

Waste Minimisation Strategy 2014-2023

EXECUTIVE SUMMARY

The City of Maribyrnong, like many other communities across Melbourne, is facing major challenges with the management of solid wastes. Landfills across Melbourne are running out of space, new technologies for organic waste and recycling are being developed or investigated and increases to the State Government Waste Levy, and the introduction of Carbon Tax charges have meant a sharp increase in disposal costs in recent years. At the same time, a growing population is resulting in increasing levels of waste generation.

This strategy has been prepared to provide a coordinated approach to these issues. While there are many potential directions in waste management, Maribyrnong City Council has a duty to its rate-payers to ensure any funds or staff time are well directed. This strategy will help Council to concentrate its efforts on the issues that hold the greatest potential to provide benefits for the city. The strategy sets a vision for the future of waste management in the City of Maribyrnong. It identifies strategic gaps between the current and desired position and details the best way of moving forward.

The document will be used by Maribyrnong City Council as:

- a guide for waste management;
- a tool for communicating with our community; and
- a basis for implementation, monitoring, reporting and evaluation.

In preparing this Waste Minimisation Strategy, Council consulted with community members through a series of forums for residents and other stakeholders such as bodies corporate. A retailer survey identifying waste created, recycled and disposed of was carried out with every business in the Footscray Activities District. Demographic information has been compiled and considered. Research about the characteristics and performance of each of the waste and recycling services was carried out. The management of waste and recycling was also considered in light of federal and state government waste and planning strategies and policies.

VISION

The ultimate vision for waste minimisation in the City of Maribyrnong is:

'A community that generates minimal waste and considers the waste that is produced as a valuable resource to be managed sustainably.'

This vision incorporates the principles of sustainable waste management and is the ultimate goal of the initiatives outlined in this strategy.

OBJECTIVES

The following objectives have been identified to help us move towards this vision:

1. Avoid the generation of waste;
2. Increase the reuse and recovery of materials from the municipal waste stream to equal or exceed the average for Metropolitan Melbourne by 2024.
3. Reduce recycling contamination rates by at least 50% by 2024.
4. Communicate waste minimisation objectives to our community in an effective manner.
5. Minimise adverse impacts of waste operations on public and environmental health and safety; and
6. Ensure the provision of Council's waste services is cost effective and equitable.

Council officers formed a working group to identify and address existing and emerging issues. Major waste issues identified in the development of the Waste Minimisation Strategy were:

Low Recycling Rates

Maribyrnong City Council has lower recycling rates than the average for metropolitan Melbourne. To address this Council will need better and more targeted communication with our community to enable all sectors of our community to participate in Council recycling programs. In order to ensure that Maribyrnong City Council is able to achieve average or higher than average diversion rates over the next ten years. Improving recycling and diversion rates has the potential to make significant environmental and financial benefits to our community.

In order to achieve increased recycling rates, reduced contamination and increased diversion of organics and other waste, Council is proposing a range of actions including:

1. Develop and implement a communications plan to promote improved recycling including
 - Further research into existing recycling practices in the community.
 - Using a range of communications tools to promote key messages around recycling to our community
 - Develop information and promotions targeted at increasing recycling and reducing contamination in CALD communities
 - Targeted information around reducing key recycling contaminants such as items placed in plastic bags.
 - Specific actions and messages targeted towards residents of multi-unit dwellings.
2. Continue the Maribyrnong Recycling Champions program aimed at reinforcing good recycling behaviours and promoting good recycling practices throughout the community.
3. Promote food waste avoidance Based on the Love Food Hate Waste and Food Know How Programs. Develop a program to reduce volume/ weight of waste per household through the reduction of food waste in garbage.
4. Develop waste and recycling information kits for tenants of multi unit dwellings for distribution through real estate agents and bodies corporate.
5. Investigate the feasibility of social media and mobile platform applications to enable residents to better understand the Council Waste System and improve participation in recycling and waste reduction programs.

Organic Waste and design of overall residential waste and recycling services

Organic waste made up of food and garden waste makes up more than 50% of the average garbage bin in the municipality. Options for treating organic waste are currently being investigated by State Government bodies. The Metro Waste Management Group is undertaking trials of combining food waste into green waste bins and also of using treatment systems to remove all organic waste from garbage bins prior to sending the remainder of the bins contents to landfill. They are also exploring options such as treatment processing centres and waste to energy plants with industry in a bid to replace the half of Melbourne's landfill space that is due to close in the next five years. In addition, Sustainability Victoria will be shortly releasing the Victorian Organics Strategy and Victorian Marketing Strategy for recycled materials.

This has significant implications for the type of services that Maribyrnong Council will provide to residents, the number of bins that will be required per household and the type of community education and engagement that will best assist Council in achieving waste minimisation and management objectives. Council will have the opportunity to address the treatment of household organic waste once the feasibility of these technologies and state government investment programs are clarified. Council will monitor these developments closely over the next few years with a view to designing the residential waste and recycling collection system that will deliver the best environmental and financial outcomes for our community.

Urban Growth - Multi Unit Dwellings and High Rise

Council is experiencing urban growth where a number of former industrial sites are being developed into residential developments. The growth is mostly in the form of dwellings with higher densities than existing housing stock, including townhouses, medium and high density multi unit dwellings. In ten years up to ten percent of our population will be housed in high rise buildings.

Planning for the provision of waste and recycling services to new multi unit developments is an important issue. Council will need to consider the appropriate levels of Council waste and recycling services to offer to MUDs. There is also a growing need to ensure appropriate design for waste storage and collection is included in MUD developments whether this is undertaken by Council or private contractors.

Illegally Dumped Rubbish

Rubbish dumping is an ongoing problem in the municipality. Dumping from larger blocks of flats and units has decreased due to the introduction of regular hard waste collections. However, there is still regular dumping of furniture, mattresses and hard waste on vacant land, along railway lines, outside residential properties and in council reserves. There is also a considerable amount of industrial waste that is illegally disposed of in the municipality.

There is a link between dumped rubbish and the knowledge and use of the Council hard waste collection. Residential feedback has indicated that there is a lack of knowledge about the at call hard waste collection, how it works and even that it exists.

Addressing the problem of illegally dumped waste requires a combined program of Education, Prevention, and Enforcement. Council has recently formed an Illegally Dumped Rubbish taskforce to undertake such a program.

Management of the Footscray Activities District – Waste and Recycling Services

Council provides the majority of waste and recycling services to small commercial properties in the Footscray Activities District. The Footscray Central Activities District is an area that has had a number of issues including old bin stock, low take-up of recycling bins, use of additional bins that are not paid for, and the use of street litter bins by businesses, with a considerable minority of business with no bins at all.

Lack of data in relation to waste and recycling services.

There is a lack of waste and recycling data in some areas which inhibits Council's ability to understand and better manage our waste and recycling services. Some of the data which is lacking includes waste and recycling audits of households and multi-unit dwellings, dumped waste collection data and bin counts.

Action Plan

The Action Plan proposes a range of activities to address these and other issues including

- Adoption of best practice guidelines for waste and recycling management plans in multi-unit dwellings
- Trialing of different collection methods with MUDs, e.g. increased frequency of collections with fewer bins at larger sites, at call cardboard pick-ups, larger shared bins for small blocks of units with collective bin areas.
- Implementing communication and engagement campaigns focused on
 - reducing recycling contamination, especially recyclables in plastic bags

- waste management in MUDs - working with body corporates and real estate agents,
 - Better communication with CALD communities about Council waste and recycling services.
 - Promoting At Call Hard Waste Services.
 - Improving waste management in shopping centres.
 - Promotion of at home composting.
 - Monitoring and reporting on the development of organics technologies and the feasibility of adopting them for Maribyrnong City Council residential waste services.
 - An Investigation of options for treating food waste in shopping centres.
 - Introduce a pensioner rebate for the User Pays Green Waste Service
 - Implement a program to clean up the Footscray Activities District with the rollout of new bins and education around waste minimisation options and waste management for traders.
 - Undertake regular E Waste collection days
 - Improved data collection and audits around waste and recycling in order to improve management and decision making around waste and recycling services.
 - Delivery of new bin infrastructure and a waste minimisation communications program targeted at sports and recreation centres with the City of Maribyrnong.
 - Review of the Local Law to reflect changes in waste and recycling services.
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List of Acronyms used

ARRT	Advanced Resource Recovery Technology
C&D	Construction and Demolition (waste)
C&I	Commercial and Industrial (waste)
CPRS	Carbon Pollution Reduction Scheme
Hh	Household (as in per Household)
EPA	Environment Protection Authority Victoria
MGB	Mobile Garbage Bin (i.e. wheelie bin)
MAV	Municipal Association of Victoria
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
MUD	Multi Unit Development
MWMG	Metropolitan Waste Management Group
NPC	National Packaging Covenant
PPR	Public Place Recycling
pP	per Person or Resident
RRC	Resource Recovery Centre
SIWMP	Solid Industrial Waste Management Plan
SMEs	Small to Medium Sized Enterprises
SV	Sustainability Victoria
VLAA	Victorian Litter Action Alliance
VARRI	Victorian Advanced Resource Recovery Initiative
WMS	Waste Minimisation Strategy

1 INTRODUCTION

1.1 WHY A WASTE MINIMISATION STRATEGY?

The City of Maribyrnong, like many other communities across Melbourne, is facing major challenges with the management of solid wastes. Landfills across Melbourne are running out of space, new technologies for organic waste and recycling are being developed or investigated and increases to the State Government Waste Levy, and the introduction of Carbon Tax charges have meant a sharp increase in disposal costs in recent years. At the same time, a growing population is resulting in increasing levels of waste generation.

This strategy has been prepared to provide a coordinated approach to these issues. While there are many potential directions in waste management, Maribyrnong City Council has a duty to its rate-payers to ensure any funds or staff time are well directed. This strategy will help Council to concentrate its efforts on the issues that hold the greatest potential to provide benefits for the city. The strategy sets a vision for the future of waste management in the City of Maribyrnong. It identifies strategic gaps between the current and desired position and details the best way of moving forward.

The document will be used by Maribyrnong City Council as:

- a guide for waste management;
- a tool for communicating with our community; and
- a basis for implementation, monitoring, reporting and evaluation.

1.2 VISION

The ultimate vision for waste minimisation in the City of Maribyrnong is:

'A community that generates minimal waste and considers the waste that is produced as a valuable resource to be managed sustainably.'

This vision incorporates the principles of sustainable waste management and is the ultimate goal of the initiatives outlined in this strategy.

1.3 OBJECTIVES

The following objectives have been identified to help us move towards this vision:

7. Avoid the generation of waste;
8. Increase the reuse and recovery of materials from the municipal waste stream to equal or exceed the average for Metropolitan Melbourne by 2024.
9. Reduce recycling contamination rates by at least 50% by 2024.
10. Communicate waste minimisation objectives to our community in an effective manner.
11. Minimise adverse impacts of waste operations on public and environmental health and safety; and
12. Ensure the provision of Council's waste services is cost effective and equitable.

1.4 WASTE MINIMISATION STRATEGY OVERVIEW

The WMS incorporates the strategies and actions for the management of a variety of waste materials. The focus of the strategy is on Municipal Solid Waste (MSW) although, where appropriate, the strategy addresses Commercial and Industrial (C&I) waste and Construction and Demolition (C&D) waste.

1.4.1 Local Waste Management

Waste management in Maribyrnong City Council covers the strategic planning and management of a wide range of activities including:

- Collection of waste and recyclables at the kerbside in MGBs (wheelie bins), including:
 - Co-mingled recyclables;
 - Green organics;

- Garbage (residual waste); and
- Waste and recyclables from a diverse range of residential, mixed use properties (such as schools, care facilities, council run facilities and small commercial properties);
- Hard waste, including metals and mattresses
- Bundled green waste (branches, shrubs etc.)
- Street litter collection (including street litter bins);
- Street sweeping;
- Public Place Recycling (PPR);
- Collection of illegally dumped waste, usually hard rubbish;
- Collection of waste and recyclables generated at local Festivals and Events;
- Collection of E-waste, usually at a drop-off facility; and
- Collection or management of drop-off of household hazardous/toxic waste (e.g. household chemicals, motor oils, paint, car batteries, gas bottles etc).

The cost of providing these services for the 2014/15 year is expected to be in excess of 7 million dollars. This cost is expected to grow over time in line with municipal growth.

1.5 KEY ISSUES FOR THE CITY OF MARIBYRNONG

1.5.1 Low Recycling Rates

Maribyrnong City Council has lower recycling rates than the average for metropolitan Melbourne. To address this Council will need better and more targeted communication with residents. Residential waste forums have indicated the need to communicate our services to residents, as well as better point of collection information. For example, recycling signage at bin storage areas in flats and units, large stickers on the outside of bins. In order to achieve increased recycling rates, reduced contamination and increased diversion of organics and other waste, Council is proposing a range of actions including:

1. Develop and implement a communications plan to promote improved recycling including
 - Further research into existing recycling practices in the community.
 - Using a range of communications tools to promote key messages around recycling to our community
 - Develop information and promotions targeted at increasing recycling and reducing contamination in CALD communities
 - Targeted information around reducing key recycling contaminants such as items placed in plastic bags.
 - Specific actions and messages targeted towards residents of multi-unit dwellings.
2. Continue the Maribyrnong Recycling Champions program aimed at reinforcing good recycling behaviours and promoting good recycling practices throughout the community.
3. Promote food waste avoidance Based on the Love Food Hate Waste and Food Know How Programs. Develop a program to reduce volume/ weight of waste per household through the reduction of food waste in garbage.
4. Develop waste and recycling information kits for tenants of multi unit dwellings for distribution through real estate agents and bodies corporate.
5. Investigate the feasibility of social media and mobile platform applications to enable residents to better understand the Council Waste System and improve participation in recycling and waste reduction programs.

1.5.2 Organic Waste and design of overall residential waste and recycling services

The City of Maribyrnong, like many other municipalities is at a crossroads in terms of the provision of waste and recycling services. A key component of what our waste and recycling services will look like in 2024 is dependent on decisions made about how we treat organic wastes. Organic wastes have traditionally made up over half of the contents of metropolitan garbage bins. At our last waste audit, organic wastes (food waste and garden waste) made up 52% of garbage bin contents.

A range of current technology options for organic waste treatment are in the process of being developed or explored in metropolitan Melbourne. The North West organics treatment facility run by Veolia has recently opened at Bulla and new treatment plants are currently being planned for other parts of Melbourne. The feasibility of creating waste to energy plants using techniques such as gasification and pyrolysis are also being explored by the State Government. Due to the capital intensive nature of such plants, these would require that facility operators secure long term (up to 30 years) collection contracts and the redirection of a proportion of state landfill levies to make them viable.

Sustainability Victoria is also in the process of developing the Victorian Organics Strategy supported by the Victorian Marketing Strategy for recycled products which will be released in late 2014. The Victorian Organics Strategy has a 30 year timeframe and will outline 5 and 10 year plans to increase investment in the recovery of organics and to develop a sustainable organics waste industry.

In addition the State Government's waste policy indicates that its long term aim is that only residual or treated waste will be allowed to be disposed of in landfill. This means that the long term trends indicate that sorting facilities or waste to energy facilities will be a necessary step that will be required to be undertaken before landfills can be used.

This has significant implications for the type of services that Maribyrnong Council will provide to residents, the number of bins that will be required per household and the type of community education and engagement that will best assist Council in achieving waste minimisation and management objectives. Possible options amongst many are

1. Two residential waste and recycling services. A two bin system, an organics bin for food and garden waste delivered to an organics composting facility and a residual bin for recyclables and other non organics to be sorted at a treatment facility prior to landfill.
2. One residential waste and recycling service. A one bin system that contains all waste and recycling items that are sorted at a treatment facility, separating and diverting high value recyclables, with the remainder entering a waste to energy plant and/or organics composting facility, with residual ash taken to landfill.

The uncertainty around the types of technology that will be available, and associated costs and benefits, makes it difficult to set a clear direction in relation to overall bin systems and collection and processing systems over the next ten years.

The decisions around the treatment of organic waste is pivotal to the development of future waste and recycling services in the municipality.

The state government has identified two trials for residential organic waste collection, that it will be undertaking in the next year.

