



MOONEE VALLEY CITY COUNCIL

# Waste Management Strategy 2008-2014



# Contents

---

Summary	2
Introduction	3
Moonee Valley's approach	4
Background	5
Policy context	9
Demographic profile	10
Current waste programs	12
Action Plan	17
Glossary	28
Appendix One Predicted waste volumes for Moonee Valley	30
Appendix Two	32

---



# Summary

---

## Willful waste brings woeful want.

Thomas Fuller (1608–1661) British clergyman and author

The sustainable management of waste is a key part of economic and community development. Local governments must reduce the environmental impacts of waste by assisting their community to minimise waste production, increasing recycling and organic waste diversion rates, finding alternatives to landfill disposal and meeting statutory requirements. Actions to reduce waste, either by the more efficient use of resources or by enabling the recovery and reuse of discarded material, are a critical element of sustainable waste management practices.

One of Council's great challenges is to manage wastes from increasing and unsustainable consumption patterns. Waste per capita is rising steadily and part of local government's role is to educate and inform the community to help them make sustainable choices.

Moonee Valley City Council currently diverts 44.8 per cent of its waste from landfill, a significant increase since the 2003 Waste Management Strategy was adopted by Council. The State Government's "Towards Zero Waste" strategy released in 2005 has set a new diversion rate target for municipal waste of 65 per cent by 2014.

A bin audit completed during 2007 revealed that 41 per cent of waste in landfill bins can be potentially diverted into the recyclables or garden waste bins (see Figure seven). Council's priority will be increase services and provide education to target the removal of these items from incorrect disposal into the landfill bin system. The introduction of the kitchen organics to the garden waste bin will be a key step in diverting food waste from landfill.

This strategy sets out Council's commitment to surpassing the State Government's target. Continuous improvement and innovation is embedded within this strategy to ensure Council remains abreast of best practice technology. It includes actions to guide Council's waste management practices over the next six years. These actions will take a twofold approach, firstly aiming to avoid and minimise waste generation and, secondly, to sustainably manage waste collected by Council.



# Introduction

---

Moonee Valley City Council is committed to reducing waste from its operations and from the community. This Waste Management Strategy is Moonee Valley's vision for the sustainable management of waste. It will enable Council to build upon the momentum generated by the 2003 Waste Management Strategy, and will help Council surpass mandatory State Government targets. Through this strategy, Council aims to be a leader in waste management across the broader metropolitan region.

The key objectives of this strategy are to achieve best practice waste management, to work with State Government to deliver innovative solutions to minimise landfill and to make informed purchasing decisions. Importantly, these objectives support the aims of Council's Environmental Sustainability Plan, which are to:

- Establish an overall vision for a sustainable environment
- Integrate sustainability into all future policies and strategies
- Provide an action plan with measurable environmental targets and indicators
- Provide a framework for an effective and ongoing sustainability report to Council and community.

This strategy incorporates best management practices both internationally and locally, and adopts current thinking in waste management while seeking to continually innovate and improve as methodologies and technologies change.



# Moonee Valley approach

---

In line with its values, to achieve the targets set in this strategy Moonee Valley City Council will:

- Think strategically: look ahead, plan for change and understand community aspirations in the context of Council's role in waste management. Implement policies and guidelines that influence Council and community waste management.
- Communicate: promote better waste management and share experiences with local business, industry and residents.
- Be accountable: take responsibility for our actions, and report accurately on our waste management activities.
- Show leadership: lead by example and reduce Moonee Valley's impact on the environment through reduced waste disposal.
- Be innovative: seek new ways to achieve better outcomes in reshaping the consumption patterns of our community and make use of waste products.
- Use teamwork: work together to achieve the best outcomes for citizens. Develop new partnerships between Council, business and across the community to achieve a cultural change in the way we think about waste.



# Background

---

There are three main waste streams in Victoria: municipal solid waste from households and council operations; construction and demolition and commercial and industrial.

Municipal solid waste has traditionally been disposed of to landfill, but as landfills reach their capacity, there is increasing resistance to creating new landfill sites. This is a result of a number of factors including statutory recycling targets set by government, scarce urban land, groundwater pollution leaching from older landfill sites, methane released from the decomposition of organic wastes and greenhouse emissions from the transportation of waste to landfill sites often located on the urban fringe.

Since the mid 1980s municipal solid waste and the environmental consequences associated with its management have received increasing attention from communities and governments in industrialised countries. In addition to the financial costs associated with wastes, a large number of hidden costs are linked to waste disposal. These costs include greenhouse gas emissions from waste collection vehicles, greenhouse gases emitted from landfills and the loss of valuable resources including embodied energy and water. In 2001, greenhouse gas emissions from waste collection services made up 1.8% of the community's total greenhouse gas emissions. A recent study concluded, however, that methane emissions from landfill could account for up to 85% of Australia's total carbon budget by 2050 (ECOS 2007). Moonee Valley has reduced its greenhouse gas emissions through the introduction of a green waste kerbside service; however emissions from waste disposal are still substantial, incorporating those from the embodied energy of goods thrown out and packaging used.

Technologies and methods of dealing with municipal waste have changed rapidly over the last 20 years, moving towards the diversion of materials to be recycled or composted. Variations on the traditional kerbside collection to landfill are used around the world – in northern Europe several communities use the Envac collection system, which conveys waste in underground conduits using a vacuum tube. Separation of waste is carried out in three coloured bags, which are mechanically detected. In Japan it is common for waste to be incinerated due to the scarcity of available land.

In Australia, the majority of household waste, street litter, and waste from parks and gardens is collected through services provided directly by municipal councils or by contractors engaged by the councils. Commercial and industrial waste, and a small proportion of household waste, is collected by private sector organisations engaged on a commercial basis. Most kerbside collection services provide a 120 litre bin emptied to landfill weekly and a 120 or 240L recycling bin collected fortnightly. Some councils also provide optional bins for green waste. The increase in the provision of kerbside recycling services by councils has brought about a significant change in behaviour and diversion rates.

