<tr>
<td>To maximise diversion of recoverable materials from landfill</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>To increase resource recovery</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>To achieve quantities for reprocessing</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>To manage waste and material streams</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>To maximise economic outcomes, provide cost effective service delivery, and reduce community, environment and public health impacts</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>To facilitate cost effective statewide network of waste and resource recovery infrastructure</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 2. Alignment of Metropolitan Implementation Plan actions to long term directions of the State Infrastructure Plan
2.2 Strategic Objective 1: Reduce waste sent to landfill

This strategic objective seeks to increase the supply of viable resource recovery infrastructure to reduce pressure on existing landfills and to reduce the need for new landfills. It directly aligns to the State Infrastructure Plan’s long term directions to:

- maximise the diversion of recoverable materials from landfill
- support increased resource recovery
- achieve quantities for reprocessing
- maximise economic outcomes, provide cost effective service delivery, and reduce community, environment and public health impacts
- facilitate a cost effective statewide network of waste and resource recovery infrastructure.

Finding ways to maximise resource recovery is a central goal of the State Infrastructure Plan. There is considerable scope to make valuable goods from our waste, to grow industry and to create jobs. It is estimated that recycling creates 9.2 jobs for every 10,000 tonnes of waste processed in comparison to creating only 2.8 jobs if this waste is landfilled\(^3\).

Work undertaken by IBISWorld reports that revenue generated from waste disposal is estimated to be decreasing\(^4\), while recycling revenue has been increasing. In Melbourne, around 73% of all waste produced and managed is recycled, leaving 27% (around 2.8 million tonnes a year) still being landfilled. It is projected that recycling volumes will continue to grow.

Landfills play a central role in protecting human health and the environment by safely managing materials that residents and businesses no longer want or that can’t be recycled. However, landfills can cause amenity impacts like odour for surrounding communities, and have environmental impacts including being a source of greenhouse gases. Solid waste disposal accounted for 1.2% of Victoria’s total greenhouse gas emissions in 2013\(^5\). Climate change is further discussed in section 11.3. And even after landfills stop taking waste, they can present risks to the environment and local communities. To manage these and other potential risks, landfills must be managed to the highest standards and are regulated by EPA Victoria to ensure this occurs.

As waste generation continues to grow and many of the older landfills in the south east of Melbourne close, we need to look for new ways of managing our waste. The priority of this plan, and where we can make the most impact, is to reduce the need for landfilling by making use of advanced resource recovery infrastructure, such as technologies that convert waste to green energy.

The actions described in Table 3 will collectively reduce the amount of waste sent to landfill over the lifetime of this Metropolitan Implementation Plan.

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1Access Economics, Employment in waste management and recycling, 2009
3Australian National Greenhouse Accounts - State and Territory Greenhouse Gas Inventories, 2013