- 1. Divert food waste into garden waste collections
- 2. Recover and treat food and garden organics from waste – with the remainder of waste going to landfill

This Waste Minimisation Strategy proposes a flexible approach to the treatment of organics, to monitor and periodically review organic waste trials and the development and implementation of new technologies for the treatment of waste in order to make more informed decisions in the future.

The strategy does not propose any immediate changes to the current three bin system (Garbage, Recycling and User Pays Green Waste services) at this stage until the feasibility of new options for organic waste treatments has been fully explored and the State Governments direction for developing an organics recycling industry is clear.

1.5.3 Urban Growth - Multi Unit Dwellings and High Rise

The City of Maribyrnong is in the middle of substantial urban growth. Predicted growth in population is estimated to increase from the current 75000 residents to 110,000 residents by 2031 with growth mainly predicted for MUDs. In the next ten years approximately 10,000 dwellings are planned, with around half of those being in high rise apartment blocks of 7 or more storeys. If this proceeds as planned, one in ten residents in the City of Maribyrnong will be living in high rise apartment blocks by 2024.

Council needs to look at the services provided but also clarify minimum requirements for waste services to MUDs. Some of the issues which are expected to grow are

- Increased costs for residents of MUDs who already pay for waste collection services from their rates.
- Developers choosing to opt out of Council services although residents generally prefer them.
- Lack of Recycling and Hard Waste Services for residents when private contractors are the only option
- Excess noise from numerous Private Contractor waste trucks that arrive at all hours of the morning to collect waste and increasing levels of residential complaints about noise.
- OHS issues – The operators are not accountable in the same way putting residents and employees at risk when private contractors are selected on price alone.
- Design for convenient and safe storage. There is currently a lack of storage areas designed into MUDs, especially for recycling and hard waste collections.
- Lack of appropriate and safe collection areas and access infrastructure for waste contractors.

The Victorian State government has highlighted the issues of planning for waste infrastructure in MUDs in their State Waste Policy. The policy outlines actions to ensure planning permits for MUDs require adequate waste and resource recovery infrastructure. Similar actions reflected in the Draft Metropolitan Waste and Resource Recovery Strategic Plan and in the Melbourne Planning Scheme, both released in 2013.

Council will need to consider the appropriate levels of Council waste and recycling services to offer to MUDs. This includes decisions as to whether high rise MUDs are provided with Council waste and recycling services, as well as the consideration of increased frequency of waste and recycling services to larger MUDs.

1.5.4 Illegally Dumped Rubbish

Rubbish dumping is an ongoing problem in the municipality. Dumping from larger blocks of flats and units has decreased due to the introduction of regular hard waste collections. However, there is still regular dumping of furniture, mattresses and hard waste on vacant land, along railway lines, outside residential properties and in council reserves. There is also a considerable amount of industrial waste that is illegally disposed of in the municipality.

There is a limited trend data about dumped waste collections in the municipality, so it is difficult to provide conclusive information about the level of dumping in the municipality. However, there is an observation from our Cleansing and Local Laws departments who deal with the waste on a day to day basis that illegally dumped waste is increasing in the municipality. The significant increase in landfill costs in the last few years is likely to have provided an incentive to dump waste rather than dispose of it legally.

There is a link between dumped rubbish and the knowledge and use of the Council hard waste collection. Residential feedback has indicated that there is a lack of knowledge about the at call hard waste collection, how it works and even that it exists.

The waste minimisation strategy proposes processes to promote the at call hard waste service to different community target groups, and to work with bodies such as real estate agents, bodies corporate, and public housing property managers to increase awareness of the at call hard waste service.

Addressing the problem of illegally dumped waste requires a combined program of Education, Prevention, and Enforcement.

1.5.5 Management of the Footscray Activities District – Waste and Recycling Services

Council provides the majority of waste and recycling services to small commercial properties in the Footscray Activities District. The Footscray Central Activities District is an area that has had a number of issues.

- Bin stocks are very old.. Waste bins have not had an integrated replacement program in the area since MGBs were first introduced in 1988. Some of the 240L bins in the FCAD date from this time.
- Low takeup of recycling bins
- Over 20% of properties have additional bin collections. Many of these are not registered and annual bin fees are not paid.
- Skips and bins are located in laneways and at the rear of buildings, in areas that could be used as shared community areas.
- Use of street litter bins by businesses.

This would be assisted by a number of measures including a rollout of new bins to the retail properties, combined with a communications plan and advice about additional bin collections and waste minimisation information and resources for business owners.

1.5.6 Lack of data in relation to waste and recycling services.

There is a lack of waste and recycling data in some areas which inhibits Councils ability to understand and better manage our waste and recycling services. Some of the data which is lacking is:

- Household kerbside audits of both waste and recycling streams
- MUD kerbside audits of both waste and recycling streams. This is an especially important form of data due to our expected growth in this type of housing over the next ten years. One of the few audits done in the Waterford Green area nearly ten years ago indicated that while residents in higher density dwellings recycle at similar rates to the rest of the municipality, they produce higher quantities of garbage than the average in the municipality. This needs to be explored further.
- Dumped Waste – quantities and trends in relation to dumped waste. current data does not capture all the illegally dumped waste that is collected by Council.
- Bin counts – currently the breakdown of the number of bins in residential and commercial properties is not clearly known as the same contractors service both types of properties at the same time and only one bin database is kept which does not differentiate both properties.
- Council Internal Operations – the last waste and recycling audit was conducted in 2008 prior to increased recycling services being rolled out.

1.6 OVERVIEW OF MUNICIPALITY – DEMOGRAPHICS

The characteristics of the population within the City of Maribyrnong will influence the type of waste and recycling services provided and also impacts on the effectiveness of the communication and engagement of our community with waste and recycling issues. The following summary of census and other data, outlines some of the demographic characteristics of the municipality.

Some of the traits that influence the effectiveness of waste and recycling services in the municipality are,

- the diversity of our population and the need to communicate with and engage with culturally diverse groups some of whom have poor English skills,
- the aging of our population that impacts on our ability to provide fee for service programs without considering pensioner rebates and the physical ability of older residents to move bins and take part in hard waste services
- the growth in multi-unit dwellings and higher density developments with narrower access roads, that impact on Council's ability to provide waste and recycling services.
- Differences in income levels throughout the municipality, with gentrification creating pockets of the community with above average wealth, nearby other areas with people experiencing high levels of unemployment and economic disadvantage. These differences result in differing expectations and differing abilities to participate in council services and engagement programs.

1.6.1 Summary of local residential properties (households) and population characteristics

Population and Cultural Diversity

- Total population is estimated at 76,589 persons (ABS estimate, June 2012)
- There were 323 people (0.5%) who identified as being Aboriginal or Torres Strait Islander
- 40% of our population were born overseas and 43% speak a language other than English
- Largest language groups include Vietnamese, Cantonese, Mandarin, Greek, Italian and Spanish
- 9.9% of the population do not speak English well or at all

Social and Economic Disadvantage

- Braybrook and the City of Maribyrnong are the 4th most disadvantaged suburb and municipality respectively, in the metropolitan area on the SEIFA index of disadvantage.
- Our unemployment rate is relatively high. As of the June 2013 quarter, the unemployment rate was 7.8% for the City compared to the Melbourne rate of 5.6% and the national rate of 5.4%.
- Unemployment is highest in Braybrook which has an unemployment rate of 15%.

Households and Housing

- Average household size is 2.4 people
- Average weekly household income is \$1,258
- 25% of households are couples with children
- 26% of households are couples without children
- 25% of households are lone person
- 70.6% of households have an internet connection
-
- 35.5% of all households are renting (both public and private)

- Median weekly rent was \$280 compared to \$300 for Greater Melbourne
- The median monthly housing loan repayment was \$2,167 compared to \$1,810 for Greater Melbourne

Health and Wellbeing

- Approximately 1 in 5 people have a disability

Source: This information is drawn from our community profile, 2011 Census data, Burden of Disease data and Commonwealth Department of Education, Employment and Workplace Relations labour market data.

Table 1 Population and Households – Current and Projected - City of Maribyrnong

	2011	2016	2021	2026	2031	
Population	75,297	87,764	96,880	104,464	111,185	
Change (5yrs)		12,467	9,116	7,584	6,721	
Average annual change (%)		3	2	2	1	
Households	30,091	35,403	39,507	43,156	46,589	
Average household size	2	2	2	2	2	

Population and household forecasts, 2011 to 2031, prepared by [.id](#) the population experts, May 2012.

Around half of the growth in dwellings is expected to be in the form of high rise buildings.

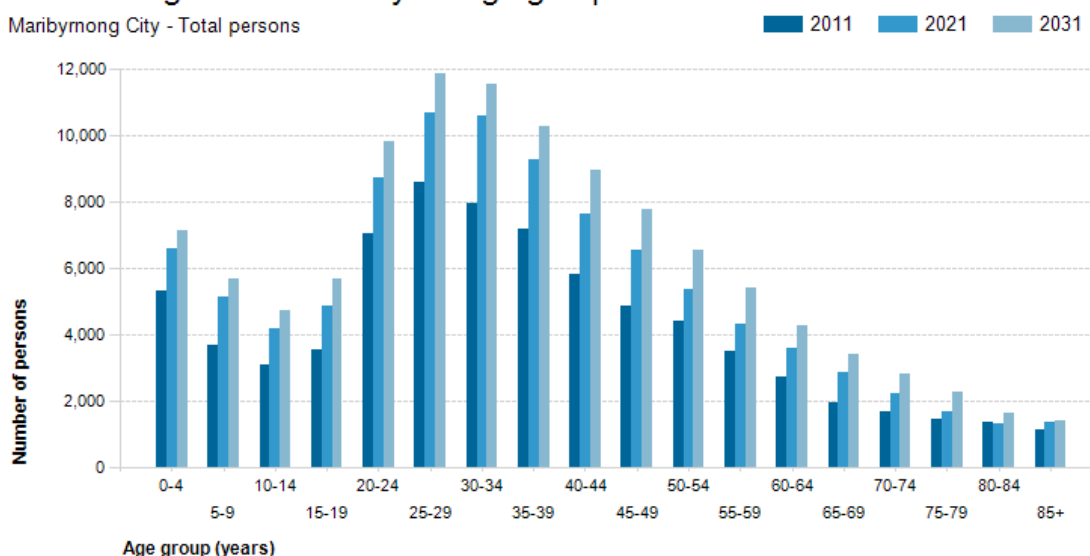
Forecast Age Structure

Table 2 below, represents the forecast age structure of the municipality to 2031. While all age groups will increase due to the forecast growth in population, the average age is expected to increase and the total number of elderly residents will grow.

Table 2 Forecast Age Structure

Forecast age structure - 5 year age groups

Maribyrnong City - Total persons



Population and household forecasts, 2011 to 2031, prepared by .id the population experts, May 2012.

.id
the population experts

1.6.2 Non-residential properties and commercial and public sector organisations operating in the municipality

Maribyrnong City Council provides some waste and recyclables collection services to non-residential properties such as schools, care facilities (elderly and child) and small commercial premises such as shops and offices. Providing a co-mingled recyclables service to these properties and organisations increases the amount of waste diverted from landfill within the municipality.

An overview of the amount of commercial and non-residential properties is detailed below in Table 2.

Table 3 Commercial and Non-residential properties in the municipality

	Rateable	Non Rateable	Total
Community Facilities	20	80	100
Educational Facilities	0	41	41
Factory/Warehouse	927	2	929
Aged Care Accommodation	6	11	17
Retail/Office/Service	2693	26	2319
Sports Clubs/Stadiums	21	37	48
Utilities	45	30	75
Total	3712	227	3939

Source: Maribyrnong City Council – Rates Database

There is currently a lack of data on waste and recycling services to Commercial and Industrial properties. It is estimated that less than half of Commercial and Industrial properties use a Council garbage or recycling collection service. Waste and Recycling collections are carried out as part of the residential services and collections from Commercial and Industrial properties are not counted separately.

Non residential properties are eligible for one weekly garbage collection with a 240L bin and one fortnightly recycling collection with a choice of 120L or 240L bin. Commercial and Industrial properties with greater quantities of waste are required to engage their own private collections

2 STRATEGIC CONTEXT

The WMS has been developed in line with relevant legislation and policies that have been developed at both the Federal and State level. These documents include:

- Environment Protection Act (EP Act) 1970, with Amendment in 2006;
- Federal Government's *National Waste Policy*, launched in late 2009;
- Victorian State Government's *Getting Full Value* State Waste Policy released in 2013
- Victorian State Government's *Our Environment Our Future: Victoria's Sustainability Framework* released in 2005
- Draft Metropolitan Waste and Resource Recovery Strategic Plan. 2013
- Draft Statewide Waste and Resource Recovery Infrastructure Plan (SWRRIP) 2013

Figure 1 below illustrates how the legislation, policies and strategic plans by various agencies of government are considered and integrated with the Waste Minimisation Strategy of Maribyrnong City Council.

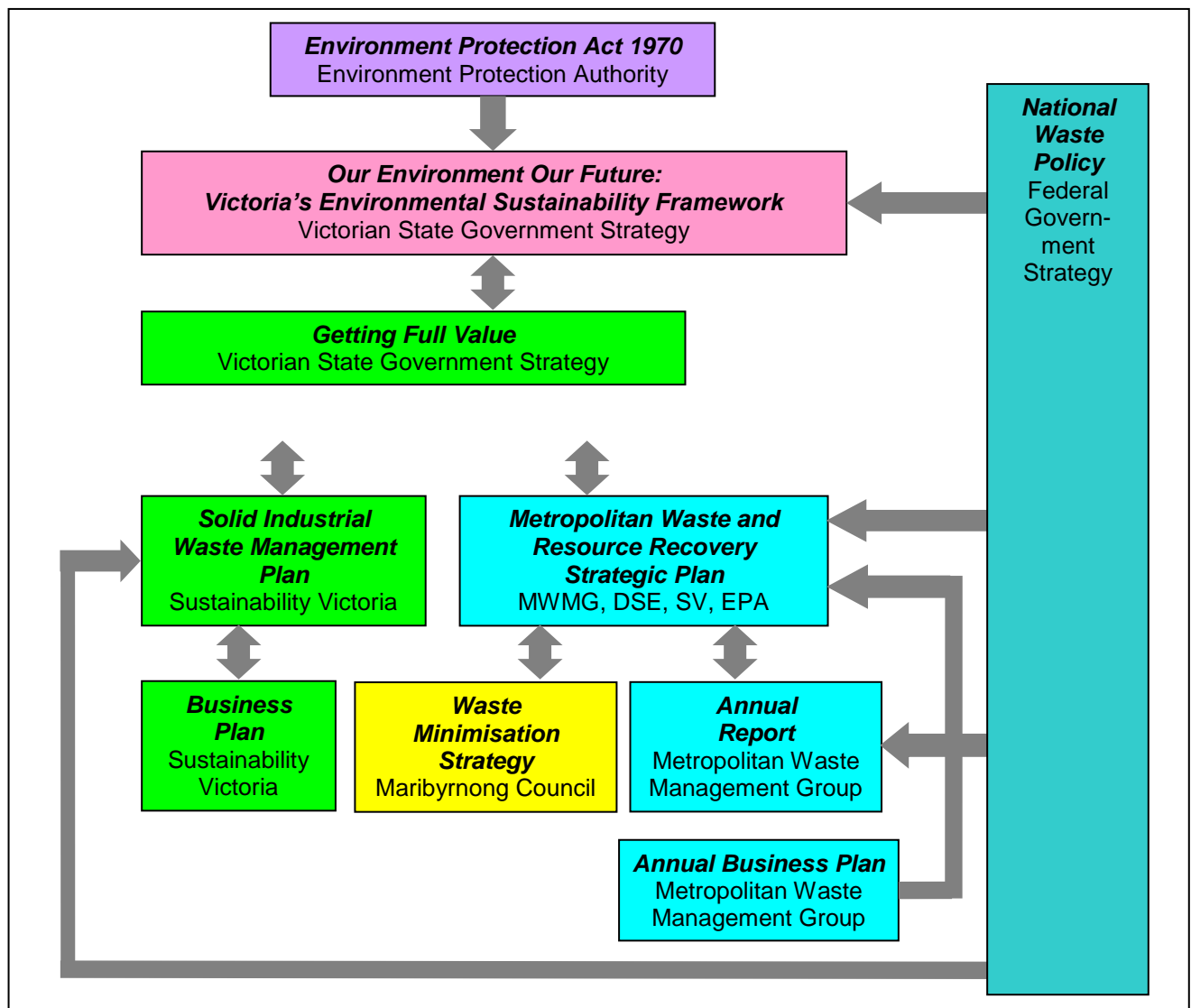


Figure 1 Interlinking of Legislation, Policies and Plans

The objectives and targets developed in these overlying policies and strategies have been utilised to form the *Solid Industrial Waste Management Plan* (SIWP) and the *Metropolitan Waste and Resource*

Recovery Strategic Plan (the Strategic Plan). Finally, Maribyrnong City Council's waste management strategy has been developed to ensure that the objectives and targets of the Federal and State Government policies will influence waste management activities in the community and can be implemented at a local level.