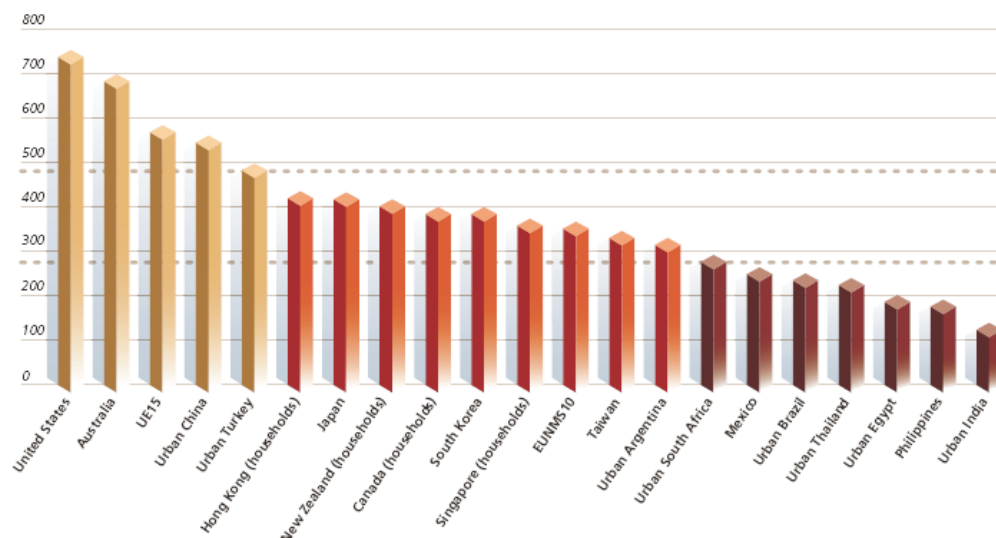
## Waste trends

Despite an improvement in waste technologies and an increase in recycling rates, worldwide waste generated per capita is steadily increasing. This trend is likely to continue over the next decade as waste levels per capita have been shown to increase with individual wealth. In Organisation for Economic Co-operation and Development countries, which includes most developed countries, municipal waste generated per capita has increased almost 60 per cent since 1980. Only a few countries have succeeded in reducing solid waste generated through a combination of community education and legislation. For example, Germany requires its vehicle makers to manufacture cars with entirely recyclable components. In most countries for which data is available, increased affluence, associated with economic growth and changes in consumption patterns, has generated higher rates of waste per capita.

Of all the Westernised nations, the United States collects the most waste per capita (700+kg/capita), followed by Australia (600 to 700kg/capita) and western Europe (see Figure one). While there is a relatively strong correlation between the amount of municipal waste collected and a country's wealth, the European Union per capita waste levels remain significantly lower than Australia despite higher wealth levels.

Figure one: Municipal waste generation per capita kg/inhabitant/year (2006)

### *Municipal waste per capita in countries with high, medium and low incomes (kg/inhabitant/year)*

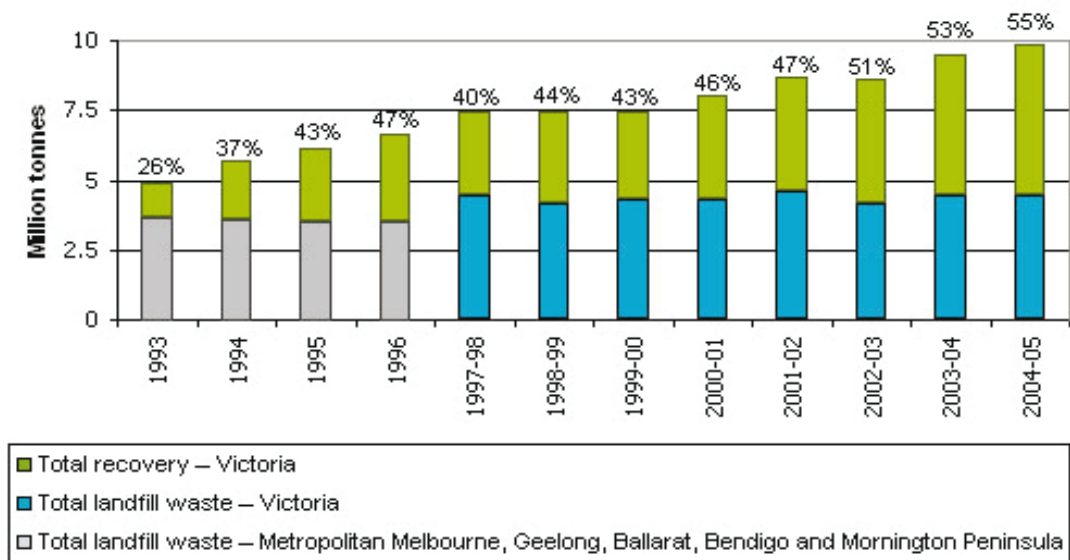


Sources: National Environmental Agencies, OECD, Eurostat, CyclOpe

While waste management has traditionally focused on disposal methods and the associated environmental impacts of disposal, contemporary management thinking has shifted towards the avoidance of waste from the outset. Planned obsolescence in products, over-packaging and increased consumerism are all significant challenges to reducing waste figures. As Figure two shows, whilst there has been a substantial increase in the rate of diversion to recycling, the total waste produced has doubled between 1993 and 2004/05.



Figure two: Waste generation (tonnes) and recovery rates Victoria 1993 to 2004-05 (Sustainability Victoria 2006).



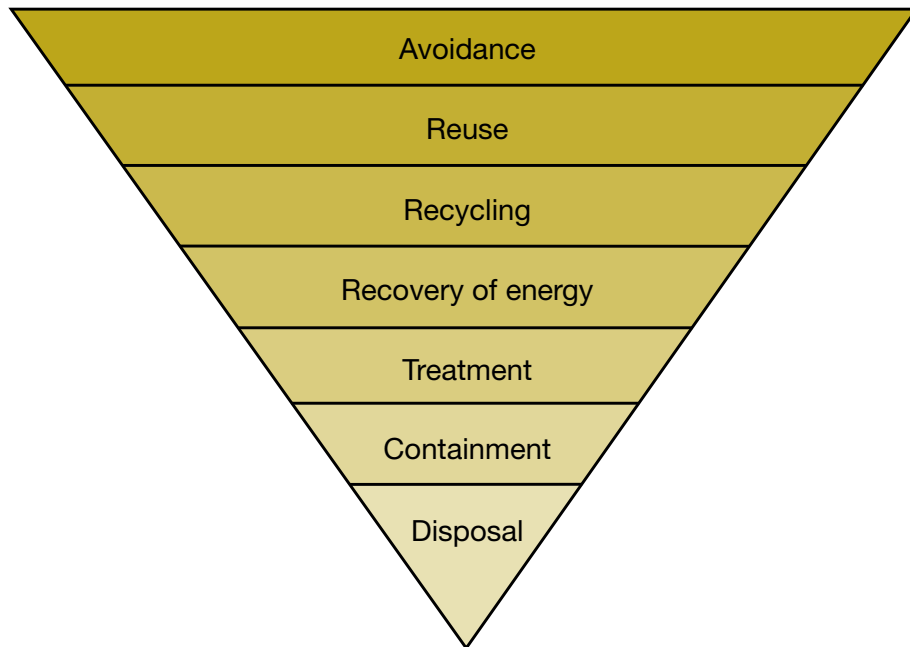
Victorian households contribute about a quarter of the total waste stream and close to 40 per cent of waste disposed to landfill (State Government of Victoria, 2005). In 2005-06, the average household in metropolitan Melbourne generated approximately 900 kg of kerbside municipal solid waste. Of this, approximately 40 per cent was recovered for recycling and reprocessing (State Government of Victoria, 2008).