Table 3: Actions to achieve Strategic Objective 1

<table>
<thead>
<tr>
<th>Actions</th>
<th>State Infrastructure Plan - Strategic Direction/s</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Facilitate and establish new infrastructure that can recover resources from residual municipal waste through the re-tendering of MWRRG’s landfill services contracts</strong>&lt;br&gt;&lt;br&gt;<strong>Implementation</strong>&lt;br&gt;• Develop and implement a procurement strategy for local governments to engage service providers to receive and manage residual waste from the municipal sector that includes:&lt;br&gt;  • establishing resource recovery targets&lt;br&gt;  • provision for accepting residual waste from the commercial sector&lt;br&gt;  • Enter into Memoranda of Understandings with local governments as a precursor to releasing procurement tenders&lt;br&gt;&lt;br&gt;<strong>Outcome by 2021</strong>&lt;br&gt;• New municipal contract/s commenced.&lt;br&gt;&lt;br&gt;<strong>Outcome by 2026:</strong>&lt;br&gt;• 25% of all municipal residual waste collected through facilitated group procurement will be recovered (current level in 2016 is 0%)</td>
<td>• To maximise the diversion of recoverable materials from landfill&lt;br&gt;• To support increased resource recovery&lt;br&gt;• To achieve quantities for reprocessing&lt;br&gt;• To maximise economic outcomes, provide cost effective service delivery, and reduce community, environment and public health impacts&lt;br&gt;• To facilitate a cost effective statewide network of waste and resource recovery infrastructure</td>
<td>Lead: MWRRG&lt;br&gt;Support: SV, local government</td>
</tr>
<tr>
<td><strong>2. Create opportunities for aggregating priority commercial waste material streams and other place based recovery solutions</strong>&lt;br&gt;&lt;br&gt;<strong>Implementation</strong>&lt;br&gt;• Work with commercial waste generators and reprocessors to identify priority materials for recovery, which sectors to work with and how MWRRG can best add value. In the immediate future, organic waste will be the priority, but others would expect to become a priority over the life of this plan&lt;br&gt;• Partner with businesses and manufacturers to identify systemic barriers and ways to support:&lt;br&gt;  • source separation and aggregation of waste materials at the point of generation that can be used as feedstock for reprocessors&lt;br&gt;  • investment in expanded and/or new resource recovery and processing infrastructure&lt;br&gt;  • Facilitate the development of precinct based approaches that provide for cost effective recovery and diversion&lt;br&gt;  • Identify and broker opportunities for generators to connect with reprocessors to maximise the benefits of waste and resource recovery&lt;br&gt;&lt;br&gt;<strong>Outcome by 2026</strong>&lt;br&gt;• There is a 25% increase in the recovery of priority materials (tonnes) from residual waste from the commercial sector (baseline 2013-14)&lt;br&gt;• New, local place based infrastructure established to recycle commercial waste including an increase in small on site organics processing across Melbourne and energy from waste</td>
<td>• To maximise the diversion of recoverable materials from landfills&lt;br&gt;• To achieve quantities for reprocessing</td>
<td>Lead: MWRRG&lt;br&gt;Support: SV, local government, industry</td>
</tr>
<tr>
<td>Actions</td>
<td>State Infrastructure Plan - Strategic Direction/s</td>
<td>Responsibility</td>
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<td>-----------------------------------------------------------------------</td>
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</tbody>
</table>
| **Support local government to progressively increase recovery of materials from waste streams** | • Maximise diversion of recoverable materials from landfill  
• To achieve quantities for reprocessing                           | Lead: MWRRG  
Support: SV, local government                                        |
| **Implementation**                                                    |                                                                                                                 |                                 |
| • Review the full suite of local government/MWRRG partnership projects that have been delivered, and support the implementation of projects across metropolitan Melbourne that demonstrate cost effective resource recovery from the residual waste bin |                                                                                                                 |                                 |
| • Support local government to deliver waste minimisation programs     |                                                                                                                 |                                 |
| • Facilitate collective procurements to increase recovery of key hard waste materials (e.g. mattresses) |                                                                                                                 |                                 |
| • Implement relevant actions within complementary government strategies (e.g. Victorian Organics Resource Recovery Strategy) |                                                                                                                 |                                 |
| • Develop a resource recovery and waste planning guide and template, and support councils to develop local resource recovery and waste management plans |                                                                                                                 |                                 |
| **Outcome by 2021**                                                   |                                                                                                                 |                                 |
| • More metropolitan councils are implementing best practice kerbside collection |                                                                                                                 |                                 |
| • Council waste and resource recovery plans are aligned to the Metropolitan Implementation Plan and other relevant state strategies |                                                                                                                 |                                 |
| **Outcome by 2026**                                                   |                                                                                                                 |                                 |
| • All metropolitan councils have a higher diversion rate compared to 2015 levels, as reported by the Victorian Local Government Annual Survey* |                                                                                                                 |                                 |
| *Excluding municipalities that have low diversion rates due to existing housing stock constraints, for example, large number of multi-unit dwellings with limited recycling provision |                                                                                                                 |                                 |
4. Facilitate the growth of the metropolitan resource recovery centre/transfer station (RRC/TS) network in order to manage future waste volumes and increase resource recovery solutions

**Implementation**

- Deliver the metropolitan resource recovery centre/transfer station growth strategy in partnership with local government and industry operators.
- Prioritise the aggregation and collection of priority materials such as organics and e-waste, identified as local issues or in support of product stewardship schemes.
- Identify and facilitate opportunities for local employment and economic participation through social enterprise and boutique businesses.
- Partner with local government to fill the gaps in local drop off services.

**Outcome by 2021**

- New resource recovery/transfer station facility/s initially established in the south east region with a metropolitan wide uplift in resource recovery capacity.

**Outcome by 2026**

- Waste generators and waste transporters report increased satisfaction with availability of RRC/TS network infrastructure.
- There is a measurable increase in diversion rates above 2015 levels.
- Infrastructure is sufficient to accommodate increased volumes of diverted materials due to delivery of product stewardship, market development and other policy programs.