The key principle underpinning the waste minimisation strategy is the waste management hierarchy, which was disseminated under the Environmental Protection Act. The waste management hierarchy places waste avoidance as the most preferred option and waste disposal the least preferred. All the policies developed by all levels of government are based on this principle. This has been removed in the latest State Waste Policy – Getting Full Value to allow waste to energy projects preference over other treatment methods. Previously the priority of waste to energy projects fell between treatment and disposal. However, the waste management hierarchy it is still very relevant at the local level and has been included in this strategy.

Figure 2 Waste Management Hierarchy

Further information about these strategies are detailed in Appendix A.



Planning Provision for increased recycling in multi-unit dwellings

There are a number of recent state government policies and strategies that indicate that planning and provision for increased recycling in multi-unit dwellings is becoming a priority. Local Governments are expected to design their own waste strategies so that they align with these state government strategies.

A number of relevant actions and strategic directions related to waste and recycling in multi-unit dwelling, arising from the following plans is detailed in Appendix A.

- **Getting Full Value: The Victorian Waste and Resource Recovery Policy adopted in early 2013**
- **Draft Metropolitan Waste and Resource Recovery Strategic Plan.**
- **Melbourne Planning Scheme.**

2.1 MARIBYRNONG CITY COUNCIL PLANS, POLICIES AND STRATEGIES

2.1.1 Council Plan 2013 – 2017

Six strategic objectives are outlined in the Council Plan. These relate to Urban Growth, Liveability, Economic Prosperity, Transport, Environmental Sustainability and Organisational Accountability. The objective for Environmental Sustainability is detailed below.

Environmental Sustainability

In partnership with our community and stakeholders we will educate and promote environmental sustainability.

The strategies outlined under this objective are:

1. Collaborate with the community and key stakeholders to support local sustainability initiatives.
2. Educate the community on environmental issues and best practice in waste management.
3. Ensure all new Council buildings meet high environmental design standards.
4. Protect our natural environment through sustainable practices to create a Greener city.
5. Manage issues relating to landfill and contamination.

2.1.2 Waste Policy

Council has a Waste Policy that provides guidance as to how waste and recycling services and resources are to be allocated and the requirements around the provision of waste and recycling services to different classifications of property.

The Objectives Of This Policy Are To Ensure:

- That the allocation of waste and recycling services are provided in a consistent and reliable manner.
- Access to waste and recycling services is provided equitably to all residents.
- New residential and commercial developments are provided with appropriate and safe waste and recycling services.
- Transparency and accountability in Council decision making

The structure of the policy identifies the waste and recycling services available and the requirements relating to these for each building type.

It outlines services available to:

- Residential - Houses
- Residential - Multi Unit Dwellings
- Commercial and Industrial Waste – Small Business
- Construction and Demolition Waste
- Non Rateable Properties

The Waste Policy contains a number of requirements in relation to planning permits and waste management plans for multi unit dwelling.

2.1.3 Local laws

Section 56 of Maribyrnong Councils local law relates to refuse. It outlines the use of approved bins, avoidance of contamination of bin contents, maximum bin weight, bins lids must be able to be closed, cleanliness of the bin and surrounds, placement of bins, replacement of damaged bins, requirement to remove bins from the nature strip within 24 hours and the need to follow Council direction for the collection of hard and green waste collections.

3 CONSULTATION AND ENGAGEMENT

3.1 STAKEHOLDER IDENTIFICATION AND ENGAGEMENT

Figure 4 below displays the process followed by Maribyrnong City Council of developing the WMS. This involved the identification and engagement of stakeholders to get their input into the strategy.

Figure 3 *Waste Minimisation Strategy Development*

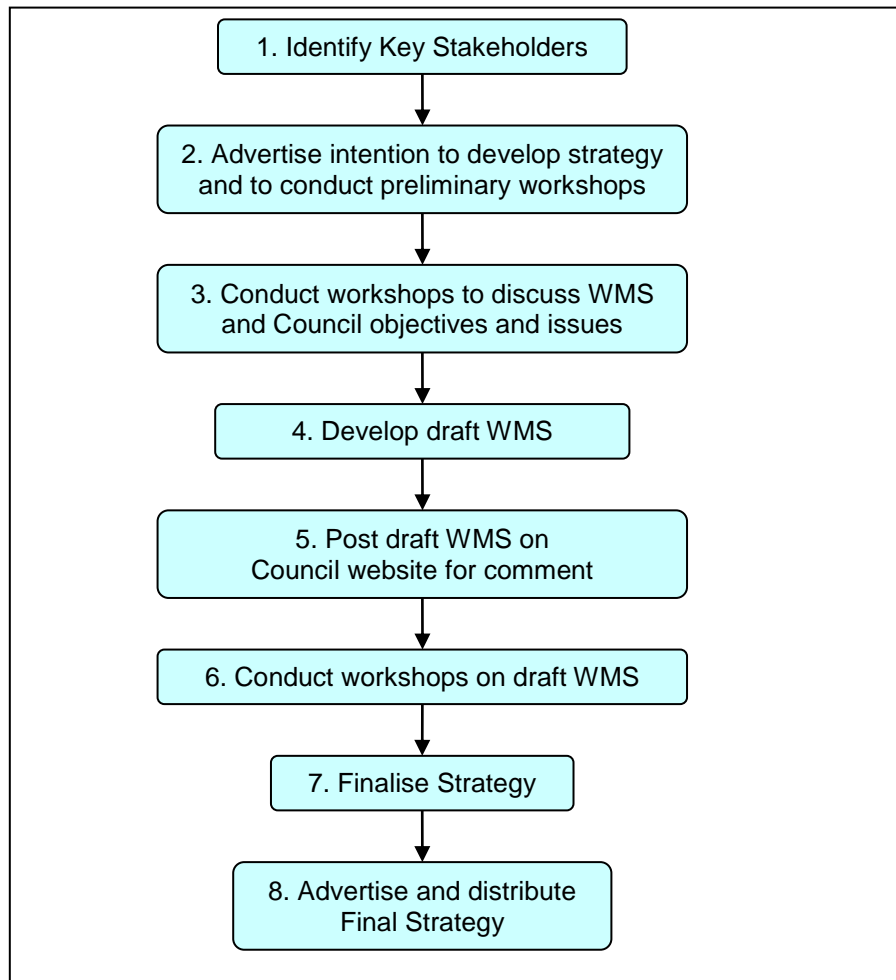


Table 3 provides information on the actions undertaken in developing the waste management strategy.

Table 4 *Notes on WMS Development*

Step	Action Undertaken	Strategy Version
1. Identify key stakeholders	Development of Internal Waste Minimisation Steering Committee comprising representatives from Waste Services, Sustainability and Environment, Local Laws, Communications and Customer Service to oversee the development of the strategy.	Prior to draft strategy being written.
	Residents Online Survey	Prior to draft strategy being written.
	Footscray FBD – undertook audit of all business owners in the Footscray Business District with Vietnamese interpreters	Prior to first draft
	Developed 3 community forums in West Footscray, Maribyrnong and Yarraville to discuss issues relating to the Waste Minimisation Strategy	Prior to first draft
2. Advertise and conduct workshops	Advertised and conducted 3 community forums Advertised and conducted a forum for body corporate representatives.	Prior to First Draft
3. EMT and Councillor Approval of Draft Strategy	Report to EMT and to Council presenting the draft Waste Minimisation Strategy	Draft Version 1
4. To be consulted on Draft Strategy – once completed and following comments from EMT/Council.	<ul style="list-style-type: none"> Local community/residents Local Community Reference Groups and Committees MWMG Sustainability Victoria EPA Victoria Waste Service providers Relevant waste management facility operators (landfills etc) Operators of recyclables processing facilities (MRFs, green organics) Adjoining Councils 	Draft Version 2

3.2 STAKEHOLDER CONSULTATION FEEDBACK

Community Workshops

Three community workshops were held with the community in Yarraville, West Footscray and Maribyrnong.

The workshops addressed key areas of council waste management and resource recovery activities:

- Kerbside garbage collection
- Kerbside recycling collection
- Kerbside organics collection
- Hard waste service
- Litter and illegal dumping management

For each topic, workshop participants were asked to consider the following key issues:

What is good about current services?

What could the service improved?

How should should/could Maribyrnong council and community be managing these resources by 2023?

What is needed for this (the vision for 2023) to happen?

In addition similar questions were asked in an online survey.

Residents indicated a high level of satisfaction with residential waste and recycling services. They suggested that Council should improve communication around waste and recycling, through a variety of means including large bin stickers, fridge magnets and mailouts in rates notices. There was a concern that Council should be communicating with non English speakers more effectively around waste and recycling and that a much bigger emphasis should be placed on communication around our waste and recycling services and waste minimisation.

In relation to the green waste service, some residents suggested that food waste should be included in the service and that it should be evolving into a more general organics service. Residents were mixed about the price of the service. Some liked the price of the user pays green waste service, in comparison to other options such as taking the waste to landfill or hiring a skip. Some also liked that fact that those with no need for the service do not need to pay for it out of rates. Alternatively there was a clear view from a large group of residents that green waste services should be provided for free as a service covered by their rates charges. This was argued most clearly by pensioners and those with low incomes. These residents felt that they were doing the right thing by separating their green waste for composting, and that they should not be penalised for recycling by an additional charge, while there was no additional charge to send the green waste to landfill if it was placed in a garbage bin.

Residents provided feedback on the at call hard waste service. Many wanted to go back to the council wide, kerbside hard waste services. They liked the idea of the service being instigated by Council rather than having to call Council. Some said they did not like the idea of calling out trucks for just a small number of items. Residents suggested the idea of a Council instigated at call hard waste service, where Council promoted the service for an area, told residents the dates that the Hard Waste Service would be visiting their street, and prompted them to book their at call collection for those dates.

There was also much concern that good quality items were being crushed and destroyed in trucks. Residents felt that Council should be facilitating a re-use system for usable items and partnering with charities and re-use centres in order to do so.

During the forums, Council also canvassed the idea of an organics service where food and garden waste are collected weekly similar to the service provided by some North East Melbourne Councils. Some residents embraced the idea, but there was concern from others about odours from unwrapped food items in organics bins and the need to clean bins more regularly than the current waste bin.

Body Corporate Focus Group

A Body Corporate Focus Group was also held with a number of representatives from most of the larger property managers attending. This forum focused on services provided to Multi Unit Dwellings.

Summary of Body Corporate Focus Group Feedback

Waste and Recycling Collections

- The existing waste and recycling collection in MUDs were generally considered to be operating well.
- One exception was in the case of smaller MUDs that have shared bins. Fewer and larger bins, smaller skips and 360 Litre bins shared between a number of units were considered to be better than shared 240 Litre bins in some cases.
- Body Corporates asked Council to consider providing more frequent recycling collections when large new buildings are first occupied, as there are many residents purchasing new items and large amounts of cardboard discarded.

- In some cases, fewer skips and bins and more frequent waste and recycling collections for larger MUDs are preferable and reduce the need for storage and collection space. They also reduce the amount of time that trucks are blocking roadways
- Communication is very important
 - Information to be given to body corporate and real estate agents to give to new tenants about the waste and recycling services available to residents.
 - More signage around bin storage areas about waste and recycling.
 - No hard waste signage as this only encourages outsiders to dump – but encourage onsite information e.g. in stairwells so that new residents are aware of hard waste collections, registered storage areas and collection dates

Hard Waste Collections

- Property managers were generally happy with the regular monthly collections for larger MUDs.
- Participants requested more frequent collections for smaller MUDs rather than resident ordered hard waste collections for individual properties. Either allow the individual collections to be co-ordinated over the year or provide 4 waste collections per annum.
- For those MUDs that are not suitable for hard waste collections, Council should provide free tickets to landfill stations to provide a service and minimize dumping.
- The current contractor collects hard waste over 3 days. This has caused problems with other people dumping on the property. Participants requested a shorter time frame for the actual collection period.

3.2.1 Footscray Central Activities District – Retailer Waste Survey

A team of 4 Council staff, including 3 Vietnamese speakers visited all retail premises in the Footscray Central Activities District. The results of the survey are detailed in Appendix 2. Some of the major finding were:

Food based businesses, such as restaurants and cafes make up the largest business classification in the FCAD with 32% of businesses. However they are by far the biggest producers of waste creating around 51% of the waste collected by Councils. They are also the largest users of private waste contractors.

Food based businesses also admitted to having the largest number of council waste and recycling bins with over 20% with 2, 3 or 4 Council garbage bins, most of which are not paying additional bin charges.

The largest volume of waste in the garbage stream is estimated to be food waste, with the majority coming from food based businesses.

Far fewer businesses used recycling services and the majority of these services to commercial properties are provided through Council services.

3.2.2 Community satisfaction with waste collection services

A Community Satisfaction Survey, including questions with regard to Maribyrnong City Council's waste services was undertaken in 2013.

Residents ranked almost all of Council's waste and recycling services in the top 10 by importance out of 32 services ranked. The City of Maribyrnong community consistently ranks these services as important.

Table 5 - Ranking of Services – By Importance

Ranking out of	Service Description
----------------	---------------------

32	
2	Weekly garbage collection
5	Regular recycling
7	Hard Waste Collection
8	Green Waste Collection

Table 6 Community Satisfaction – rated out of 10

Service Description	Rating out of 10	Ranking out of 32
Weekly garbage collection 8.41	8.41	1
Regular recycling 7.99	7.99	5
Green waste collection 7.97	7.97	6
Hard rubbish collection 7.30	7.30	15

The community generally displays a high level of satisfaction with the waste and recycling services provided. Rankings on Hard rubbish collections have fallen over the past year. Residents have in their feedback about Council's waste and recycling services have outlined some issues in relation to hard rubbish collections that they would like to see addressed, including better communication about the service and more information in community languages. Currently only 25% of households use the hard waste service, improvements to communication programs around hard waste can assist both households to access the hard waste service, but also has the potential to minimise dumped waste throughout the municipality.

4 CURRENT WASTE MANAGEMENT

4.1 INTRODUCTION TO WASTE MANAGEMENT OPERATIONS

4.1.1 Residential waste collection services

Information on the kerbside collection services provided to residential properties by Maribyrnong City Council is included in Table 5:

Table 7 -Current council waste services to residential properties

Waste type	Type of service	Type of container	Frequency	Type of waste materials and exclusions	Number of buildings serviced 2012/2013 & Participation rate
Garbage Houses	Kerbside collection	120L MGBs. Additional 120L or 240L for a fee	Weekly	All household, not hazardous waste such as asbestos, chemicals etc.	30500 97% Approx
Garbage MUDS	Multi-unit dwellings (MUD)	Shared 240L between 2 units, (smaller blocks of units) 660L skips or 1100L skips (larger blocks of units.)	Weekly	All household, not hazardous waste	542 skips 100%
Co-mingled Recyclables Houses	Kerbside collection	Choice of 120L or 240L bin	Fortnightly	Dry paper and cardboard, Plastics 1-6, Glass containers, Metal containers etc.	26800 90%
Co-mingled Recyclables MUDs	Kerbside collection	Shared 240L between 2 units, (smaller blocks of units) 660L skips or 1100L skips (larger blocks of units.)	Fortnightly (smaller blocks) Weekly (larger blocks)	Dry paper and cardboard, Plastics 1-6, Glass containers, Metal containers etc.	462 skips 100%
Green Organics – User Pays	Kerbside collection	Optional, mostly 240L MGB, option for 120L	Fortnightly	Organic garden/green waste only, no other contaminants etc.	5841 56%
Hard and Green waste	At call,	Collected from within residential property	At call, booked through Council	Pile to be no larger than 2 m ³ , mattresses to be piled separately, up to 5m ³ of organics. No hazardous waste or chemicals, or building rubble..	7864 26%
Hard and Green Waste Larger MUDs	Regular Monthly Collections	Collected from Designated Collection sites on site	For registered Buildings		65 sites
Other...					