Growing concern towards unsustainable materials consumption has resulted in measures that educate consumers and manufacturers on the need to purchase and manufacture products which use fewer resources in their manufacturing, last longer and are made up of recyclable components when they reach the end of their useful life. As an example of these measures, the European Union has piloted Eco-label, a voluntary scheme designed to encourage businesses to market products and services that are part of more sustainable consumption and production methods. In Australia, progress towards more socially and environmentally responsible production practices has been slow. Programs such as Eco-buy and the growth of green purchasing policies are helping to raise both public and private awareness and action.

## The Waste Management Hierarchy

The seven-tier waste management hierarchy shown in Figure three below is a visual representation of the preferred approach to waste management. The first tier, waste avoidance, is the most sustainable form of action. The second and third tiers involve the reuse and recycling, including composting of wastes, using products again instead of throwing them out and creating new materials from old without the energy expense or environmental damage from mining for raw materials. Waste that cannot be prevented, reused or recycled can be combusted with energy recovery (tier 4). Treatment and containment both involve energy use and are relatively poor outcomes for waste. The final tier, disposal, refers to landfilling or incineration without energy recovery which is the least preferred option. Actions for Council's waste management will be prioritised according to this hierarchy, seeking firstly to minimise waste production and then managing wastes according to the hierarchy.

Figure three: Waste management hierarchy (Sustainability Victoria)



# Policy context

---

Strategies and action plans for waste management need to be considered as a part of an overall approach to responsible environmental management. The following policies and strategies have contributed to the development of actions within this draft Plan.

**Federal Government strategies and policies that highlight waste management as a key issue for achieving sustainable growth in our cities include:**

- Waste Generation and Resource Efficiency in Australia 2006
- Greenhouse gas / Global warming policies and strategy

**At a state level:**

- Growing Victoria Together A Vision for Victoria to 2010 and beyond
- Melbourne 2030 – Planning for Sustainable Growth
- Environmental Protection Act 1970
- State Environment Protection Policies
- Victoria's Litter Reduction Strategy (1995)
- Towards Zero Waste Strategy (Sept. 2005). This document details how all Victorians will progress towards becoming a zero waste society within the next 10 years by:
  - > Preventing the creation of waste
  - > Improving the effective and efficient use of resources and the management of waste
  - > Improving resource recovery and recycling
  - > Disposing of waste in an environmentally safe manner.

**The specific targets for municipalities set out in the Towards Zero Waste Strategy 2005 are:**

- A 65 per cent recovery rate (by weight) of municipal solid waste for reuse and recycling by 2014. An interim target of 45 per cent is established for 2008/09.
- Contribute towards a state-wide 25 per cent improvement from 2003 levels in littering by 2014.

**Ensuring sustainability is one of Council's five future objectives<sup>1</sup>, with waste management a key component, as shown in the:**

- Council Plan 2006
- Environment Sustainability Plan 2007-2012
- MV2020 Vision
- Stormwater Management Plan 2008
- Greenhouse Action Plan 2004
- Waste Wise Organisation

<sup>1</sup>Council Plan 2006 – 2010 A New Direction

# Demographic profile

The demographic profile of Moonee Valley is a key consideration in planning for a sustainable waste management service.

Moonee Valley is located north west of the Melbourne CBD and covers an area of 44 square kilometres. It encompasses the suburbs of Flemington and Ascot Vale in the south, through to Avondale Heights, East Keilor and Airport West in the north. Moonee Valley is a largely residential municipality with approximately 107,000 residents. Housing ranges in style from smaller terrace houses with small scale yards in the south to substantially sized houses and lots in Essendon, to more contemporary homes in the north. The DSE publication "Victoria in the Future" (2004) estimates that Moonee Valley's population will increase to 115,030 by 2021. As a result, Moonee Valley is seeing an increase in higher density developments and the associated challenges with waste collection from such developments..

## Current waste programs

Since its adoption in 2003, the Moonee Valley Waste Management Strategy has significantly increased recycling and diversion rates. The Strategy contained 57 initiatives, of which 47 were completed or ongoing in 2007. A significant action from the Strategy was the implementation of the Great Recycling Revolution, a three bin system introduced in October 2004. This system provided residents with a comprehensive kerbside collection service including a 120 or 240L bin for fortnightly recycling and a weekly landfill bin. Residents are also provided the option for a user pays 240L bin for garden waste collected fortnightly. As figure four demonstrates, the 3 bin system has contributed to a significant increase in diversion rates from landfill, from 12.4 per cent in 2003 to 44.8 per cent in 2007.

Figure four: Moonee Valley's diversion from landfill rate

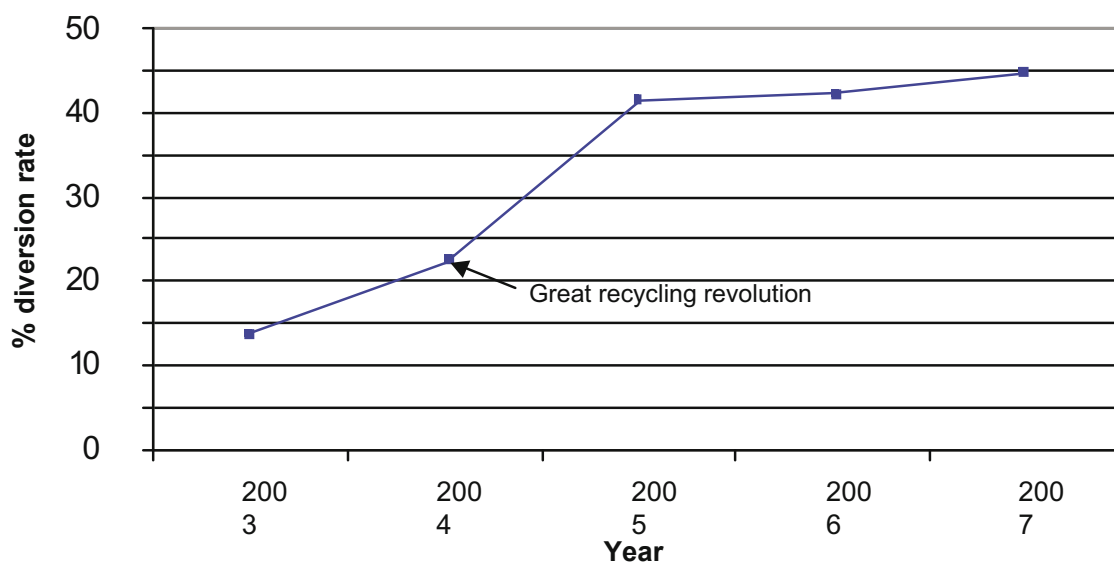
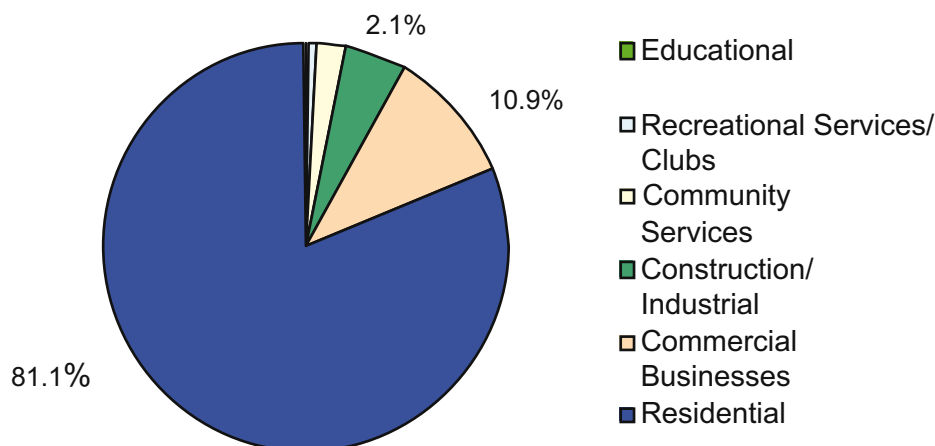