**Responsibility**

- Maximise diversion of recoverable materials from landfill.
- To achieve quantities for reprocessing.

Lead: MWRRG
Support: SV, local government, RRC/TS network, industry, local communities.

2.3 Strategic Objective 2: Increase organic waste recovered

This strategic objective seeks to reduce the environmental and community impact of organics in landfill by minimising food waste and by recovering more food and garden waste. It directly relates to the State Infrastructure Plan long term strategic directions to:

- maximise the diversion of recoverable materials from landfills
- achieve quantities for reprocessing
- manage waste and material streams
- maximise economic outcomes, provide cost effective service delivery, and reduce community, environment and public health impacts
- facilitate a cost effective statewide network of waste and resource recovery infrastructure.

A large proportion of the waste we send to landfill is organic waste. In metropolitan Melbourne, approximately 42% of municipal solid waste and commercial and industrial waste sent to landfill is food and garden organic waste. This represents a sizeable opportunity to reduce the amount of waste we send to landfill.

In landfill, organic waste breaks down to produce methane, a potent greenhouse gas. It can also cause odour and produce leachate that can negatively affect local communities and the environment. The Victorian Government's vision is to increase recovery of organics to deliver a vibrant, functioning recovery market to minimise health and amenity impacts on communities, and contribute to climate change adaptation through improved soil productivity and provision of feedstock for bioenergy generators. A priority focus of the Metropolitan Implementation Plan is to recover organics for reprocessing to reduce the challenges this material presents in landfill.

We need to grow and support an integrated system of diverse facilities that process municipal and commercial food and garden waste so that the Victorian Government's vision for the recovery of organic resources can be realised. This will also reduce the need for additional landfills to manage metropolitan Melbourne's waste.

The actions described in Table 4 will collectively result in more food and garden waste being recovered for productive uses, thereby reducing the environmental and community impacts it can cause when disposed to landfill.
### Table 4: Actions to achieve Strategic Objective 2

<table>
<thead>
<tr>
<th>Actions</th>
<th>State Infrastructure Plan - Strategic Direction/s</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Build the metropolitan organic recovery and processing network and maximise the network’s productivity by: • accepting household and commercial food waste • engaging and educating Melburnians</td>
<td>• To maximise the diversion of recoverable materials from landfills. • To achieve quantities for reprocessing • To manage waste and material streams • To maximise economic outcomes, provide cost effective service delivery, and reduce community, environment and public health impacts • To facilitate a cost effective statewide network of waste and resource recovery infrastructure</td>
<td>Lead: MWRRG Support: Regional WRRGs, local government, contracted parties, SV, DELWP (Environment), EPA Victoria</td>
</tr>
</tbody>
</table>

**Implementation**
- Develop a metropolitan municipal organics procurement strategy to receive and process food organics, in line with the Victorian Organics Resource Recovery Strategy
- Build new capacity or expand the capacity and function of existing facilities (including those outside the metropolitan region) to process additional food organics from the municipal and commercial sectors
- Investigate and support opportunities to co-locate and/or co-process organic waste with waste water treatment plants
- Provide guidance and support to local government and commercial and community food waste generators about on site food waste treatment options
- Support continued roll out and delivery of the Back to Earth Initiative education program to engage Melburnians on how to use the organics recycling system correctly and achieve acceptance of the practice of putting food into the garden waste bin
- Continue to support and educate food waste generators (households and businesses) on how to reduce and manage their food waste, e.g. through Sustainability Victoria’s Love Food Hate Waste program

**Outcome by 2021**
- Melbourne has infrastructure processing capacity in place to manage up to 400,000 tonnes municipal food and garden waste per annum
- Regional reprocessing arrangements continue and/or expand to include food waste as a principal or supplementary feedstock
- There is an increase in recycling of food waste by commercial and industrial food waste generators
- Improved understanding of the future needs and capacity for increasing commercial food waste recovery
- Reduced contamination of food and garden waste collected
- An increased number of councils providing kerbside collection of food waste for recycling

**Outcome by 2026**
- Melbourne has access to at least 600,000 tonnes per annum of food and garden waste processing capacity for the municipal sector
- Minimal contamination rates in food and garden waste collected.
- An increased number of households use their councils’ organic kerbside collection service
2.4 Strategic Objective 3: Deliver community, environmental and economic benefits

This strategic objective seeks to support a liveable and productive Melbourne with a resource recovery and waste network that provides jobs and economic opportunities, while reducing environmental and community impact. It directly relates to the State Infrastructure Plan long term strategic directions to:

- maximise economic outcomes, provide cost effective service delivery and reduce community, environment and public health impacts
- facilitate a cost effective statewide network of waste and resource recovery infrastructure.