4.2 REVIEW OF WASTE AND RECYCLING SERVICES

4.2.1 Summary of Waste and Recycling Quantities

Quantities and composition of waste and recyclable materials collected from across the municipality are detailed below:

Table 8 - Quantities of waste and recyclable materials collected from residential collections in 2012/2013– includes approx 1000 commercial/retail properties

	Recycled	Disposed to landfill	kg / Hh / yr	kg / pP / yr
	<i>Tonnes</i>	<i>Tonnes</i>	<i>Kgs</i>	<i>Kgs</i>
Residential collections				
Garbage	0	19,499	665.0*	280.9*
Co-mingled Recyclables	7,429	1,783	221.8	93.7
Green Organics	1,815	115	54.2	22.9
Hard Waste	1,256	879	37.5	15.8
Total of waste and recyclables generated	10,500	22,276	978.4	413.3
Diversion Rate (%)	32%			

*based on 22,276 kg per annum sent to landfill from all sources.

Commercial and retail collections from small businesses were not separated from these figures. Approximately 1000 businesses with one 240 L garbage bin and 500 businesses with one 240L recycling bin are included in the figures above.

Table 9 - Summary of waste and recyclables generated and recycled in the municipality for 2012/13

	Total (tonnes)	kg / Hh / yr	kg / pp / yr
Residential – waste to landfill	22,276	740	282
Residential – materials recycled	10,500	349	133
Other – waste to landfill	5,524	184	70
Other - materials recycled	0	0	0
Total	38,300	1273	485
Diversion Rate (%)	27.4%		

4.2.2 Residential Waste and Recycling Services

Garbage Collection Service

Residents have identified that they have a high level of satisfaction with Council's garbage collection service. The collection service is well managed and meets the expectations of the majority of residents.

However, audits of garbage bins both within this municipality and metro wide continue to highlight the large amount of waste going to landfill that could be potentially be diverted.

Our last audit found that over half of the waste in bins was made up of organic waste. This is consistent with municipalities that do not provide a universal green waste bin that is provided to all residents. Food waste makes up a large proportion of the material in the typical waste bin. Garden organics also is quite considerable. Council has had a growing number of residents subscribing to the user pays green waste service, from approximately 600 in 2004 to the current rate of approximately 6000 subscribers. There are potentially 18,000 households that have suitable properties and large gardens that could make use of the user pays green waste service. However, increasing the current number of subscribers may be difficult. Resident feedback indicates that there is a considerable segment of the population who are sensitive to waste charges who have made the decision to place garden waste in garbage bins covered by their existing rates charges rather than pay extra for green waste services.

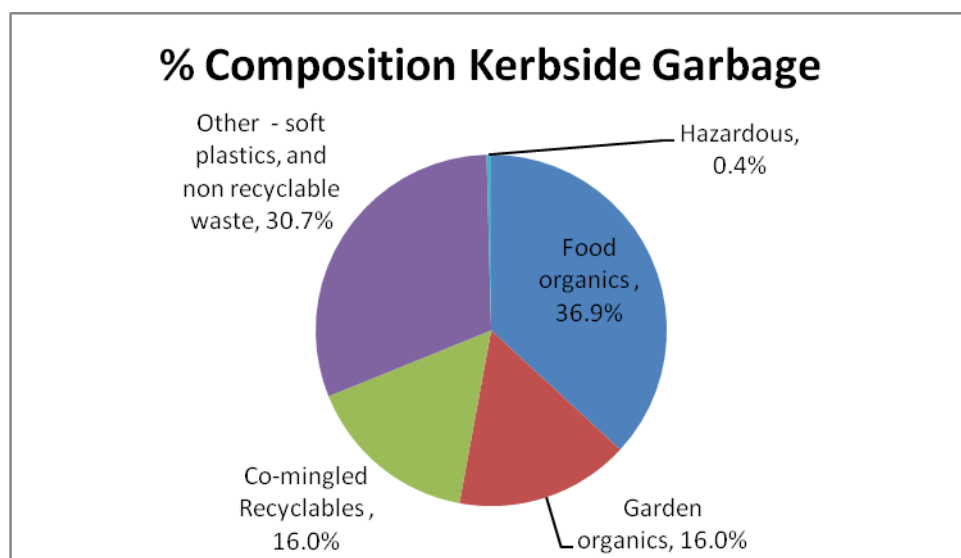
There is also a considerable amount of paper and cardboard, glass, metal and plastic containers that are disposed of in garbage bins.

Table 10 - Composition of kerbside collected Garbage

Waste Type	% Composition
Food organics	36.9%
Garden organics	16.0%
co-mingled	16.0%
Other - soft plastics, and non recyclable waste	30.7%
Hazardous	0.4%
Total	100.0%

Source –Audit of Maribyrnong Council Kerbside Garbage Stream 2008 – by Wastemin

Figure 4 - Percentage Composition Kerbside Garbage



Source: Audit of Maribyrnong Council Kerbside Garbage Stream 2008 – by Wastemin

The treatment of organics is a key consideration in future decisions

A key component of what our waste and recycling services will look like in 2024 is dependent on decisions made about how we treat organic wastes. Organic wastes have traditionally made up over half of the contents of metropolitan garbage bins. At our last waste audit, organic wastes (food waste and garden waste) made up 52% of garbage bin contents.

A range of current technology options for organic waste treatment are in the process of being developed or explored in metropolitan Melbourne. The North West organics treatment facility run by Veolia has recently opened at Bulla and new treatment plants are currently being planned for other parts of Melbourne. The feasibility of creating waste to energy plants using techniques such as gasification and pyrolysis are also being explored by the State Government. Due to the capital intensive nature of such plants, these would require that facility operators secure long term (up to 30

years) collection contracts and the redirection of a proportion of state landfill levies to make them viable.

In addition the State Government's waste policy indicates that its long term aim is that only residual or treated waste will be allowed to be disposed of in landfill. This means that the long term trends indicate that sorting facilities or waste to energy facilities will be a necessary step that will be required to be undertaken before landfills can be used.

This has significant implications for the type of services that Maribyrnong Council will provide to residents, the number of bins that will be required per household and the type of community education and engagement that will best assist Council in achieving waste minimisation and management objectives. Possible options amongst many are

1. Two residential waste and recycling services. A two bin system, an organics bin for food and garden waste delivered to an organics composting facility and a residual bin for recyclables and other non organics to be sorted at a treatment facility prior to landfill.
2. One residential waste and recycling service. A one bin system that contains all waste and recycling items that are sorted at a treatment facility, separating and diverting high value recyclables, with the remainder entering a waste to energy plant and/or organics composting facility, with residual ash taken to landfill.

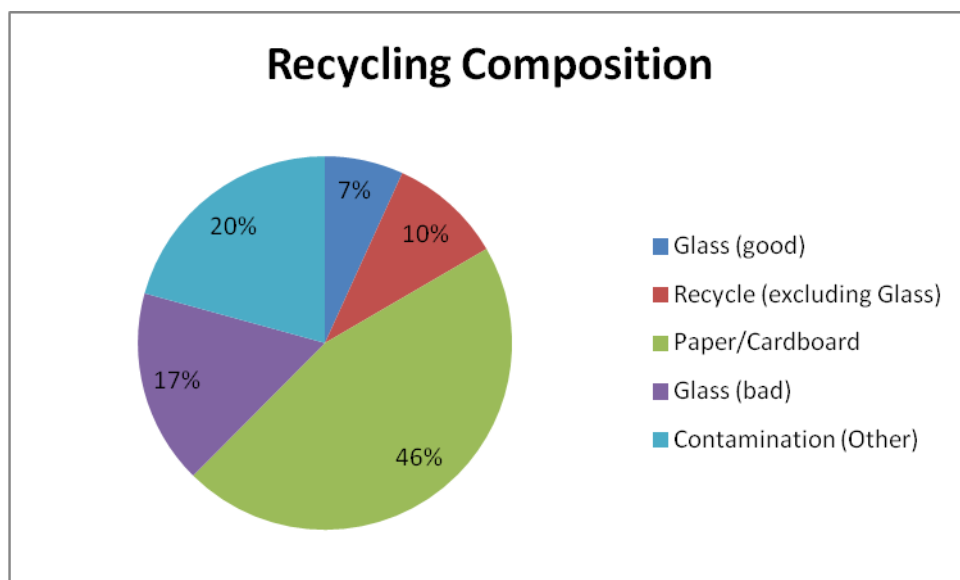
The uncertainty around the types of technology that will be available, and associated costs and benefits, makes it difficult to set a clear direction in relation to overall bin systems and collection and processing systems over the next ten years.

Residential Recycling Service

Residents have indicated a high level of satisfaction with the kerbside recycling service. This service is consistently ranked in the top 5 in terms of satisfaction with Council services and residents also rank its importance as high. This reflects the delivery of the collection service meets the needs of residents effectively.

However contamination levels from recent audits are quite high as shown in the diagram and table below.

Figure 5 Composition of kerbside collected Recyclables



Source - Maribyrnong City Council truck recyclables audit by weight *MWMG and SKM Recycling* 2013 – conducted by *WasteMin*

Table 11 – Maribyrnong City Council truck audits by weight comparison previous years

Item	% Dec 2007	% Dec 2008	% Dec 2009	% Dec 2010	% Dec 2011	% Dec 2012	% Dec 2013
Glass (good)	13.4%	14.8%	10.7%	22.6%	6.1%	7.4%	6.8%
Recycle (excluding Glass)	9.8%	9.0%	7.4%	8.3%	7.9%	9.2%	9.8%
Paper/Cardboard	61.4%	54.6%	59.4%	49.2%	61.9%	53.3%	45.8%
Glass (bad)	7.1%	9.3%	7.3%	3.4%	12.7%	15.2%	16.8%
Contamination (Other)	8.2%	12.3%	15.2%	16.6%	11.4%	14.9%	20.7%
Total	100%	100%	100%	100%	100%	100%	100%
Glass Breakage (less than 60mm) % of total glass	35%	38.4%	40.5%	13.1%	67.5%	71.0%	71.0%

Source - Maribyrnong City Council truck recyclables audit by weight *MWMG and SKM Recycling* – conducted by *WasteMin*

Contamination rates found in the Maribyrnong City Council truck audits of recycling loads made up 37.5% of the total load in the 2013 audit. There were two sources of contamination. The first is glass that is ineligible to be counted as recyclable. This currently makes up 15.2% of the total recycling stream. It appears that the majority of glass in the trucks is broken, currently around 71%. This mainly occurs in the truck as the recycling bins are emptied. Compaction also exacerbates this breakage level. Over the past ten years, there has been a trend to reducing levels of newspaper and other forms of reading material in recycling as residents move to digital formats. As there has been less material to cushion the glass, higher levels of glass breakage is occurring than in previous years.

While broken glass is still acceptable for recycling, our current contract with the recycling contractor – SKM specifies that any glass smaller than 60mm is considered to be contamination. Contaminated glass levels reached a high of 15.2% at the last audit.

Since the recycling contract was initiated around 8 years ago, technology has improved and recycling contractors currently recycle glass above 10mm in size. Using this as the recycling contamination level, glass contamination levels would be reduced to 5.6%.

The other major source of contamination are items incorrectly placed in recycling bins with 14.9% found in the most recent truck audits. The major item appears to be recyclables placed in plastic bags, rather than being placed loosely in the recycling bin and bagged waste. This made up between 40 to 95% of all other contamination in truck loads.

Recommendations of the audit included

- Undertake an annual full collection cycle kerbside audit.
- Use the SKM on line reporting on other contamination to investigate and address areas/sources of contamination as an education tool.
- Talk to all kerbside drivers to locate areas of greatest recycling contamination.
- Education program aiming to reduce contamination should cover
 - eliminating use of plastic bags
 - Educating service users on what are recyclable items.
 - Eliminating hard rubbish items from the recycling stream.
- Investigate the potential of undertaking “day after” hard rubbish collections using the existing 240 litre recycling bins.

MUD Garbage and Recycling Collection Services

In 2004, council introduced waste and recycling skips to larger multi unit developments. Smaller multi-unit dwellings share a bin between each two units. Feedback from body corporate representatives indicates that these were generally considered to be operating well.

Specific feedback was given in relation to smaller MUDs that have shared bins. While the current system works well in a large number of cases, waste services would be more effective if greater flexibility was allowed in order to best meet the needs of each property. Shared bins worked well where there was a sense of ownership and responsibility, however in a number of cases, this was not apparent and the bins were used communally or were managed by property managers. Suggestions were changes were introduced fewer and larger bins in particular properties. Smaller skips and 360 Litre bins shared between a number of units were considered to be a better option than shared 240 Litre bins in some cases.

Council was also asked to consider providing more frequent recycling collections when large new buildings are first occupied, as there are many residents purchasing new items and large amounts of cardboard discarded. Council's waste services teams have already started to provide this one off service. As there are sometimes large amounts of cardboard that are not accepted by hard waste contractors, Council will also consider a service by request for a cardboard pickup as part either the recycling collection or an extension of the FCAD cardboard collection service.

In the case of larger Multi Unit Dwellings, storage and collection space for skips is problematic for both the residents/ property managers and service contractors. In these cases, fewer skips and bins and more frequent waste and recycling collections for larger MUDs are preferable and reduce the need for storage and collection space. They also reduce the amount of time that trucks are blocking roadways

The importance of communication has also been emphasised. Body corporate managers and real estate agents have expressed that they are willing to co-operate in providing information to new tenants about the waste and recycling services available to residents.

Council were also asked to investigate the provision of signage about waste and recycling service near bin storage locations in multi unit dwellings .

Property managers were generally happy with the regular monthly hard waste collections for larger MUDs. Residents requested more frequent collections for smaller MUDs rather than resident ordered hard waste collections for individual properties. Either allow the individual collections to be co-ordinated over the year or provide 4 waste collections per annum. Residents felt that the current hard waste service designed for individual houses did not suit the needs of households living in smaller MUDs as collection and storage spaces were more of an issue and discouraged residents from booking a service.

High Rise Residential Properties

The City of Maribyrnong is forecast to add 9892 dwellings to its existing stock of residential buildings over the next ten years. More than half of this growth is expected to be in high rise multi-unit dwellings, mainly in Footscray. The City of Maribyrnong has only added waste and recycling services specifically targeted at multi unit dwellings in the last 8 years. As there are a number of high rise dwellings planned especially in Footscray, Council must decide whether it will provide a service that specifically caters for residents in larger multi-unit dwellings.

There are a number of issues associated with waste in high rise buildings.

- Lack of control over private contractor waste and recycling collections.
- Greater environmental sustainability outcomes through the provision of recycling services. Few residents in MUDs elect to pay additional fees for recycling.
- Fewer noise complaints. Waste trucks generally visit in the early hours of the morning. High Rise MUDs often have daily collections. Multiple trucks visiting each of the high rise MUDs result in greater noise. A council service can reduce the number of trucks and better regulate the hours that waste is collected.
- Equity in relation to provision of services to residents.
- Currently Council has a policy that there will be no refund on rates for residents of properties that engage private waste contractors. This is based on the understanding that Council is set up to provide an appropriate waste services to all low rise multi-unit dwellings and it is the property owners' decision not to use the Council service, not Council's refusal to service a property.

This is designed to provide further transparency to the community.

Best Practice Collections from High Rise Multi Unit Dwellings.

The emerging best practice in the area of waste and recycling collection in high rise multi-unit dwellings is being undertaken in the City of Melbourne.