Figure five below illustrates the breakdown of waste percentages in Moonee Valley. As shown, residential waste makes up the bulk of our collection, followed by commercial wastes. It should be noted that these figures do not include any waste or recycling collection organised privately by commercial or industrial businesses.

Figure five: Waste collection categories by percentage in Moonee Valley 2006



While kerbside collection is the most visible aspect of waste management, Council also carries out a number of other waste management activities. The environmental charge which Council collects through its rates goes towards other services including:

- Transfer station landfill collection and disposal
- Transfer station recycling collection and processing
- Provision of bins for domestic waste and recycling
- Domestic waste, recycling and green waste collection and disposal
- Litter bins (streets and parks) provision, collection and disposal
- Street and laneway cleaning
- Footpath cleaning in shopping precincts
- Leaf litter removal
- Graffiti removal
- Annual hard waste pick up
- Twice-yearly branch and pruning pick up.

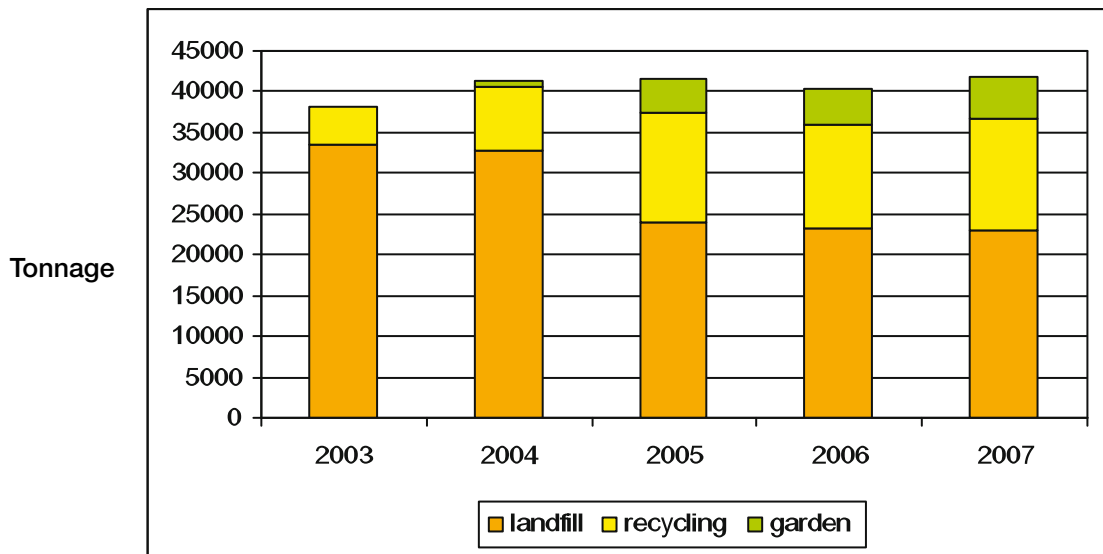
Council also supports and promotes the following activities:

- Community Recycling Trailer available for hire from the Council depot for public events
- Clean up Australia Day - Cleanup Australia
- World Recycling Games - Visy
- Waste Wise procedures and events - Sustainability Victoria.

# Current waste trends

In 2002/03, Moonee Valley was one of the two highest waste producing municipalities in Melbourne in terms of materials collected by the kerbside service per household (849kg) (DSE Melbourne Atlas 2006). In 2006, 897kg of materials were collected per household, including Department of Human Services (DHS) high rise dwellings and 3000 commercial premises. This includes a figure of 515kg per household sent to landfill, higher than the Victorian average of 490kg (Sustainability Victoria). While recycling and diversion rates have increased significantly, removing much of this from the landfill stream, figure six below shows the overall trend for household yield in Moonee Valley's kerbside collection service.

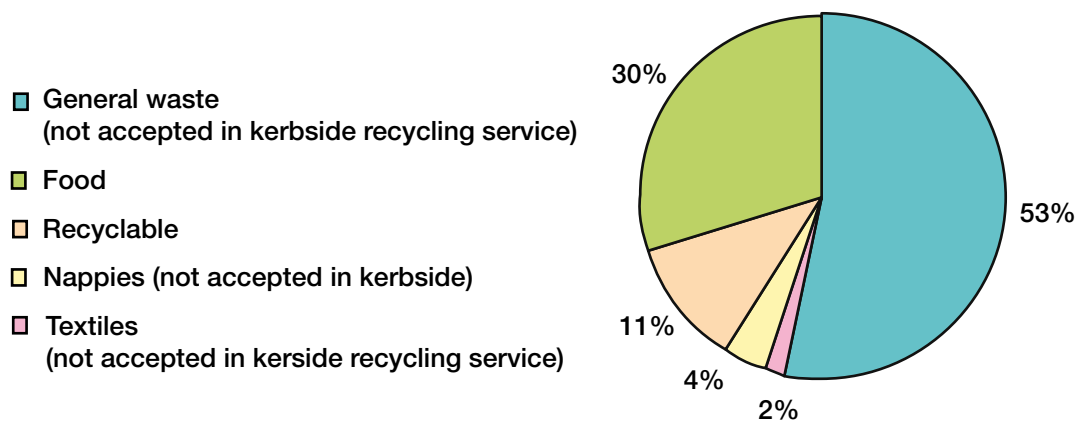
Figure six: Moonee Valley kerbside waste tonnages since 2003



## Waste practices in the kerbside collection

A bin audit completed during 2007 revealed that in order to make significant reductions in landfill bins, diversion of food waste is a priority. Further research is required to understand why 11 per cent of waste ending up in landfill bins could have been placed in kerbside recycle services.