Increasing resource recovery within the metropolitan Melbourne region can create new industries and jobs, grow the economy and protect the health of communities, while generating positive environmental outcomes.

Achieving this objective will require the involvement of everyone who produces waste, manages waste and uses products made from recycled materials. We need to ensure all decisions are informed by the views and interests of stakeholders, and consider the needs of community. This aligns with the principle of environmental justice in the State Infrastructure Plan, which requires the community to be involved in determining waste and resource recovery priorities for the whole of metropolitan Melbourne, and to have opportunities to participate in decisions and planning needed to establish a safe and integrated system.

Residents and businesses who use resource recovery and waste services need support to better understand and get the best out of our metropolitan network. And, the operators of the resource recovery and waste network need clarity on the standards expected of them – i.e. best practice operations and a culture of continuous improvement.

The actions listed in Table 5 will result in the waste and resource recovery network delivering community, environmental and economic benefits.

Table 5: Actions to achieve Strategic Objective 3

<table>
<thead>
<tr>
<th>Actions</th>
<th>State Infrastructure Plan - Strategic Direction/s</th>
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<tbody>
<tr>
<td>6. Encourage best practice operations for the resource recovery and waste network</td>
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</tbody>
</table>

**Implementation**

- Recommend best practice and continuous improvement expectations be a requirement of all MWRG facilitated collective procurement contracts
- Input into statutory approvals (planning and works approvals) to ensure objectives and actions of the Metropolitan Implementation Plan are understood and acknowledged
- Implement statewide best practice guides, including guides tailored to regional needs. E.g. for the operation of resource recovery centres/transfer stations and hubs

**Outcome by 2021**

- Operators have a clear understanding of the best practice standards expected of them

**Outcome by 2026**

- Metropolitan network establishes a reputation as a leader in delivering community and economic benefits by going beyond compliance
- Reduction of licensed waste management facilities with environmental breaches

- To maximise economic outcomes, provide cost effective service delivery and reduce community, environment and public health impacts

Lead: MWRG Support: SV, EPA Victoria, responsible state authorities, industry, community leaders
7. **Engage community and stakeholders in waste and resource recovery decision making**

**Implementation**

- Include effective community engagement as a requirement of all MWRGG facilitated procurement contracts.
- Support the achievement of the Victorian Waste Education Strategy, including the implementation of the Victorian Government’s social licence program.
- Develop and deliver a MWRGG stakeholder and engagement policy.
- Continue to partner with EPA Victoria and relevant planning authorities to encourage the use of best practice stakeholder engagement in regulatory approval processes.

**Outcome by 2021**

- Best practice engagement practices in place to support the metropolitan network.

**Outcome by 2026**

- Deliberative engagement process are established as key processes for reviewing and developing the Metropolitan Implementation Plan 2026–35.
- There is a measured increase in business and community awareness of and engagement with resource recovery and waste services and infrastructure.

- To maximise economic outcomes, provide cost effective service delivery and reduce community, environment and public health impacts.
- To facilitate a cost effective statewide network of waste and resource recovery infrastructure.

| Lead: MWRGG |
| Support: SV, industry, local government, EPA Victoria, planning authorities |

8. **Support the implementation of best practice litter prevention programs**

**Implementation**

- Support existing partnerships including Victorian Litter Action Alliance and Councils Litter Environment Action Network to help develop and implement best practice litter prevention programs, including delivering the Litter Hotspots program.

**Outcome by 2026:**

- Best practice litter prevention programs are in place.

- To maximise economic outcomes, provide cost effective service delivery and reduce community, environment and public health impacts.

| Lead: MWRGG |
| Support: SV, Victorian Litter Action Alliance, local government, Councils Litter Environment Action Network |
2.5 Strategic Objective 4: Plan for Melbourne's growing population

This strategic objective seeks to ensure Melbourne has the right resource recovery and waste infrastructure it needs in the right place, at the right time, with the right protections. It directly relates to the State Infrastructure Plan's long term strategic directions to:

- achieve quantities for reprocessing
- manage waste and material streams
- maximise economic outcomes, provide cost effective service delivery, and reduce community, environment and public health impacts
- facilitate a cost effective statewide network of waste and resource recovery infrastructure.