This municipality has released clear guidelines for developers, and created amendments to the Melbourne Planning Scheme to mandate that all planning applications must be accompanied by a Waste Management Plan prepared in accordance with the Guidelines.

The municipality provides up to five weekly collections to assist in minimising space requirements for storage for developers, and provides 1100 litre skips as their maximum container size for both waste and recycling.

No containers are picked up from the street, and all buildings must have a loading zone large enough to allow the largest garbage truck to reverse in, collect waste from waiting skips and drive out. A diagram showing the loading zone(s) and truck access paths must be provided as part of planning permit. In addition Council mandates twin shutters for waste and recycling as a standard and all new developments now comply with this requirement.

According to City of Melbourne staff collection costs are similar to individual household collections due to economies of scale of collecting large amounts of waste and recycling from one location.

The majority of residential towers in the City of Melbourne including docklands are collected by Council collectors.

These changes have occurred since 2009 due to

1. The need for more control over waste truck movements in high density residential zones. The City of Melbourne previously received large numbers of complaints from residents about noise from numerous waste truck movements in the early hours of the morning disturbing residents sleep.
2. Complaints from residents and body corporate organisations about double charging, e.g. paying for waste collection in rates and also body corporate fees.
3. The need to increase recycling rates in the city. Where developments must pay for private contractors, they tend to consolidate their costs and pay for only one collection of waste. This means that the recyclable items are not recovered in most cases.

The Cities of Port Phillip and Banyule have also indicated that they will be adopting similar guidelines to the City of Melbourne for waste planning in multi-unit dwellings.

Maribyrnong City Council have some requirements around planning and waste management plans, however, the adoption of similar guidelines would assist in providing a more effective waste and recycling service for residents of high rise buildings.

User Pays Green Waste Service

Council provides a fortnightly user pays green waste service for the collection of garden waste. The level of subscribers has increased tenfold from approximately 600 households to approximately 6000 households currently. Residents who subscribe to the green waste service are generally satisfied with the service according to the most recent Community Survey. Levels of contamination found in green waste collections are very low.

However, resident feedback from forums indicates that there is a section of the community resistant to paying extra for a green waste service. One perspective of the service is that it is unfair to penalise residents who do the right thing by recycling their green waste through an additional charge, while sending the same waste to landfill which results in an adverse environmental impact, results in a cost savings.

Residents with low incomes especially pensioners were concerned about the cost and are unlikely to take up the service at the current cost. A pensioner rebate may assist in improving the take up of the green waste service. As the user pays service is designed to be cost neutral, this would need to be paid for by savings from the full fee service. As the current number of subscriptions is covering costs, a pensioner rebate could be introduced at the time of the next annual fee increase, without a substantial impact on existing subscriber costs.

The table below details the tonnages of green waste collected annually.

Table 12 - Composition of kerbside collected Green Organics

Waste Type	Tonnes	% Composition
Green organic material recovered	1930 tonnes	100%
Green organic material processed	1815 tonnes	94%
Contaminants/waste	115 tonnes	6%

Sourced from processor of Green organics Veolia 2012/13

Residential Hard and Green Waste Service

Residents of houses and multi unit dwellings of up to 11 units are eligible for one free hard and green waste service. The service is at call and waste collection is made from within each residents property. Kerbside permits are provided for residents with no room within their properties. Additional hard and green waste collections are available at a fee of \$75 per collection.

The current service replaced a kerbside service that was provided twice annually. The previous service had issues relating to occupational health and safety and were difficult to manage with some residents placing hard waste on the kerbside weeks before collection. Residents placing waste on the kerbside after a collection was also a regular occurrence. There were also issues with scavengers collecting all the valuable items such as metals before the collections, making them less viable for contractors.

The current system has improved safety with fewer items left on kerbside for collection, and has reduced the incidence of scavengers removing the most valuable recycling.

However, only 26% of residents in houses and smaller MUDs used the service in the 2012/13 financial year, which means that a large number of residents are not participating in collections.

MUDs with 12 or more units are eligible to register for a regular monthly collection. The collection area must be onsite and approved by Council. Currently around 170 properties have registered for this collection. This has covered around 80% of larger MUDs.

The at call Hard and Green Waste collections are a key component in combating illegally dumped rubbish. Residential forums have highlighted a lack of knowledge about the Hard and Green Waste Services and a lack of motivation to initiate a service call by a segment of the community. In addition while the MUD regular collections have reduced the level of dumped waste from this segment of dwellings, there are still a sizable number of Multi Unit Dwellings that have not registered for regular collections and smaller MUDs that would benefit from increased promotion of the at call service. The establishment of a small number of regular collections for smaller MUDs especially around peak lease changeover times could improve the problem of illegally dumped rubbish as residents move.

Residents liked the exchange of items that occurred as a result of kerbside services. Exchange programs can also be promoted through a number of ways, by encouraging participation in the garage sale trail, considering a role for charities pre collection to identify and collect usable items, and promoting drop off programs. In addition the feasibility of an urban workshop to collect, update and redistribute usable items could be examined.

Recommendations for improvement include

- increased promotion of the service,
- promoting the service in community languages,
- working with real estate agents and bodies corporate to provide information about the service to new residents.
- Trialling a managed at call collection program, by organising collections in a specific area and prompting residents to book a collection for a pre specified date, via a postcard reminder that could be returned, or through an online booking.
- Investigate role of charities to facilitate re-use of usable items such as furniture
- Undertake feasibility study to facilitate the re-use of hard waste through an urban workshop and partnerships with charities.
- Trial of a small number of regular hard waste services for smaller MUDs, around transition times, e.g. end of tertiary school year.

4.2.3 Commercial Waste and Recycling Services Service

Commercial premises that produce similar amounts of waste to residential premises are eligible to receive one 240 litre garbage bin collected weekly and one 240 litre recycling bin collected fortnightly. Up to two additional waste and/or recycling bins are available to commercial properties for an annual fee.

Currently the number of commercial premises receiving Council waste services is not isolated from residential collections as the collection services are covered by one contract. It is estimated that around 1000 garbage bins and a few hundred recycling bins are located in commercial properties.

Most of the commercial bins are located in strip shopping centres such as Footscray Central, Yarraville, Seddon and West Footscray. Others are located in office units and small industrial buildings throughout the municipality.

It would be useful to undertake an audit of commercial properties, to gain an understanding of the location, number and condition of garbage and recycling bins being used by commercial properties.

Strip shopping centres that have individual waste management collections such as Footscray, Seddon, Yarraville and West Footscray are one target segment in the community that could have improved waste management and recycling.

The Footscray Central Activities District is an area that has had a number of issues.

- Bin stocks are very old.. Waste bins have not had an integrated replacement program in the area since MGBs were first introduced in 1988. Some of the 240L bins in the FCAD date from this time.
- Low takeup of recycling bins
- Over 20% of properties have additional bin collections. Many of these are not registered and annual bin fees are not paid.
- Skips and bins are located in laneways and at the rear of buildings, in areas that could be used as shared community areas.

4.2.4 Footscray Cardboard Collection Service

Council's waste contractor Remondi's undertake a Cardboard Collection Service in the Footscray Business District weekly. Approximately 15 tonnes of waste is collected per month.

The graph and table below shows the self reported, number of boxes per week placed out for the Cardboard Collection. Food based businesses recycle the largest quantities of boxes.

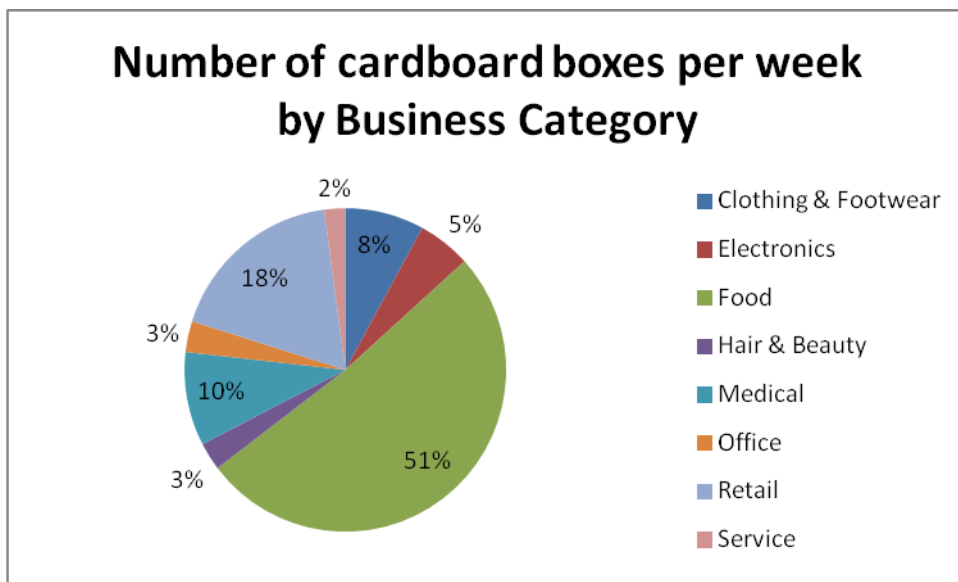


Figure 6– Percentage Cardboard Collection by Business Category

Table 13 - Number of Cardboard Boxes Recycled Per Week - FCAD

Business Category	Total Boxes pw	Average pw per business
Clothing & Footwear	565	14
Electronics	380	21
Food	3665	23
Hair & Beauty	200	4
Medical	670	11
Office	222	4
Retail	1285	15
Service	150	4

Total	7137	14
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The cardboard collection in Footscray has ongoing litter management problems, which is being monitored by Council officers. The largest contributors to the cardboard collection are food based businesses. A trial of different treatments for cardboard targeted at food waste businesses, which contribute more than half of the cardboard, could make a significant impact on the cardboard litter and amenity problems. For example, a shared small compactor and disposal equipment in central locations.

The cardboard collection in Footscray was originally started as a free service by a private contractor at a time of high market prices for cardboard and paper. When the market price dropped, the contractor ceased the service, however retailers continued to place cardboard out for collection. Council organised for the Council contractor to collect the cardboard and the service has continued ever since.

The service has not previously been extended to other small retail outlets such as in Yarraville, West Footscray or Braybrook although there is an option in the new recycling contract to expand the service. Council will investigate the feasibility of expanding the cardboard collection service to smaller retail centres.

Also there are a number of issues with cardboard collections at MUDs as hard waste services do not collect cardboard and sometimes MUDs are dealing with large amounts of cardboard boxes. Council is trialling a one off cardboard collection service for newly commissioned MUDs which has been working well.

Council will investigate the feasibility of offering additional at call services for cardboard collections to MUDs.

4.2.5 Street litter collection (including street litter bins) and Street Sweeping Services

226 street litter bins are collected by Council's cleansing team. Litter bins in parks are collected as part of the Council waste contract. In general the litter bins work well and frequency of collection is based on the average levels of waste generation.

An ongoing issue with litter bins in some retail shopping centres is that the bins are used as waste bins by businesses. Some of these will be an overflow once their own bins are full. However, the retail waste survey in the Footscray CAD has identified that a large proportion of business owners in this location do not have any bins at all as they produce small amounts of waste. Retail businesses in other areas may be similar. An option to select smaller 120 litre waste and recycling bins may suit these businesses.

The use of street litter bins should also be addressed in the waste minimisation communications programs for commercial areas.

The placement of new litter bins is undertaken by request on an ad hoc basis. There is a need for a brief policy on the placement of new bins, that includes a criteria including existing or future expected sources of litter, checks of any planning documents of master plans for the area, and the expected use of the bins.

In addition existing litter bins should be monitored periodically to assess the current need for the bins. For example bus stops have been moved to new locations, but litter bins remain, or changed business uses require new bins or mean that existing bins are no longer needed.

Table 14 - Quantities of waste and recyclable materials from Other waste collection services in 2012/2013

	Recycled	Disposed to landfill
	Tonnes	Tonnes

Other		
Street Sweeping		278
Street Cleaning and dumped rubbish		5,246
Litter (included in street cleaning)		Unknown
Public Place Recycling (included in residential collection.)		Unknown
Events (included in residential collection.)		Unknown
Total of waste and recyclables generated	0	5524
Diversion Rate (%)	0%	

Street sweeping services are currently being reviewed as part of a Council Service Review of cleansing services. One of the issues that is relevant to street sweeping services is that of parked cars obstructing the street sweeping trucks. In addition narrow streets, reduce access making it difficult to provide an effective service.

Council will investigate the use of parking restrictions on specific days in narrow streets for waste services including street sweepers.

4.2.6 Public Place Recycling (PPR)

Maribyrnong Council has installed 20 PPR bins in Yarraville and West Footscray. The bins are collected weekly and have very low contamination rates. The design of the bins with small openings for recycling, is designed to make it slightly more difficult to recycle than to use the waste bins, which are generally side by side. This means that recycling becomes a conscious action, resulting in low rates of contamination.

Residents are used to recycling at home and in their workplaces, extending recycling to public places reinforces this behaviour. Council should consider installing more PPR bins in heavy pedestrian traffic locations.

Council will also extend public place recycling programs to sports clubs.

4.2.7 Collection of illegally dumped waste

Rubbish dumping is an ongoing problem in the municipality. Dumping from larger blocks of flats and units has decreased due to the introduction of regular hard waste collections. However, there is still regular dumping of furniture, mattresses and hard waste on vacant land, along railway lines, outside residential properties and in council reserves. There is also a considerable amount of industrial waste that is illegally disposed of in the municipality.

There is a limited trend data about dumped waste collections in the municipality, so it is difficult to provide conclusive information about the level of dumping in the municipality. However, there is an observation from our Cleansing and Local Laws departments who deal with the waste on a day to day basis that illegally dumped waste is increasing in the municipality. The significant increase in landfill costs in the last few years is likely to have provided an incentive to dump waste rather than dispose of it legally.

There is a link between dumped rubbish and the knowledge and use of the Council hard waste collection. Residential feedback has indicated that there is a lack of knowledge about the at call hard waste collection, how it works and even that it exists.

The waste minimisation strategy proposes processes to promote the at call hard waste service to different community target groups, and to work with bodies such as real estate agents, bodies corporate, and public housing property managers to increase awareness of the at call hard waste service.

Addressing the problem of illegally dumped waste requires a combined program of Education, Prevention, and Enforcement.

The tables below show the recorded requests for dumped rubbish collections over the past two financial years. This does not include regular dumped waste collections carried out by our Rapid Response and Cleansing teams, that were not the result of a logged request. The recorded data shows an increase in collection requests since October 2012, most of the growth in dumped waste requests related to waste dumped on nature strips.