Figure seven: Landfill bin contents



**General waste (including textiles)** - This component, made up of items not accepted in the recycling or green waste kerbside bins, contained items which can be recycled at the transfer station, including polystyrene, computers and timber. Also within this waste were items which could be removed in programs such as Council's Re-New service. This program, trialled in 2007, provides residents with the kerbside removal of reusable and recyclable household goods such as shoes, clothing, textiles, books, household goods, mobile phones, print cartridges, batteries, toys, sporting equipment and plastic bags.

**Food organics** - Council provides discounted compost bins and worm farms to assist residents in diverting food waste from the landfill bins. A trial was conducted where kitchen organics were included in the garden waste bin and Council are now negotiating with garden waste processing contractors, the feasibility running the program across the entire municipality.

**Recyclables** - Council will continue to provide education about the items that can be placed in the recycle stream and investigate opportunities to increase the frequency of recyclables collection.

**Nappies** - New technologies are required to remove nappies from the landfill stream.

## The future challenge

In 2008 the State Government will release the Metropolitan Waste and Resource Recovery Strategic Plan, which will cover all aspects of solid waste disposal within Metropolitan Melbourne. The Strategic Plan will provide a long term vision for waste management and reduction in metropolitan Melbourne and will also identify short and long term waste infrastructure needs. The consultation process for this Plan has indicated a potential change for waste management in Melbourne's inner urban area towards a one bin system in conjunction with a wet Materials Recycling Facility, which sorts a single waste stream. Council clusters still require consideration and discussion by Metropolitan Waste Management Group and whether it is appropriate to determine Moonee Valley as an inner city municipality. Future reviews of this Strategy will need to address issues and incorporate actions raised in the State Government's Recovery Plan to ensure a coordinated approach to waste management.

**The key areas for sustainable waste management targeted by the actions in the Metropolitan Waste and Resource Recovery Strategic Plan are:**

- Minimising wastes produced by the community and Council;
- Maintaining continuous improvement and sustained growth in reuse and recycling;
- Ensuring no recyclables or organics are placed into the landfill bin;
- Reducing commercial and industrial business waste;
- Providing services to an increasing number of people;
- Slowing down increased consumption patterns;
- Meeting more stringent recycling targets;
- Absorbing rising costs associated with dumping rubbish into landfills;
- Providing education.

A particularly difficult challenge for Council is slowing and reversing consumption trends. While a great deal of emphasis is placed on achieving increased diversion rates from landfill, the amount of waste generated due to increasing consumerism and packaging is extremely important and needs to be addressed through a combination of education and advocacy.

Future development in Moonee Valley is likely to be in the form of higher density development and redevelopment of existing sites. Approvals were granted for between 1000 and 1500 dwellings of four or more stories in 2004/05, more than the state average, indicating an increased concentration of people in the municipality. Currently, a limited amount of high density developments receive a waste and recycling service from Council and the remaining developments utilise private contractors for collection. As a result there is a gap in the data relating to household waste and recovery figures for Moonee Valley. When planning for this higher density, Council needs to consider waste collection vehicle accessibility, bin storage and bin size. Where Council can not provide a waste collection service, a system will need to be in place to ensure developments are diverting waste from landfill.

This strategy sets out Council's activities for the next six years to address these challenges and achieve the Victorian government's targets, which are shown below:

## Municipal Sector

- 65% recovery rate (by weight) of municipal solid waste for reuse and recycling by 2014. An interim target of 45% is established for 2008-09.
- Contribute towards a state wide 25 per cent improvement from 2003 levels in littering by 2014.

## General

- 1.5 million Tonne reduction in the projected quantity of solid waste generated by 2014.
- 75 per cent of solid waste (by weight) to be reused, recycled and/or converted to energy by 2014.
- 80% recovery (by weight) of commercial and industrial solid waste for reuse and recycling by 2014. An interim target of 65% is established for 2008-09.
- A recovery rate of 80% (by weight) of construction and demolition solid waste for reuse and recycling by 2014. An interim target of 65% is established for 2008-09.

Actions within this strategy are prioritised according to the waste management hierarchy shown on page seven. The actions have been identified to ensure that Council:

- Leads by example
- Takes a whole of municipality approach (Council, community, commercial and industrial and educational)
- Reduces consumption
- Minimises waste
- Maximises reuse
- Maximises recycling
- Reduces litter

## Partnerships

Successful delivery of the actions and objectives in this strategy requires strong partnerships to be built with community organisations and other bodies, including:

- Sustainability Victoria (State Government)
- Other local governments
- Department of Sustainability and the Environment
- Metropolitan Waste Management Group
- EPA Victoria
- The Victorian Litter Alliance
- Environment Victoria

These partnerships provide advantages for advocacy, information sharing, networking and funding resources.



  
Moonee Valley

- NO HAZARDOUS GOODS
- NO LIQUIDS
- NO GAS CYLINDERS
- NO PAINT
- NO FOOD WASTE
- ALL CHILDREN AND ANIMALS TO REMAIN IN VEHICLES
- PLEASE RETAIN YOUR RECEIPT

GENERAL WASTE  
↓ ↓

# Action Plan:

## Council – Education

Waste Hierarchy	Action	Responsibility	Cost	Timeline
Waste avoidance	<ul style="list-style-type: none"> <li>Promote better waste minimisation and management practices through staff education programs and waste wise events</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	08/09
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>Incorporate waste education into the staff induction program</li> </ul>	Communications	Within operational budget	08/09
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>Promote waste initiatives and projects through the MVCC Green Team</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	08/09
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>Promote a range of waste wise practices to staff, including:                             <ul style="list-style-type: none"> <li>&gt; the use of reusable bags for staff shopping</li> <li>&gt; MVCC reusable cups rather than disposable cups for take-away drinks and staff coffee machines</li> <li>&gt; rubbish free catering</li> </ul> </li> </ul>	Environment and Lifestyle – Environment	Within operational budget	09/10
Recycle	<ul style="list-style-type: none"> <li>Provide education and signage for Council staff in using the three bin system (food scraps/garden bin, recycling, landfill)</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	08/09

## Council – Activities

Waste Hierarchy	Action	Responsibility	Cost	Timeline
Waste avoidance	<ul style="list-style-type: none"> <li>• Include environmental issues as a criteria in selecting contractors for waste contracts, such as minimising greenhouse gases and using alternative fuels</li> </ul>	City Works – Operations	Within operational budget	09/10
Waste avoidance	<ul style="list-style-type: none"> <li>• Review the use of bottled water at Council events</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	09/10
Waste avoidance	<ul style="list-style-type: none"> <li>• Investigate targets for departmental paper use</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	08/09
Waste avoidance	<ul style="list-style-type: none"> <li>• Create a no-print policy for all Council policies and strategies which includes:               <ul style="list-style-type: none"> <li>&gt; Policies available on line</li> <li>&gt; Hard copies distributed to libraries</li> <li>&gt; Hard copies available on request</li> </ul> </li> </ul>	Corporate Services – Information Services	Within operational budget	08/09
Waste avoidance	<ul style="list-style-type: none"> <li>• Review the use of vending machines in Council premises</li> <li>• Reduce the use of disposable cups from coffee machines</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	09/10
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>• Create a policy document that embeds waste wise protocols in all Council procedures, operations and services</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	09/10
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>• Develop and adopt a green purchasing policy</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	08/09
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>• Hold regular strategic waste planning sessions between key internal stakeholders</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	08/09