Planning for waste and resource recovery infrastructure is inherently linked with transport and land use planning. As our population grows we need to secure more housing, essential community infrastructure, and services and transport. Land use planning tries to balance these competing needs and interests so we achieve an overall community benefit by developing land in a fair, orderly and sustainable way.

As with other essential services and infrastructure, it is important that sufficient land is available in suitable locations with appropriate approvals for the waste and resource recovery facilities that Melbourne is going to need over the next 30 years.

The community, state and local government, planning authorities and private industry all have a role to play in helping to strike the right balance and ensuring their views are considered in the way land is developed.

The Metropolitan Implementation Plan considers regional transport, land use planning and the role of planning schemes in aligning resource recovery, waste and land use planning outcomes and objectives. It also gives further meaning to the concept of waste and resource recovery hubs of ‘state importance’ in a spatial sense through the land use planning system. The land use planning system can facilitate and encourage the placement of waste and resource recovery facilities in hubs and provide disincentives for potentially conflicting land uses in buffer areas around these hubs. The State Infrastructure Plan identifies 14 hubs of state importance with the metropolitan Melbourne region.

The actions listed in Table 6 will help ensure we have the right resource recovery and waste infrastructure in the right place, at the right time, with the right protections.

### Table 6: Actions to achieve Strategic Objective 4

<table>
<thead>
<tr>
<th>Actions</th>
<th>State Infrastructure Plan - Strategic Direction/s</th>
<th>Responsibility</th>
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</thead>
<tbody>
<tr>
<td>9. Identify the roles and functions of waste and resource recovery hubs across the metropolitan network</td>
<td>• To achieve quantities for reprocessing</td>
<td>Lead: MWRRG, Support: local government, landfill and waste operators, SV, DELWP (Planning and Environment), EPA Victoria</td>
</tr>
<tr>
<td></td>
<td>• To manage waste and material streams</td>
<td></td>
</tr>
<tr>
<td>Implementation</td>
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</tr>
<tr>
<td>• Support developing plans for each metropolitan hub of state importance that will reference the role and function of resource recovery and waste facilities within that hub, identify opportunities for increased aggregation and reprocessing for cost effective recovery and opportunities to implement best practice in the design and operations of the facilities in the hub</td>
<td>• To achieve quantities for reprocessing</td>
<td>Lead: MWRRG, Support: local government, landfill and waste operators, SV, DELWP (Planning and Environment), EPA Victoria</td>
</tr>
<tr>
<td>• Identify and broker opportunities for generators to connect with reproprocessors to maximise the benefits of waste and resource recovery hubs</td>
<td>• To manage waste and material streams</td>
<td></td>
</tr>
<tr>
<td>• Support Sustainability Victoria to develop a statewide strategy for hubs. In line with this strategy, identify and develop plans for regional hubs</td>
<td>• To achieve quantities for reprocessing</td>
<td>Lead: MWRRG, Support: local government, landfill and waste operators, SV, DELWP (Planning and Environment), EPA Victoria</td>
</tr>
<tr>
<td>Outcome by 2021</td>
<td>• Options for linking metropolitan hubs into local planning schemes are identified and implemented</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Site/precinct plans are developed for at least four hubs of state importance</td>
<td></td>
</tr>
<tr>
<td>Outcome by 2026</td>
<td>• Site/precinct plans are developed for the 10 remaining hubs of state importance</td>
<td></td>
</tr>
<tr>
<td>Actions</td>
<td>State Infrastructure Plan - Strategic Direction/s</td>
<td>Responsibility</td>
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</tbody>
</table>
| 10. **Facilitate appropriate land use planning protection of sites of strategic importance for metropolitan Melbourne’s waste and resource recovery system** | To manage waste and material streams  
To facilitate a cost effective statewide network of waste and resource recovery infrastructure | Lead: MWRRG  
Support: SV, EPA  
Victoria, key local governments DELWP (Planning and Environment) |

**Implementation**

- Work with state and local governments and industry to explore how metropolitan planning schemes can support waste and resource recovery hubs and identify and protect their buffer areas.
- Work with state and local governments to develop and deploy a suite of tools to define, protect and maintain buffer areas around waste and resource recovery facilities and minimise impacts on surrounding communities.
- Improve how the land use planning system gives effect to waste and resource recovery plans and policy, and increase the knowledge and capacity of land use planners to plan and make decisions in relation to waste and resource recovery infrastructure.
- Support local government and the waste industry to respond to the land use planning challenges and opportunities associated with waste and resource recovery facilities by providing knowledge and building capacity to protect and enhance waste and resource recovery facilities.