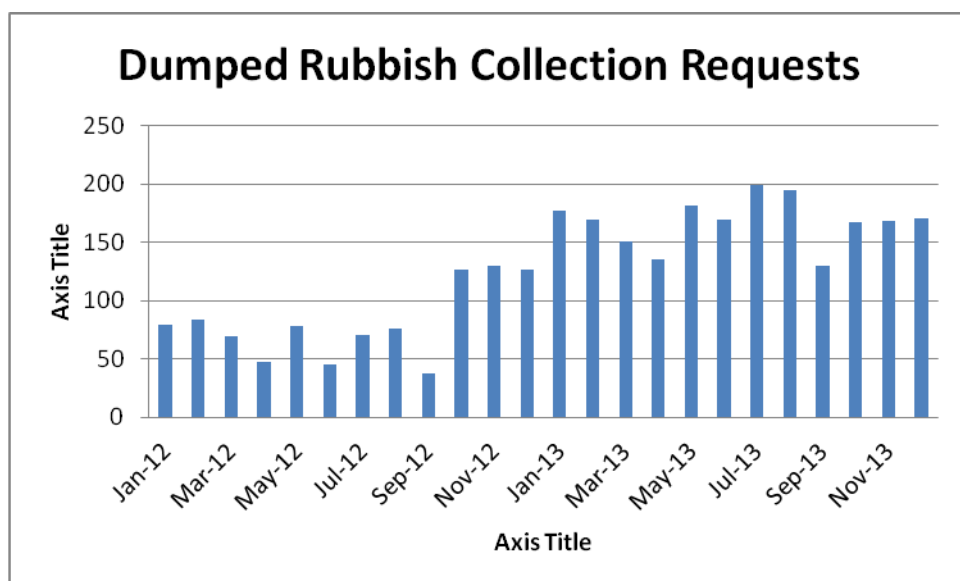


Figure 7 – Dumped Rubbish Collection Requests

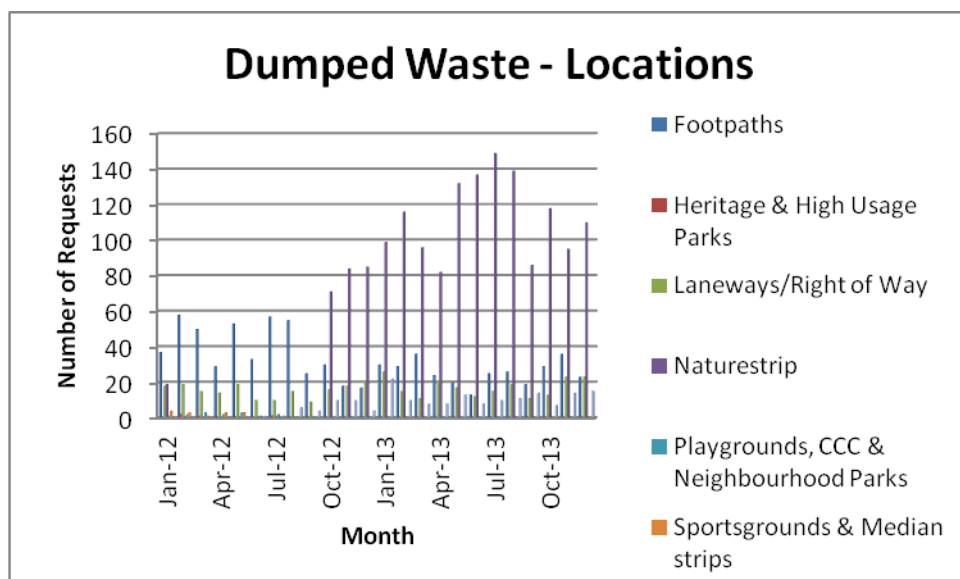


Figure 8 – Dumped Waste Collection Requests - Locations

4.2.8 Collection of waste and recyclables generated at local Festivals and Events

Council provides waste and recycling bins for local festivals and events on request for a fee. More events only use waste bins with a few now using recycling bins as well. Currently Council does not own or provide event bin caps which sit over a number of bins, creating a waste and recycling station.

Further promotion of Recycling at events would reinforce the recycling message within our community. A more wholistic view of waste minimisation at events involves the promotion and support of waste wise events which can include controlling the supply of disposable items that are available for sale, buying green products, promoting waste minimisation, encouraging

recycling through bin caps, at point promotions and strategic location of bins and evaluation of recycling levels.

Council will consider the purchase of bins caps and other promotional material and promotion of waste wise events.

4.2.9 Collection of E-waste

Electronic waste is state government responsibility. The State Government funds a number of regional electronic recycling programs run at local government facilities. The facility for the western Metro region is at the Mooney Valley transfer station. Free drop off services are available to western Metro residents including residents of the City of Maribyrnong.

Residents are often unaware that State Government funds programs for E-Waste collections and that services provided in nearby Councils are also aimed at City of Maribyrnong residents. Promotion of the regional E-waste drop off centres and their role will be expanded.

Maribyrnong City Council has provided local E-waste drop off collection days at the Sunshine Rd depot in response to local demand due to the cessation of analog TV signals. This has resulted in a large number of analog TV sets being illegally dumped as well as being included in hard waste collections.

Council will schedule more E-Waste drop off days for local residents.

4.2.10 Household Hazardous Waste Collections

The collection and management of household hazardous waste such as household chemicals, motor oils, paint, car batteries and gas bottles is a state government responsibility. The state government has run a Detox Your Home program for a number of years. An increasing number of permanent collection sites have been created. The western Metro locations are in Melton and Moonee Ponds, (previously in Keilor, run by Brimbank Council). These operate for all western Metro residents including those in the City of Maribyrnong. The Detox Your Home program also had a number of mobile collections with two annual collections run in the western Metro area. Maribyrnong City Council has hosted a number of mobile collections.

The state government has now moved to permanent sites for the twice annual mobile collections. The closest regional mobile site will now operate in Altona twice a year. Mobile collections will not be offered in each municipality.

Council will continue to promote the Detox Your Home program to the City of Maribyrnong Residents.

Council will advocate for an extension of mobile Detox Your Home services to sites in each municipality.

4.2.11 Non-residential waste collection services

Council provides limited recycling services to community groups and schools in order to support waste minimisation and recycling education.

Subsidised waste and recycling services are also available to eligible sporting and recreation groups, subject to council approval.

A sustainability audit of Council buildings identified that many sporting clubs do not have recycling services. Council is currently reviewing waste and recycling services at sporting clubs and developing a waste management plan including a communications program to promote waste reduction, increase recycling levels and encourage the introduction of public place recycling at sporting grounds within the municipality.

4.3 COUNCIL INTERNAL WASTE MANAGEMENT

4.3.1 Waste composition and quantities

Council was certified as a waste wise organisation in 2010. This is a 2 year certification and has now expired. Under the previous certification, Council undertook an audit and developed an action plan. Some actions from the action plan were implemented including the introduction of co-mingled recycle bins into kitchens in a number of offices, upgrading desk based recycling boxes and removing individual waste bins and replacing them with shared waste bins and a green team was created. As a result of internal structural changes within the organisation, the waste wise program has been discontinued. There is a need to re-activate this program to continue to realise waste reduction and resource recovery goals set out in the last Waste Wise Council Action Plan.

There is a lack of current data with the last audit conducted in 2010, before a number of actions were implemented. At the time Council internal office operations resulted in 312 tonnes of waste and 62 tonnes of recycling per annum.

4.3.2 Council waste reduction policies and activities

Maribyrnong City Council has a green purchasing policy which was endorsed by Council. Maribyrnong Council reports on all green purchasing to Eco-Buy once per year. This is benchmarked with other Councils.

Maribyrnong Council has twice been a certified Waste Wise Council. As part of this a Waste Reduction plan was developed and implemented. This Action Plan and Waste Wise Certification has expired. A new program will need to be initiated.

4.4 OVERVIEW OF CURRENT COUNCIL WASTE CONTRACTS

Table 15 Overview of Waste Contracts

Service	Contractor (or internal)	Address of facility	Contract Expiration (plus extensions)
Kerbside Collection			
Garbage collection	Remondis	McIntosh St Airport West	30 Jun 2020 plus 3 1 year ext
Garbage disposal to landfill	Wyndham City Council	Wyndham Landfill Wests RD Werribee	
Green Organics collection	Remondis	Taken to Veolia at Wyndham – transfer to Bulla	30 Jun 2020 plus 3 x 1 year ext
Green Organics receival	MWMG - Veolia	Bulla Organics Facility	???
Bundled green waste	WM Waste	Taken to Veolia at Wyndham – transfer to Bulla	29 Nov 2014 plus 2 x 1 year ext
Commingled recyclables collection	Remondis	McIntosh St Airport West	30 Jun 2020 plus 3 1 year ext
Commingled recyclables receival	SKM Recycling	Laverton site	1 July 2015
Hard waste	WM Waste	Taken to Knox transfer station for sorting, recyclables recovered, residual to Boral	29 Nov 2014 plus 2 x 1 year ext
Non-residential collections			
Garbage collection	Remondis	McIntosh St Airport West	30 Jun 2020 plus 3 1 year ext
Garbage disposal to landfill			
Commingled recyclables collection	Remondis	McIntosh St Airport West	30 Jun 2020 plus 3 1 year ext
Commingled recyclables receival	SKM Recycling	Laverton site	1 July 2015
Other waste collections			
Street sweeping and disposal	Council Cleansing	Dynon Rd Transfer Station	On going
Street Cleaning and dumped rubbish collection and disposal	Council Cleansing	Dynon Rd Transfer Station	On going
Park bins Collection and disposal	Remondis	McIntosh St Airport West	30 Jun 2020 plus 3 1 year ext
Public Place Recycling (PPR) bins Collection	Remondis	McIntosh St Airport West	30 Jun 2020 plus 3 1 year ext
PPR receival	Remondis	SKM Recycling	1 July 2015
Events waste collection and disposal	Remondis	McIntosh St Airport West	30 Jun 2020 plus 3 1 year ext

An audit of waste contracts was completed in March 2014. With the exception of some relatively minor procedural issues that are being addressed, the contractors were found to be meeting all major obligations required of them by the contract. Overall they were found to be providing the required service in a proper, timely and efficient manner using a standard of care, skill, diligence, prudence and foresight that would be reasonably expected.

5 EDUCATION STRATEGY

Council has a focus on promoting and explaining recycling and waste management services as they are some of key services provided to residents. Waste and recycling collection services are the most frequent interface that most residents have with their local council. Many of the community education and engagement actions in this strategy support this focus on the promotion of key services, explaining how to use them properly and encouraging the diversion of resources away from landfill to other resource recovery streams such as recycling services and green waste and recycled hard waste services.

However it is a key task of educational strategies to show the entire waste hierarchy and emphasise the importance of avoidance in relation to recycling behaviour. This waste minimisation strategy also focuses on waste avoidance actions.

It is a growing challenge to communicate waste minimisation to Maribyrnong's diverse and changing communities. There has been considerable literature on the effectiveness of using various behaviour change principles in sustainability education. Community educational activities designed to support this waste minimisation strategy are based around the following principles:

- **Participation** – participation in the educational/communicative process is superior to information-only approaches regarding retention. As part of the waste minimisation strategy scalable low-cost participatory techniques in waste education will be explored and implemented.
- **Innovation** - research suggests that innovative and creative approaches can circumvent 'message fatigue' and create lasting impressions
- **Commitment** - research consistently indicates that commitment making, especially public commitment, increases the durability of behaviour change
- **Feedback** – this principle indicates the importance of providing appropriate positive or negative feedback about people's waste behaviour

Communications and Engagement programs will be developed to support the actions of the waste minimisation strategy including:

- A continuing focus on recycling education for residents who live in houses and smaller multi-unit developments.
 - a) The development of a communications and engagement program that promotes the entire range of waste services to the community in various mediums, including onsite signage for bins about recycling, promotion of user pays green waste services and hard waste services, through flyers, advertisements, website, promotion at events and through social media and continuing incentive programs for residents.
 - b) This financial year Maribyrnong City Council has undertaken the Maribyrnong Recycling Champions Project. This is an incentive program that rewards residents for recycling correctly and provides recycling information to those who need to improve their recycling. This program will continue for another year with external funding.
 - c) A specific focus on a campaign to reducing plastic bags used as packaging for recycling which makes up Council's largest form of recycling contamination.
 - d) Continuing and expanding the online waste reduction pledge that encourages residents to set personal waste reduction goals, using the commitment principle.
 - e) Continuing and expanding the Maribyrnong Recycling Champions campaign and
 - f) Ongoing communication about waste services to new tenants through waste kits provided through real estate agents.

- Culturally and Linguistically Diverse (CALD) Communities – identify communities for targeted communications and engagement programs. Including:
 - a) engaging with community leaders or active members of CALD communities as vehicles for change in their own communities through various programs.
 - b) increased provision of recycling services information in various community languages.
 - c) identifying communities through surname recognition technology and promoting council services to specific communities in various community languages.
- Campaigns targeting reduction and avoidance of waste.
 - a) Research and the activities of other councils suggest that programs using simple goals and reflective processes are effective. A trial of 'Halve your waste' month using self-assessment, household goal-setting, and dissemination of learnings will undertaken.
 - a) Promotion of second-hand retail, swapping, garage sales and related events or services that provide alternatives to the purchase of new items.
- Communication and Engagement with residents of Multi Unit Dwellings to promote recycling and reduce waste.
 - a) The development of a communications and engagement program that promotes the entire range of waste services to the community in various mediums, including onsite signage for bins about recycling, promotion of user pays green waste services and hard waste services, through flyers, advertisements, website, promotion at events and through social media and continuing incentive programs for residents.
 - b) Providing innovative and targeted onsite signage
 - c) Working with real estate agents and bodies corporate to provide new tenants kits promoting a range of waste services.
 - d) Encouraging recycling and providing specific information tailored to Multi Unit Dwellings
 - e) Engaging with public housing tenants through DHS
 - f) Undertaking MUD waste and recycling kerbside audits and providing feedback to MUD residents.
- Sporting and Recreation Clubs Waste Management – there is an opportunity to increase the knowledge of waste minimisation in specific communities through targeted promotion in sporting clubs. A pilot 'Good Clean Game' recycling education program is being undertaken along with new bin infrastructure to eligible clubs.
- Public Place Recycling programs. There has been a small successful trial of PPR in Yarraville and West Footscray. This will be expanded upon by increasing the number and location of such PPR. From an educational perspective, a precinct-level approach to PPR will enable information to be targeted to the demographics or the specific waste items encountered e.g locations near restaurants or bars would need a different targeted approach to an office precinct.
- Shopping Centre Programs – Footscray Business District – upgrade of bin stock and development of a waste minimisation communication program for traders.
- Support for initiatives to reduce the incidence of illegally dumped rubbish, such as "Dob in a Dumper", promotion of hard waste services and a communications and engagement program to reduce illegally dumped rubbish.
- Schools and Youth Program – a program to engage with schools and other educational and youth organisations to encourage waste avoidance, reduction and recycling.
- Projects harnessing creativity to communicate waste minimisation. A recycled art competition was held successfully that celebrated reuse and recycling and invited the public to consider the environmental impact of consumption in their lives.

In addition Council will focus on leveraging State Based community education programs such as Get it Right on Bin Night and the Back to Earth campaigns in order to tap into the metro wide programs and resources. Existing Council information around waste and recycling will be integrated with state based images, promotions and resources in order to enhance our residents existing exposure to waste reduction and recycling information.

A further priority for community education and engagement around waste avoidance, reduction and recycling is understanding and adopting new forms of technology. Given the ten year outlook of this strategy, developing waste minimisation education using social media and applications for mobile platforms, web portals and other types of technology yet to be released on the market. Using social media and emerging technologies, will enable us to better meet the information needs of our community around waste and recycling and to engage with them in more participatory ways.

6 PROGRESS TO DATE AND ACHIEVEMENTS

6.1 PRIOR ACTION PLAN REVIEW

The previous Maribyrnong City Council waste minimisation strategy was developed in 2004. The stated objectives of the strategy were.

- ▶ To reduce waste sent to landfill in line with State government targets.
 - 15% reduction in waste generation by 2013.
 - 45% recovery rate in municipal solid waste by 2008 and 65% by 2013
 - All municipal waste to be processed for resource recovery prior to landfill by July 2012
- ▶ To provide appropriate waste and recycling services for higher density residential developments with a focus on waste minimisation.
- ▶ To design waste and recycling services that meet Council's obligations under the Workcover Occupational Health and Safety Guidelines.
- ▶ Provide a cost effective waste minimisation system in the City of Maribyrnong
- ▶ To provide a comprehensive waste minimisation education program.

The waste targets listed for the City of Maribyrnong were in line with the targets in the State Waste Strategy in effect at the time, Towards Zero Waste. All Councils were required to adopt the state targets. The zero waste objective was not achieved in the City of Maribyrnong. One of the main reasons for this was that a major component of the target to achieve zero waste was the treatment and recovery of organic waste (mainly food and garden waste) which made up almost half of the waste stream. The treatment facilities and markets for organic waste are still at a very early stage. The Bulla organic waste facility which treats organic waste from Councils in the northern and western suburbs of Melbourne only opened in late 2013. At the moment the treatment of food waste at the facility is in the very early stages, and it is unlikely to have the capacity to manage and treat food waste.

As part of the 2004 strategy, Maribyrnong City Council introduced co-mingled recycling bins to all residential properties and made them available to small commercial and retail properties on request. Prior to this, Council provided recycling crates to residents for bottles and cans, paper and cardboard were collected in separate tied bundles to houses only.