Waste Hierarchy	Action	Responsibility	Cost	Timeline
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>Review the Moonee Valley City Council Waste Wise Action Plan</li> </ul>	City Works – Operations	Within operational budget	09/10
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>Review the Waste Management Operations Policy</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	09/10
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>Ensure Council events incorporate green purchasing, waste wise, energy and water reduction measures</li> </ul>	City Works – Operations	Within operational budget	09/10
Recycle/reuse	<ul style="list-style-type: none"> <li>Continue negotiations with the Metropolitan Waste Management group to further reduce waste going to landfill using alternative and emerging technologies such as Wet Materials Recovery Facilities, Biodigester and enclosed vessel composters</li> </ul>	City Works – Operations	Within operational budget	ongoing
Recycle/reuse	<ul style="list-style-type: none"> <li>Provide garden bins which also accept food scraps for Council owned and operated facilities including: <ul style="list-style-type: none"> <li>&gt; Childcare centres</li> <li>&gt; Preschools</li> <li>&gt; Community centres</li> <li>&gt; Neighbourhood Centres</li> </ul> </li> </ul>	Environment and Lifestyle – Environment	\$10,000	09/10
Recycle/reuse	<ul style="list-style-type: none"> <li>Investigate the creation of a compost interpretation area in Queens Park</li> </ul>		\$5,000	09/10
Recycle/reuse	<ul style="list-style-type: none"> <li>Minimise green waste removed from open space and parks through re-use on site</li> </ul>	City Works – Operations	Within operational budget	ongoing

## Community – Education

Waste Hierarchy	Action	Responsibility	Cost	Timeline
Waste avoidance/ reuse	<ul style="list-style-type: none"> <li>• Prepare an education strategy which incorporates:               <ul style="list-style-type: none"> <li>&gt; Promoting reusable cleaning materials</li> <li>&gt; Promoting Council's leadership in waste management through festivals and other public events</li> <li>&gt; An ongoing program for recycling/composting education</li> <li>&gt; Promoting green purchasing programs and the ECO buy program</li> <li>&gt; Working with local businesses to provide reusable shopping bags</li> <li>&gt; Encouraging business and schools to participate in Sustainability Victoria's Waste Wise program</li> <li>&gt; Promoting extended producer responsibility with businesses</li> <li>&gt; Regional education materials and programs through the Metropolitan Waste Management Group's education network</li> </ul> </li> </ul>	Environment and Lifestyle – Environment  City Works – Operations  Communications	Within operational budget	09/10
Waste avoidance/ reuse	<ul style="list-style-type: none"> <li>• Encourage responsible purchasing. Investigate the introduction of a food-coop that has less packaged products.</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	10/11
Recycle	<ul style="list-style-type: none"> <li>• Programs to promote:               <ul style="list-style-type: none"> <li>&gt; 1-7 plastics recycling</li> <li>&gt; Squash Don't Wash your recyclables campaign to maximise recycling bin capacity and save water</li> <li>&gt; Waste services for businesses</li> <li>&gt; Correct sorting of wastes to achieve higher diversion rates</li> <li>&gt; Re-New goods collection/ education about goods accepted in this program</li> </ul> </li> </ul>	City Works – Operations  Communications	Within operational budget	ongoing

Waste Hierarchy	Action	Responsibility	Cost	Timeline
Recycle	<ul style="list-style-type: none"> <li>• Provide waste management information for the community including: <ul style="list-style-type: none"> <li>&gt; Annual waste management calendars</li> <li>&gt; Waste management kit for new residents</li> <li>&gt; Waste information for business services</li> <li>&gt; Community updates when new materials can be received at the transfer station</li> <li>&gt; An education campaign targeting residents from non-English speaking backgrounds</li> <li>&gt; Promoting Council's services through Valley View, media releases and advertisement</li> </ul> </li> </ul>	Communications		
Recycle	<ul style="list-style-type: none"> <li>• Work with Revenue Service and/or Real Estate agents to distribute materials on the waste management services provided in Moonee Valley to new residents</li> </ul>	City Works – Operations	Within operational budget	09/10
Recycle	<ul style="list-style-type: none"> <li>• Deliver an educational campaign on good composting measures including workshops in neighbourhood houses and community centres</li> </ul>	Environment and Lifestyle - Environment	Within operational budget	09/10
Recycle	<ul style="list-style-type: none"> <li>• Investigate the delivery of ArtEcycle, an innovative arts program to promote recycling</li> </ul>	City Works – Operations Environment and Lifestyle – Arts and Culture	\$15,000	10/11

## Community – Kerbside Collection

Waste Hierarchy	Action	Responsibility		Timeline
Recycle/reuse	<ul style="list-style-type: none"> <li>Review hard waste collection to determine viability</li> </ul>	City Works – Operations	Within operational budget	ongoing
Recycle/reuse	<ul style="list-style-type: none"> <li>Review collection contracts to ensure best practice and seek the best purchase price for materials collected</li> </ul>	City Works – Operations	Within operational budget	ongoing
Recycle/reuse	<ul style="list-style-type: none"> <li>Investigate continuing the Re-New program on a quarterly basis</li> </ul>	City Works – Operations	Within operational budget	08/09
Recycle	<ul style="list-style-type: none"> <li>Develop waste management guidelines for multi unit developments and distribute at Council offices</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	09/10
Recycle	<ul style="list-style-type: none"> <li>Develop methodology to introduce recycling in high rise residential areas and an accompanying education campaign for residents</li> </ul>	City Works – Operations	Within operational budget	10/11
Recycle	<ul style="list-style-type: none"> <li>Require developers of new multi unit dwellings to submit a waste management strategy with planning permit applications</li> </ul>	City Works – Operations	Within operational budget	10/11
Recycle	<ul style="list-style-type: none"> <li>Divert organic kitchen waste from landfill through a permanent organics kerbside service using the current garden bin</li> </ul>	City Works – Operations	Within operational budget	08/09
Recycle	<ul style="list-style-type: none"> <li>Evaluate the provision of incentives for the uptake of garden bins such as                             <ul style="list-style-type: none"> <li>&gt; Low pricing</li> <li>&gt; Making them mandatory</li> <li>&gt; Supplying kitchen organic waste buckets</li> </ul> </li> </ul>	City Development	1.4 million (cost recovery from citizens)	09/10