**Outcome by 2021**

- Buffer protection measures are included within the Victorian Planning Provisions.
- Protection measures for key sites are delivered.
<table>
<thead>
<tr>
<th>Actions</th>
<th>State Infrastructure Plan - Strategic Direction/s</th>
<th>Responsibility</th>
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</thead>
<tbody>
<tr>
<td>11. Facilitate and support aligning waste and resource recovery system</td>
<td></td>
<td>Lead: MWRGG Support: SV, EPA Victoria, Victorian Planning Authority (VPA), key local governments, DELWP (Environment and Planning)</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Monitor and respond to statutory and strategic planning applications that impact the metropolitan waste and resource recovery system</td>
<td>• To manage waste and material streams</td>
<td></td>
</tr>
<tr>
<td>• Proactively inform and collaborate with local government and state planning agencies to ensure the Metropolitan Implementation Plan is considered in transport and land use planning policy development and decision making</td>
<td>• To maximise economic outcomes, provide cost effective service delivery, and reduce community, environment and public health impacts</td>
<td></td>
</tr>
<tr>
<td>• Encourage an integrated planning response by working with all stakeholders to ensure the planning system acknowledges and deals with the effects of waste infrastructure including impacts of new and existing facilities on communities, and the need to reduce the negative impacts of facilities on the environment and community</td>
<td>• To facilitate a cost effective statewide network of waste and resource recovery infrastructure</td>
<td></td>
</tr>
<tr>
<td>• Work with DELWP to develop land use planning tools and guidelines to assist new multi-unit developments to better plan and provide for resource recovery infrastructure and services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Develop guides for incorporating waste management planning into multi-unit developments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome by 2021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Responsible authorities report greater awareness and alignment of resource recovery and waste infrastructure planning and land use planning</td>
<td></td>
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<tr>
<td>• Multi-unit development planning tools and guidelines are used by 90% of metropolitan councils</td>
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</tr>
<tr>
<td>• Planning schemes are amended to better support recycling from multi-unit developments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcome by 2026</td>
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<td>• 95% of all new multi-unit developments accommodate resource recovery collections</td>
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<td>• Responsible authorities report greater awareness and alignment of resource recovery and waste infrastructure planning and land use planning</td>
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<tr>
<td>Actions</td>
<td>State Infrastructure Plan - Strategic Direction/s</td>
<td>Responsibility</td>
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| 12. **Ensure metropolitan network of landfills has sufficient capacity to accommodate an emergency or unexpected event (contingency capacity)** | • Increase resource recovery  
• Maximise economic outcomes, provide cost effective service delivery and reduce community, environment and public health impacts | Lead: DELWP  
Support: WRGRs, EPA Victoria, SV, Emergency Management Victoria |
| **Implementation** | | |
| • Annually assess and survey landfill sites to determine where contingency capacity is available within the metropolitan network  
• Develop and coordinate a Victorian waste and resource recovery contingency planning group to further investigate the waste management requirements caused by emergency events and the process of decision making regarding waste management | | |
| **Outcome by 2021** | | |
| • Sufficient landfill capacity is available if an emergency or unexpected event occurs | | |
| 13. **Review the Metropolitan Implementation Plan in 2019 to assess whether new resource recovery infrastructure will be delivered within ten year timeframe** | • Increase resource recovery | Lead: MWRRG  
Support: SV, DELWP |
| **Implementation** | | |
| • Finalise terms of review, including indicators for assessing likelihood of recovery infrastructure being commissioned and projected recovery rates being realised  
• Undertake a review in 2019, in line with best practice community engagement and statutory requirements. The review will:  
  • assess the impact of the metropolitan and regional implementation plans on the resource recovery market  
  • assess whether new resource recovery infrastructure will be delivered within 10 year timeframe  
  • determine the need for long term landfilling and, if needed, schedule a new landfill  
  • If required, amend schedule to ensure landfill infrastructure can meet community needs for 10 years and beyond | | |
| **Outcome by 2021** | | |
| • If needed, Metropolitan Implementation Plan updated including new landfill/s scheduled (if needed) and detailing additional resource recovery infrastructure required | | |