Maribyrnong City Council also developed and implemented a comprehensive range of programs for multi-unit dwellings as part of the strategy. Multi-unit dwellings received recycling services for the first time. Skips were introduced for larger properties for both waste and recycling. Council were the first Council to introduce Co-mingled recycling skips for MUDs in Victoria. This was designed to improve services to the community as well as minimising OHS claims of manual handling required to move numerous small mobile garbage bins. (MGB's) As a result of the implementation, there are very few cases where more than 4 bins are required to be collected from MUDs. Regular monthly hard waste collections were implemented in larger MUD's which was introduced to reduce the incidence of dumped waste.

The strategy also identified a program aimed to facilitate services in the Footscray Central Business District. This included a food waste trial for food based businesses, introduction of multiple recycling bins and a rationalisation of waste bins. Unfortunately, the budgeted cost of total waste and recycling services was much less than the actual cost. The cost of recycling services doubled, despite going from a weekly to a fortnightly service. As a result of financial constraints for waste and recycling services, the FBD program was not implemented.

The previous action plan and progress toward each of the actions is detailed below.

Table 16 – Previous Waste Minimisation Action Plan - Houses

	Action	Who should implement	Resources Required	Timescale	Priority	Measure of Progress	Progress
1.	Finalise waste and recycling collection options for houses.	Council	Council and Staff Time.	September 2004	High	Waste Minimisation Strategy Adopted.	Completed
2.	Introduce new waste and recycling collection options for houses.	Council. Recycling Contractor, Hard and Green Waste Contractor	\$1.1 million for waste and recycling bins.	January 2005	High	Contract finalised and signed.	Completed
3.	Develop education campaign for new waste collection system.	Council – Sustainability Staff and External Contractor	Council Staff time.	June to October 2004	High	Education Action Plan complete. Final draft for education materials.	Completed
4.	Implement Education Campaign for new waste collection system.	Council – Sustainability Staff and External Contractor	Council Staff time. \$150,000	Nov 2004 to Feb 2005	High	No of brochures distributed.	Completed
5	Order Bins and Skips.	City Services	Staff time.	September 2004			Completed
6	Rollout of New Bins	Waste Supplier – Co-ordinated by City Services	Staff time.	Nov/Dec 2004			Completed
7.	Investigate current developments in organic collections and processing in the Melbourne Metropolitan area	Sustainability Staff.	Staff time.	June 2007	Medium	Report produced with recommendation for expanded organics collection service options.	Reviewed but organic waste markets were still not mature. Green Waste Service promoted, but no further action was taken.

Table 17 - Previous Waste Minimisation Action Plan – Multi Unit Dwellings.

	Action	Who should implement	Resources Required	Timescale	Priority	Measure of Progress	Progress

1.	Reduce – Develop guidelines for developers of multi-unit dwellings in relation we design of waste and recycling in new developments.	Assets and Open Space and Urban Planning.	A&OS, and Planning Staff Time, Consultant \$12,000. Resources for promotion.	By Jan 2004	High - Urgent	Guidelines completed	Nolan ITU have completed a final draft of the guidelines. State guidelines are now available.
2.	Reduce Produce pro forma of waste management plan required to be submitted by developers.	Environment Officer	EO staff time.	By Dec 2003	High - urgent	Pro forma produced.	This was implemented.
3.	Reduce Implement equivalent development control plan into the local planning scheme.	Assets and Open Space and Urban Planning.	Additional resource required to assess waste management plans.		High - urgent	No of resident complaints in relation to waste mgt. in multi unit dwellings.	On going issue, this has not been implemented.
4.	Recycle Introduce skip based system for waste and recycling to all new developments with 10 or more units.	City Services	Approx \$40,000 per annum	On-going	High - urgent	No of new developments with skip based system.	Council have implemented this policy for all developments with 12 or more units.
5	Recycle Produce planning report estimating new dwellings/quantities of waste/capital costs for waste and recycling infrastructure.	Social Planner, Urban Planning	EO, Social Planner, Urban Planning staff time.	By Dec 2003	High - urgent	Report Produced.	This has been completed.
6	Recycle Replace current waste and recycling system with skips for all existing dwellings with 10 or more units.	City Services to co-ordinate.	\$350,000 in 2004/05 year.	By Jan 2005	High – medium urgency		Approximately 300 dwellings with over 12 units are currently being serviced by skips.

Table 18 – Previous Waste Minimisation Action Plan – Commercial and Industrial

	Action	Who should implement	Resources Required	Timescale	Priority	Measure of Progress	Progress
1.	Recycle Feasibility Study of retail recycling centres for the CDB.	External Contractor	\$35,000	Jul – Dec 04		Feasibility Study Completed	This was not considered feasible at the time.
2.	Reduce Replace existing waste bins in the FDB.	Works Centre Staff	\$35,000	Jan 05	High	Bins replaced.	Not done due to higher than expected recycling collection contract costs.

	Action	Who should implement	Resources Required	Timescale	Priority	Measure of Progress	Progress
3.	Recycle 1.Limit the number of waste bins available to commercial businesses.	Works Centre Staff	Staff time	Jan 05	Medium	Count of bins collected from commercial properties.	Bins counted but the issue of additional unpaid bin is continuing.
	2. Provide paper balers in shopping centres.	Works Centre Staff	<ul style="list-style-type: none"> ▶ Approx \$15,000 per paper baler ▶ Operators costs ▶ Offset by sale of cardboard. 	Jan 05	High	Report required identifying suitable locations and estimated costs.	Not done due to higher than expected recycling collection contract costs.
	3. Conduct a food waste trial within the CDB.	Works Centre Staff/Sustainability Staff	<ul style="list-style-type: none"> ▶ Collection Costs ▶ Gate Fees ▶ Education Campaign. 	Jul – Dec 05	High	Trial commenced.	Not done due to higher than expected recycling collection contract costs.
	4. Supply one co-mingled 240L recycling bin to commercial businesses on request.	Works Centre Staff.	Additional recycling collection cost.	Jan 05	Medium	Amount of waste diverted from landfill.	This was implemented.

Table 19 – Previous Waste Minimisation Action Plan – industrial Waste

	Action	Who should implement	Resources Required	Timescale	Priority	Measure of Progress	Progress
1.	Reduce – Implement requirement for site management plans to be completed including treatment of construction and demolition waste.	Council Staff	Education Campaign.	Ongoing	High	Number of Site Management Plans submitted. Number Approved.	Stormwater Treatment Education Program Conducted. Site Management Plans submitted to planning/building departments.

7 FUTURE DIRECTIONS

7.1 FUTURE WASTE PROJECTIONS

The population of the City of Maribyrnong, is predicted to grow by around 47% in the twenty years to 2031. Population growth is already occurring due to the residential development of former industrial and government land. Recent urban development has been of higher density with an emphasis on medium density townhouses and apartment blocks with a small but growing number of higher density developments in central Footscray.

Residents of high rise buildings will become a sizable and growing minority of the population of the City of Maribyrnong. The increased residential density is set to increase with around half of the forecast growth in dwellings expected to be in the form of high rise buildings. The number of residents living in high rise dwellings is likely to rise from less than 1% of the population to one in ten residents in the next ten years.

Table 20 - Population and Households – Current and Projected - City of Maribyrnong

	2011	2016	2021	2026	2031	
Population	75,297	87,764	96,880	104,464	111,185	
Change (5yrs)		12,467	9,116	7,584	6,721	
Average annual change (%)		3	2	2	1	
Households	30,091	35,403	39,507	43,156	46,589	
Average household size	2	2	2	2	2	

Population and household forecasts, 2011 to 2031, prepared by [.id](#) the population experts, May 2012.

Waste recycling and hard waste quantities managed by Council are likely to increase in proportion to the number of residents living in the city. This means that Council waste services will have to accommodate almost 50% more waste and recycling than is currently managed. The type of growth in residential development is projected to be mainly in new medium to high density developments. This has implications for the types of services that are provided to residents with a need to consider different types of services suited to higher densities. Narrow roads, use of laneways and alleyways and increased off street parking in higher density locations has meant that more locations need dedicated rear loader collection vehicles with two employees to collect the waste and recycling. These are more expensive to operate than the standard side lift vehicles with one employee.

In addition a growing proportion of residents will be living in high rise developments currently serviced by private contractors. Planning issues around the provision of waste facilities in MUDs has become widespread throughout metropolitan Melbourne. Maribyrnong Council addresses this through the provision of customised services for lower density MUDs and further requirements for waste management plans. However, Council has experienced ongoing planning issues around design for suitable truck access, provision of adequate storage and collection locations including the provision of areas for hard waste collections.

As part of this strategy Council will undertake a feasibility study to determine of the best way to plan for and provide services to our growing population and new housing forms including high rise residential buildings. This includes a consideration of the waste planning requirements for buildings in line with state government directives. This applies whether they are services by private or council contractors. It will also examine the feasibility of different service options for new forms of residential developments.

Table 21 - Projections for waste and recyclables in the municipality

	2012/13 (Current)	2021 (Projected)	2026 (Projected)
	Tonnes	Tonnes	Tonnes
Population projections	78,982	96,880	104,464
Residential and non residential waste to landfill	22,186	27,214	29,344
Residential and non residential– materials recycled,(recycle bin, green waste and hard waste)	10,457	12,827	13,831
Other – waste to landfill	5,524	6,891	7,490
Other - materials recycled	Included above		
Facilities – waste to landfill	Included above		
Facilities - materials recycled	Included above		
Total	117,149	143,812	155,129

Council also aims to improve recycling and contamination levels through the following objectives.

1. Avoid the generation of waste;
2. Increase the reuse and recovery of materials from the municipal waste stream to equal or exceed the average for Metropolitan Melbourne by 2024.
3. Reduce recycling contamination rates by at least 50% by 2024.
4. Communicate waste minimisation objectives to our community in an effective manner.
5. Minimise adverse impacts of waste operations on public and environmental health and safety; and
6. Ensure the provision of Council's waste services is cost effective and equitable.

The following section outlines actions through which Maribyrnong Council aims to achieve these objectives.

8 ACTION PLAN

The following Action Plan has been developed to achieve identified long term objectives, detailed in the introduction, and to address identified issues and opportunities for improvement detailed throughout the WMS:

In the Time Frame column, Short Term Actions will take place in the next two years, medium term will take place in two to five years and long term actions will take place in the next ten years. Actions with \$\$ signs indicate that further internal or external funding is required. Actions without dollar signs will be undertaken using existing resources.

The majority of Actions shown in this Action Plan are to be developed in the short to medium term time frames. The Action plan is a working document which will be reviewed and updated annually. Longer term actions will arise from a number of investigations and feasibility studies proposed in the action plan.

Table 22 -Action Plan

FUTURE DIRECTIONS		ACTIONS	RESPONSIBILITY	TIME FRAME
Recycling and Waste Services	Increase Recycling Rates and Reduce Contamination	Continue to undertake the Maribyrnong Recycling Champions program aimed at providing incentives for good recycling practices and promoting this achievements in the community.	Sustainability and Environment, Waste Management	Short to Medium Term
	Increase Recycling Rates and Reduce Contamination	Develop and implement communications plan to promote improved recycling including <ul style="list-style-type: none"> • Further research into existing recycling practices in the community. • Using a range of communications tools to promote key messages around recycling. • Develop information and promotions targeted at increasing recycling and reducing contamination in CALD communities • Targeted information around reducing key recycling contaminants such as items placed in plastic bags. 	Sustainability and Environment, Waste Management	Short to Medium Term.
		Based on the Love Food Hate Waste and Food Know How Programs, develop a program to reduce volume/ weight of waste per household through the reduction of food waste in garbage.	Sustainability and Environment, Waste Management	Short to Medium Term.

	Residential Recycling Services	<ul style="list-style-type: none"> Design and install stickers on the outside of recycling bins to improve point of use information. 	Sustainability and Environment	Short Term \$\$
		<ul style="list-style-type: none"> Develop and deliver a communications campaign focussed around plastic bag use in recycling bins. Recyclable items placed in plastic bags are the largest source of contamination in our kerbside collection. 	Sustainability and Environment	Short Term \$\$
		<ul style="list-style-type: none"> Actively promote State Based recycling education programs such as Get it Right on Bin Night . 	Sustainability and Environment	Short Term and ongoing
		<ul style="list-style-type: none"> Investigate the feasibility of undertaking "day after" hard rubbish collections using the existing 240 and 120 litre recycling bins. 	Sustainability and Environment	Short Term
	New Technology	<ul style="list-style-type: none"> Investigate the feasibility of social media and mobile platform applications to enable residents to better understand the Council Waste System and Improve Participation in recycling and waste reduction programs. 	Sustainability and Environment Communications	Short Term
		<ul style="list-style-type: none"> Report on suitable options to encourage increased participation in services and improved access of residents to Council waste services information and booking systems. 	Sustainability and Environment	Short Term
	Multi – Unit Dwellings	<ul style="list-style-type: none"> Develop waste and recycling information kits for new tenants of MUDs 	Sustainability and Environment,	Short Term \$\$
	Multi- Unit Dwellings	<ul style="list-style-type: none"> Distribute waste and recycling information kits to bodies corporate and real estate agents. 	Sustainability and Environment, Customer Service	Short Term \$\$
	Multi- Unit Dwellings	<ul style="list-style-type: none"> Develop and install point of use waste and recycling signs for MUD waste and recycling storage areas 	Sustainability and Environment, Waste Management	Short Term \$\$
Reduction Strategies	Recycling receivables contract	<p>Explore the following in the development of the next recycling receivables contract.</p> <ul style="list-style-type: none"> Include new options to handle plastic bags and recyclables in plastic bags In the receivables contract. Include plastic bag recycling in receivables contract 	Waste Management with assistance from Sustainability and Environment	Short Term

		<ul style="list-style-type: none"> Remove charge for contamination in receivables contract. 		
Recycling and Waste Services	Assist Elderly and Disabled residents with waste and recycling collections	<ul style="list-style-type: none"> Introduce a pensioner rebate for the User Pays Green Waste Service. 	Sustainability and Environment, Waste Management , Finance and Rates.	Medium Term
		<ul style="list-style-type: none"> Investigate the feasibility of waste contractors collecting waste and recycling bins from residents who have difficulty moving bins. Develop options for contractors, monitoring systems, eligibility criteria and ongoing cost estimates and report to Council. 	Waste Management Aged and Diversity Sustainability and Environment	Short Term
		<ul style="list-style-type: none"> Investigate infrastructure bin options for elderly and disabled residents, e.g. wheel assist mechanisms and smaller bin sizes 	Waste Management Aged and Diversity Sustainability and Environment	Short Term
		<ul style="list-style-type: none"> Discuss options to improve bin designs for elderly and disabled residents with bin manufacturers. 	Waste Management Aged and Diversity Sustainability and Environment	Short Term
Organics and design of waste services	Organics Collections	<ul style="list-style-type: none"> Monitor and review the two State Government Organic Waste Trials in relation to diverting food waste into garden waste collections and recovering food and garden organics from the waste stream. 	Sustainability and Environment	Short Term
	Organics Collections	<ul style="list-style-type: none"> Review the Victorian Organics Strategy and Victorian Marketing Strategy for recycled materials. 	Sustainability and Environment	Short Term
	Design of new waste services	<ul style="list-style-type: none"> Provide a report to Council on organics collections, providing options for long term design of waste and recycling services for Maribyrnong City Council including financial and environmental costs and benefits. 	Sustainability and Environment to co-ordinate	Medium Term

	User Pays Green Waste Service	<ul style="list-style-type: none"> Implement a pensioner rebate for the user pays green waste service. 	Sustainability and Environment, Waste management and Finance	Short Term
	Organics	<ul style="list-style-type: none"> Promote at home composting through workshops, education campaigns and information about compost bin and worm farm suppliers 	Sustainability and Environment	Short and Medium Term
	Commercial Organics	<ul style="list-style-type: none"> Investigate organics management options for shopping centres 	Sustainability and Environment	Short Term
Waste and Recycling Services	Multi Unit Dwellings	<ul style="list-style-type: none"> Review Maribyrnong City Council's current process for developing waste management plans including templates. 	Sustainability and Environment with Waste Management and Planning	Short Term
	Multi – Unit Dwellings	<ul style="list-style-type: none"> Develop guidelines for waste management plans incorporating best practice examples from other municipalities. 	Waste Management with assistance from Sustainability and Environment	Medium Term
	Multi- Unit Dwellings	<ul style="list-style-type: none"> Investigate the feasibility of expanding the number of sites with two or three pickups per week to reduce traffic congestion at pickup, reduce number of bins required and storage space requirements. 	Waste Management , Sustainability and Environment	Short Term
	Multi- Unit Dwellings	<ul style="list-style-type: none"> Introduce smaller skips and 360Litre bins at smaller MUDs where shared 240Litre bins are not appropriate. 	Waste Management	Short Term and Medium Term
	Multi- Unit Dwellings	<ul style="list-style-type: none"> Trial at call cardboard pick up services for MUDs 	Waste Management	Short Term
	Multi- Unit Dwellings	<ul style="list-style-type: none"> Trial regular collections of hard waste at smaller MUDs e.g. four per year instead of eleven individual pickups or at transition times such as the end of the tertiary school year. 	Waste Management with assistance from Sustainability and Environment	Short Term \$\$