Waste Hierarchy	Action	Responsibility		Timeline
Recycle/	<ul style="list-style-type: none"> <li>Survey residents' waste habits, conduct bin audits to be aware of problem materials and capacity issues</li> </ul>	City Works – Operations	\$20,000	09/10
Recycle/	<ul style="list-style-type: none"> <li>Use trials to develop a model to predict frequency of bin collection required in order to:               <ul style="list-style-type: none"> <li>&gt; Reduce landfill collection to a fortnightly collection</li> <li>&gt; Increase recycling collection to a weekly collection</li> </ul> </li> </ul>	City Works – Operations	\$10,000	10/11
Recycle	<ul style="list-style-type: none"> <li>Research and adopt new technologies or practices when available for the diversion of:               <ul style="list-style-type: none"> <li>&gt; Disposable nappies</li> <li>&gt; Residential volumes of clinical/prescribed waste</li> </ul> </li> </ul>	City Works – Operations	Within operational budget	ongoing
Recycle	<ul style="list-style-type: none"> <li>Introduce a recycling service to commercial precincts               <ul style="list-style-type: none"> <li>&gt; Review success of the program after 12 months</li> </ul> </li> </ul>	City Works – Operations	\$4,000	09/10
Recycle	<ul style="list-style-type: none"> <li>Promote a garden bin service for local businesses               <ul style="list-style-type: none"> <li>&gt; Review success of the program after 12 months</li> </ul> </li> </ul>	City Works – Operations	\$5,000	09/10
Recycle	<ul style="list-style-type: none"> <li>Trial providing compost from Moonee Valley garden bin collection back to</li> </ul>	City Works – Operations	\$2,000	09/10

## Transfer Station

Waste Hierarchy	Action	Responsibility	Cost	Timeline
Recycle/reuse	<ul style="list-style-type: none"> <li>Continually review materials accepted and seek new materials to be recycled especially fluorescent light globes</li> </ul>	City Works – Operations	Within operational budget	ongoing
Recycle/reuse	<ul style="list-style-type: none"> <li>Transfer Station to become a designated Detox Your Home (Sustainability Victoria program) drop off centre</li> </ul>	City Works – Operations	External Funding	09/10
Recycle/reuse	<ul style="list-style-type: none"> <li>Determine feasibility of mini-transfer stations/drop off centres throughout municipality and if viable, seek funding from Metropolitan Waste Management Group and Sustainability Victoria</li> </ul>	City Works – Operations	External Funding	09/10
Recycle/reuse	<ul style="list-style-type: none"> <li>Continually improve signage at transfer station to ensure directions are clear</li> </ul>	City Works – Operations	\$5,000	ongoing
Recycle/reuse	<ul style="list-style-type: none"> <li>Investigate alternative locations for the transfer station</li> </ul>	City Works – Operations	Within operational budget	10/11
Recycle/reuse	<ul style="list-style-type: none"> <li>Redevelop the entrance to the transfer station</li> </ul>	City Works – Operations	Within operational budget	08/09

## Community – Schools

Waste Hierarchy	Action	Responsibility	Cost	Timeline
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>Promote the Resource Smart Schools program as part of the Environment</li> </ul>	Environment and Lifestyle – Environment	Within operational budget	ongoing
Waste avoidance/reuse/recycle	<ul style="list-style-type: none"> <li>Provide schools with a waste management DVD</li> </ul>	City Works – Operations	Within operational budget	09/10
Recycle	<ul style="list-style-type: none"> <li>Seek to encourage school involvement in composting</li> </ul>	City Works – Operations	Within operational budget	ongoing

## Community – Activities

Waste Hierarchy	Action	Responsibility	Cost	Timeline
Waste avoidance/ reuse/recycle	<ul style="list-style-type: none"> <li>Run a training session for home care workers in sustainable waste management</li> </ul>	Environment and Lifestyle - Environment	Within operational budget	09/10
Waste avoidance/ reuse/recycle	<ul style="list-style-type: none"> <li>Encourage community groups to run Waste Wise Events in partnership with Sustainability Victoria</li> </ul>	Environment and Lifestyle - Environment  City Works – Operations	Within operational budget	ongoing
Waste avoidance/ reuse/recycle	<ul style="list-style-type: none"> <li>Promote environmental events including:                             <ul style="list-style-type: none"> <li>&gt; Clean Up Australia Day</li> <li>&gt; World Environment Day</li> <li>&gt; National Recycling Week</li> <li>&gt; Plastic Bag Exchange</li> </ul> </li> </ul>	Communications  Environment and Lifestyle - Environment  City Works – Operations	Within operational budget	ongoing  Z
Waste avoidance/ reuse/recycle	<ul style="list-style-type: none"> <li>Develop policy and program for waste minimisation and management on demolition sites</li> </ul>	Environment and Lifestyle - Environment  City Development	Within operational budget	10/11
Recycle	<ul style="list-style-type: none"> <li>Provide community compost workshops to encourage the uptake of compost bins</li> </ul>	Environment and Lifestyle - Environment	Within operational budget	09/10
Recycle	<ul style="list-style-type: none"> <li>Identify and use methods to encourage neighbours to assist their elderly and incapacitated neighbours with recycling and composting</li> </ul>	City Works – Operations	Within operational budget	10/11

## Community – Litter

Action	Responsibility	Cost	Timeline
<ul style="list-style-type: none"> <li>Monitor problem areas to identify litter hotspots and trends in littering behaviour.</li> </ul>	City Works – Operations	Within operational budget	ongoing
<ul style="list-style-type: none"> <li>Work with key bodies including schools, businesses and community groups to prevent cigarette butts and other forms of litter</li> </ul>	Environment and Lifestyle - Environment City Works	Within operational budget	ongoing
<ul style="list-style-type: none"> <li>Identify alternative measures to deal with cigarette butt litter.</li> </ul>	City Works – Operations	Within operational budget	10/11
<ul style="list-style-type: none"> <li>Work with Council's drainage department to identify and target problem areas and items</li> </ul>	City Works – Assets and Engineering City Works – Operations	Within operational budget	08/09

## Advocacy

Action	Responsibility	Cost	Timeline
<ul style="list-style-type: none"> <li>Advocate to the State Government for extended product responsibility in Victoria and further investigation the introduction of Container Deposit Legislation</li> </ul>	Environment and Lifestyle – Environment City Works – Operations	Within operational budget	08/09
<ul style="list-style-type: none"> <li>Advocate to the State Government to introduce a levy on plastic bags at retail outlets</li> </ul>	Environment and Lifestyle – Environment City Works – Operations	Within operational budget	09/10
<ul style="list-style-type: none"> <li>Advocate the State Government to review its targets to use total weight of waste per household as a measurement tool instead of diversion rates</li> </ul>	City Works – Operations	Within operational budget	08/09
<ul style="list-style-type: none"> <li>Develop formula for weight adjustment for bio-bin contents to allow for evaporation and advocate to Sustainability Victoria and MAV to adopt the formula</li> </ul>	City Works – Operations	Within operational budget	09/10

## Implementation, monitoring and review

It is vital to measure progress to assess the effectiveness of any strategy. Continuous improvement can only be achieved by reflecting on the successes and failures of the strategy and adapting actions appropriately.

A twice yearly briefing report will be made to Council, regarding the progress of implementation of this strategy and a comprehensive review plan will be conducted every two years. The briefing report will consist of:

- Quantitative data in the form of tonnages, costs and diversion rates
- Status of current programs
- Funding requirements for future program
- Industry update

The monitoring and review process will acknowledge the Council's Waste Strategy achievements, ensure current best practice is reflected, discuss the reasons for any failures and make any adjustments needed to improve actions.



# Glossary

---

## Diversion rate

The rate or percentage of a potentially recyclable material that has been diverted out of the landfill waste disposal stream and recycled.

## Hard waste

Household garbage which is not normally accepted into rubbish bins by local councils, eg. old stoves, mattresses.

## Municipal Solid Waste

Waste generated from municipal or residential activities, and comprises hard waste, recyclables, organics and residual materials (commonly referred to as garbage and contains material suitable for recycling and composting).

## Organics

Plant or animal matter originating from domestic or industrial sources, Garden/Green Organics – grass clippings, tree prunings Kitchen Organics – food scraps

## Residual waste

Waste that remains after separation of recyclable materials including green waste.

## Recovery rate

The recovery rate is the percentage of materials consumed that is recovered for recycling.

## Sustainable consumption, sustainable resource use

A change to society's historical patterns of consumption and behaviour so that consumers use fewer resources, cause less pollution and contribute to social progress worldwide.

## Sustainable development

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

## Textile

Any material made with yarns, cloth or fibres.

## Transfer station

A facility allowing drop-off and consolidation of garbage and a wide range of recyclable materials.

## Waste hierarchy, waste management hierarchy

A concept promoting waste avoidance ahead of recycling and disposal often referred to in community education campaigns as reduce reuse recycle. The hierarchy promotes management of waste in the order of preference: avoidance/ minimisation, recycle/reuse, recover (of energy) and disposal.

## Waste minimisation

Techniques to keep waste generation at a minimum level to divert materials from landfill, reducing the need for waste collection, handling and disposal to landfill. Term is also applied to other efforts to reduce the amount of waste going into the waste stream.

## References

Year book 2008, Australian Bureau of Statistics

Business plan 2007-2010, Sustainability Victoria 2007

Victorian Local Government Data Collection 2004-2005, Sustainability Victoria

Melbourne Atlas 2006, Department of Sustainability

Sustainability in action – Towards Zero Waste, State Government of Victoria 2005

Victorian Local Government Data Collection 2005-2006, Sustainability Victoria

Waste Generation and Resource Efficiency in Australia, Productivity Commission Final Report 2006

Draft Metropolitan Waste and Resource Recovery Strategic Plan, State Government of Victoria 2008



## Appendix One Predicted waste volumes for Moonee Valley

Year	Total Tonnes Kerbside	Total Tonnes Other	Total Tonnes	Landfill		
				kerbside	Hard waste	Transfer Station
2003	38272	6494	44766	33500	921	4100
2004	41296	6845	48141	32691	564	4200
2005	41635	8206	49841	24076	892	4300
2006	40394	9071	49465	23176	1054	4299
2007	41763	9339	51102	23069 A	864	4373
2008	41773	10831	52604	17740 *	1000	4100 F
2009	43469	10500	53969	13481	1000	4000
2010	43469	10900	54369	13481	950	4000
2011	43469	11435	54904	13481	950	3900
2012	43469	11750	55219	13481	900	3900
2013	43469	11975	55444	13481	900	3800
2014	43469	12000	55469	13481	900	3800

The key features of the table and graph that will guide the actions we need to take to achieve our target of 65% waste diversion from landfill are summarised below.

Total Kerbside Tonnes	Total Tonnes HW&TS	Total Tonnes	Landfill kerbside	Landfill Hard Waste	Landfill Transfer Station	Recycle kerbside	Recycle Hard Waste	Recycle Transfer Station	Garden Kerbside	Branches & Prunings	Garden Transfer Station
% decrease (-) or increase (+) from 2007 to 2014											
- 5.5%	- 20.8%	- 8.7%	- 41.7%	- 10.0%	- 11.6%	+ 34.2%	+ 55.6%	+ 57.1%	+ 52.6%	+ 33.3%	+ 23.1%
Tonnage decrease (-) or increase (+) between 2007 and 2014											
- 2253	- 2500	- 4753	- 9588	- 100	- 500	+ 6848	+ 250	+ 2000	+ 4992	+ 250	+ 600

It is anticipated that six key action areas for Council will reduce landfill tonnage to achieve our 65% diversion rate target:

Recycle			Garden			Kerbside Diversion Rate		Overall Diversion rate	
kerbside	Hard waste	Transfer Station	kerbside	Prunings Branches	Transfer Station	Tonnes	%	Tonnes	%
4772	225	500	0	48	700	4772	12.5%	6245	14.0%
8011	247	600	594	134	1100	8605	20.8%	10686	22.2%
13347	324	800	4212	690	1200	17559	42.2%	20573	41.3%
12828	178	1169	4390	470	1901	17218	42.6%	20936	42.3%
13699AD	65	1568	4995	482	1987	18694	44.8%	22796	44.6%
18304 B	250	2759 F	5729 CE	550	2172	24033	57.5%	29764	56.6%
20000	300	2200	9987 CE	600	2400	29987	69.0%	35487	65.8%
20000	300	2500	9987	650	2500	29987	69.0%	35937	66.1%
20000	385	3000	9987	700	2500	29987	69.0%	36572	66.6%
20000	400	3200	9987	750	2600	29987	69.0%	36937	66.9%
20000	425	3500	9987	750	2600	29987	69.0%	37262	67.2%
20000	450	3500	9987	750	2600	29987	69.0%	37287	<b>67.2%</b>

## Appendix Two

Initiative	Tonnes/yr diverted from landfill	% diversion
A: Renew collection	150	3
B: Commercial recycling	1900	5
C: Increase garden bins	4900	12
D: Squash, don't wash education campaign	3800	9
E: Organics collection through garden bins	550	1
F: Transfer station promotions	2000	8
TOTAL	13300	38





## Moonee Valley City Council

9 Kellaway Avenue, Moonee Ponds Victoria Australia 3039

Telephone 03 9243 8888 • Facsimile 03 9377 2100

[mvcc.vic.gov.au](http://mvcc.vic.gov.au)

### Moonee Valley Language Line

<b>عربي</b>	Arabic	9280 0738	<b>Ελληνικά</b>	Greek	9280 0741	<b>Español</b>	Spanish	9280 0744
<b>中文</b>	Cantonese	9280 0739	<b>Italiano</b>	Italian	9280 0742	<b>Türkçe</b>	Turkish	9280 0745
<b>Hrvatski</b>	Croatian	9280 0740	<b>Somali</b>	Somali	9280 0743	<b>Việt-ngữ</b>	Vietnamese	9280 0746

All other languages 9280 0747

TTY 9243 9170