	Multi Unit Dwellings	<ul style="list-style-type: none"> • Work with Victoria University to promote waste services to local students through orientation weeks. • Develop and Trial a furniture swap event for students. 	Sustainability and Environment and Waste Management	Medium Term Medium Term \$\$
Hard Waste Services	At Call Hard and Green Waste Collections	<ul style="list-style-type: none"> • Develop a Communications and Engagement Strategy to Promote the At Call Hard Waste Collection Service including <ul style="list-style-type: none"> ○ Increased regular promotion of the Hard Waste Service ○ Methods to reach CALD communities, including targeted trials of specific community groups, flyers in community languages, identification and engagement of community leaders and communities through community centres ○ Promotion of online registration service ○ Provide information about the Hard and Green waste service to new tenants through real estate agents and bodies corporate. 	Sustainability and Environment with assistance from Waste Management, Aged and Diversity and Communications.	Short Term \$\$
Hard Waste	At Call Hard Waste Collections	<ul style="list-style-type: none"> • Trial a neighbourhood approach to the delivery of at call hard waste services, prompting residents in a selected area to use their at call service on a particular date. 	Waste Management with assistance from Sustainability and Environment	Short Term
		<ul style="list-style-type: none"> • Investigate the role that charities could take in facilitating the re-use of hard waste such as furniture 	Sustainability and Environment	Short Term
		<ul style="list-style-type: none"> • Undertake a feasibility study to facilitate the re-use of hard waste through an urban workshop. 	Sustainability and Environment	Medium Term \$\$
		<ul style="list-style-type: none"> • Investigate the feasibility of Pop-Up Recycling Stations where residents can take items such as furniture, ewaste, Metals, whitegoods 	Waste Management	Short Term
		<ul style="list-style-type: none"> • Investigate Recycling Options for mattresses 	Waste Management	Short Term

		<ul style="list-style-type: none"> Investigate Recycling Options for tyres. 	Waste Management	Short Term
	Illegally Dumped Waste	<ul style="list-style-type: none"> Develop a communications plan including website pages, brochures, banners, media releases to focus on reducing illegally dumped waste. Undertake a Dob in a Dumper campaign Continue to use crime scene tape to identify and highlight dumped waste. Promote the at call hard waste service in areas where high levels of illegal waste occur Identify dumped waste hot spots Introduce signage at known hot spots to warn against dumping, explain the fine and promote the at call hard waste service. Hot Spot surveillance of known dumping areas. 	Waste Management . Local Laws to co-ordinate	Short Term \$\$
Commercial and Retail	Cardboard collection service.	<ul style="list-style-type: none"> Investigate the feasibility of expanding the cardboard collection service to other shopping centres and at call to MUDs. 	Waste Management with assistance from Sustainability and Environment	Short Term
Commercial and Retail	Shopping Centres	<ul style="list-style-type: none"> Investigate the feasibility of user pays additional bin collections in shopping centres on a second day per week, to minimise the amount of bin storage required. 	Waste Management with assistance from Sustainability and Environment	Short Term
Commercial and Retail	Footscray Central Activities District	<ul style="list-style-type: none"> Undertake a new bin rollout for businesses in the FCAD area. Introduce 120Litre bins for businesses producing smaller amounts of waste Undertake an associated communications program to explain the new system and the type of bins available e.g. one waste and one recycling MGB as part of rates, plus additional bins for an annual fee including an ordering form. As part of the communications plan promote waste reduction and recycling options for businesses. Develop communications materials in a number of relevant languages. Investigate the use of infrastructure 	Sustainability and Environment to Co-ordinate. Dependent on external funding.	Medium Term \$\$

		<p>such as cardboard compactors and organic dehydrators for restaurant and café precincts</p> <ul style="list-style-type: none"> • Trial the use of small scale waste and recycling infrastructure in restaurant and café precincts. 		
Data Collection	Data Collection	<ul style="list-style-type: none"> • Undertake kerbside audits of both waste and recycling streams every 5 years. • Undertake MUD kerbside audits of waste and recycling streams for skip based services every five years. • Bin Count – undertake an audit of commercial waste and recycling bins. • Council Internal Waste and Recycling – undertake an audit at selected Council facilities. • Illegally dumped waste – develop a data collection system for illegally dumped waste collections. 	Waste Management to co-ordinate with assistance from Sustainability and Environment Dependent on funding.	Short, Medium and Long Term \$\$
Policies and Local Laws and Transport	Waste Policy	<ul style="list-style-type: none"> • Review and Update Waste Policy every 4 years. 	Sustainability and Environment	Medium and Long Term
	Local Law	<ul style="list-style-type: none"> • Review the current local law relating to waste and recycling collections and provide recommendations that assist in implementing the waste minimisation strategy. 	Sustainability and Environment, Local Laws	Short Term
Litter Bins and Street Sweeping and Public Place Recycling	Litter bin policy	<ul style="list-style-type: none"> • Develop a litter bin placement policy that includes a criteria that covers appropriate issues such as, planning and disability issues, demand and cost. • 	Sustainability and Environment	Medium Term
	Street Litter Bins	<ul style="list-style-type: none"> • Audit street litter bins for recycling content. Assess feasibility of picking up street litter bins via recycling service. 	Waste Management	Short Term \$\$
	Public Place Recycling	<ul style="list-style-type: none"> • Identify suitable locations to expand the public place recycling bins program. • Install additional public place recycling in suitable locations. 	Waste Management	Medium Term \$\$
	Parking	<ul style="list-style-type: none"> • Investigate and if appropriate trial, waste and street sweeping parking restrictions in narrow or difficult to access streets. Provide an evaluation to Council on the impact of the parking restrictions. • 	Waste Management with Civil Design and Transport	Short Term

Event Waste and Recycling		<ul style="list-style-type: none"> • Purchase bin caps and promotional materials to create recycling stations at local events and festivals. • Promote the adoption of waste wise events to event organisers. 	Sustainability and Environment	Short Term \$\$
	Sports and Recreation Facilities	<ul style="list-style-type: none"> • Develop waste management plans for sports and recreation facilities. Introduce recycling including public place recycling in conjunction with sports and recreation clubs. • Develop and deliver a waste minimisation communications and engagement program for sporting clubs. 	Waste Management, Leisure Services, Sustainability and Environment	Short Term
E Waste	E Waste	<ul style="list-style-type: none"> • Schedule regular E Waste drop off days within the municipality. 	Waste Management	Short and Medium Term
	E Waste	<ul style="list-style-type: none"> • Promote permanent regional E waste facilities to residents. 	Sustainability and Environment	Short and Medium Term
	E Waste	<ul style="list-style-type: none"> • Explore options for E Waste collection systems e.g. at call skips 	Waste Management	Short Term
Household Hazardous Waste	Detox Your Home	<ul style="list-style-type: none"> • Continue to promote the Detox your Home program to residents. 	Sustainability and Environment	Short Term
	Detox Your Home	<ul style="list-style-type: none"> • Advocate to the State Government for an extension of mobile Detox Your Home Sites to all municipalities. 	EMT	Short Term
Internal Corporate Waste Management	Waste Audits	<ul style="list-style-type: none"> • Undertake waste and recycling audits of key council facilities. 	Waste Management	Short Term \$\$
	Corporate Recycling	<ul style="list-style-type: none"> • Develop another Waste Wise Council type program within Council facilities. 	Sustainability and Environment	Short Term
	Council Buildings	<ul style="list-style-type: none"> • Develop and implement waste management plans for all council owned buildings. 	Waste Management	Short to Medium Term \$\$
	Green Waste	<ul style="list-style-type: none"> • Investigate and report on improved options to reduce the amount of green waste from operations going to landfill 	Sustainability and Environment	Short Term

The Action Plan will be reviewed on an annual basis and the WMS every five years.

Significant Federal And State Legislation and Policies

Key legislation and policies of the different levels of government, which are detailed further in Appendix A, include, but is not limited to:

Federal government

- **National Waste Policy: Less Waste, More Resources** – the policy sets the outcomes, directions and strategies for action for the next ten years with regard to waste management in Australia.
- **National Packaging Covenant (NPC)** - voluntary initiative by government and industry to reduce the effects of packaging on the environment.

State of Victoria

- **Getting Full Value**

In April 2013, the Victorian Government released its new waste policy, *Getting Full Value*. This policy replaced the former waste strategy, *Towards Zero Waste*.

Getting Full Value recognises that managing waste and resource recovery together will maximise potential benefits for Victoria's communities, economy and environment.

Getting Full Value's vision

'Victoria has an integrated, statewide waste management and resource recovery system that provides an essential community service by protecting the environment and public health, maximising the productive value of resources, and minimising long term costs to households, industry and government.'

Getting Full Value recognises that an effective waste and resource recovery system needs investment in infrastructure to extract the maximum value from waste produced by our growing population, economy and industries. It sees market demand as a key determinant of Victoria's mix of infrastructure over the next 30 years.

Getting Full Value sets out six goals.

1. Assist Victorians to reduce the waste they generate and save Victorian's money through efficient use of resources.
2. Facilitate strong markets for recovered resources.
3. Facilitate a Victorian waste and resource recovery system that maximises the economic value of waste.
4. Reduce the environmental and public health risks of waste.
5. Reduce illegal dumping and littering.
6. Reform and strengthen the way institutions work and are governed to effectively implement waste policy.

Each goal in *Getting Full Value* has strategic directions, and each strategic direction has actions. These strategic directions and actions are developed further for the City of Melbourne in the draft Metropolitan Waste and Resource Recovery Strategic Plan.

- **Draft Metropolitan Waste and Resource Recovery Strategic Plan.**

A *Draft Metropolitan Waste and Resource Recovery Strategic Plan* was recently released. The plan informs metropolitan local governments and the waste industry about the strategic direction for future Municipal Solid Waste, Commercial & Industrial waste and Construction & Demolition Waste management in Melbourne until 2030.

The Strategic Plan's objectives are to:

provide a long term vision for the management and reduction of waste in metropolitan Melbourne

Five infrastructure priorities have been identified for Melbourne

1. Aligning infrastructure Investment with market development
2. Improved land use planning for waste and using the planning scheme to protect siting of facilities
3. Dealing with the immediacy of the South East half of Melbourne's waste recovery and disposal needs. Most of the landfills for this half of Melbourne will close in the next five years.
4. Expanding the capacity of Melbourne's transfer station / resource recovery centre Network
5. Continued council cluster procurement of organic facilities

- **Draft Statewide Waste and Resource Recovery Infrastructure Plan (SWRRIP)**

The SWRRIP aims to guide future investment in waste management and resource recovery infrastructure that effectively manages the expected mix and volumes of waste, supports a viable resource recovery industry and reduces the amount of valuable materials going to landfill.

Sustainability Victoria has released the first draft Infrastructure Plan and MWMG has collaborated to incorporate key elements of the draft into the 2013 draft Strategic Plan, namely:

- using Sustainability Victoria's statewide waste data sets and modelling to analyse Melbourne's long term trends for waste management and resource recovery
- using the goals, key opportunities and actions (chapters two and three) to guide development of the infrastructure and landfill schedule for Melbourne.

The draft infrastructure plan is currently out for consultation and a final plan will be released next year.

- **Metropolitan Planning Strategy**

In late 2013, the government released a 30-year Metropolitan Planning Strategy for Melbourne. Principle five of the Strategy consultation paper was environmental resilience, which noted that Melbourne will need to use resources more efficiently and produce less waste

- **Victorian Litter Strategy – Creating Cleaner, Safer Places** – strategy to prevent litter and improve litter management practices to meet the TZW littering behaviour target and achieve clean and safe public places.
- **Victorian Advanced Resource Recovery Initiative (VARRI)** - to facilitate the development of ARRT facilities in metropolitan Melbourne (in progress).
- **Solid Industrial Waste Management Plan** - developed to establish goals and targets for solid waste management (e.g. C&I and C&D waste) in Victoria.
- **Other waste issues or initiatives** include, but not limited to:
 - Eco-Buy or similar programs that encourages the purchasing of environmentally preferable products and services;
 - current and future disposal costs and landfill levies;
 - other EPA policy initiatives;
 - product stewardship programs;
 - contaminated soils and hazardous waste initiatives; and
 - occupational health and safety, WorkCover and Worksafe guidelines and standards.

Planning Provision for increased recycling in multi-unit dwellings

There are a number of recent state government policies and strategies that indicate that planning and provision for increased recycling in multi-unit dwellings is becoming a priority. Local Governments are expected to design their own waste strategies so that they align with these state government strategies.

A number of relevant actions and strategic directions related to waste and recycling in multi-unit dwelling, from these plans is detailed below.

- **Getting Full Value: The Victorian Waste and Resource Recovery Policy adopted in early 2013**

The following Strategic Direction is included in the State Waste Policy.

6.2 Align waste and resource recovery planning and delivery with land use and transport requirements under the Planning and Environment Act 1987 and Transport Integration Act 2010.

The action linked to the Strategic Direction is

Action 6.2.5 Develop planning guidance and support for planning authorities, with a focus on:

Maximising kerbside collection activities for new development, including mixed-use and multi-unit development, while reducing amenity impacts.

- **Draft Metropolitan Waste and Resource Recovery Strategic Plan.**

Actions in the strategic plan relating to multi –unit dwellings are

Effective land use planning policies and controls

- *investigate the amendment of planning provisions to improve building design and enable equitable access to waste and resource recovery services and maximise opportunities for recovery from residential developments and subdivisions 2013-14*
- *to better define the needs around waste infrastructure for multi-unit developments and subdivisions by ensuring planning permits require adequate waste and resource recovery infrastructure. (For example, by changing planning provisions Clause 55 Two or more dwellings on a lot and residential buildings and Clause 56 residential subdivision and expanding Clause 55.02 Neighbourhood character and infrastructure).*

- **Melbourne Planning Scheme.**

The Melbourne Planning Scheme was released around the same time as the State draft waste strategic plan and infrastructure plan. It directly references the planning issues highlighted in the Draft Metropolitan Waste and Resource Recovery Strategic Plan. The state government has indicated that it is seeking to integrate waste and recycling through land use planning instruments.

Some of the relevant actions from the scheme are:

Direction: 5.8 Plan for better waste management and resource recovery

Initiative: 5.8.2 Develop new waste systems to meet the logistical challenges of medium-and higher-density developments

- *Ensure the new Good Planning Guide better defines the need for, and provision of, waste infrastructure for all multi-unit residential developments. (Department of Transport, Planning and Local Infrastructure (Planning) and Department of Environment and Primary Industries)*
- *Review and streamline regulations and planning provisions for waste and recycling storage and collection in apartment buildings. (Department of Transport, Planning and Local Infrastructure (Planning) and Department of Environment and Primary Industries)*
- *Investigate and encourage precinct-wide innovations in waste management and recycling. (Department of Environment and Primary Industries)*

Metropolitan Waste Management Group

The Metropolitan Waste Management Group (MWMG) is a Victorian state agency, established under the Victorian Environment Protection (Amendment) Act 2006.

MWMG

In general terms, MWMG is responsible for coordinating municipal waste management activities in Melbourne on behalf of the 30 metropolitan councils it represents. Fulfilling this function involves:

- advising metropolitan councils on best practices in municipal waste management and resource efficiency;
- entering into and managing contracts and arrangements to develop and facilitate waste management services for metropolitan councils; and
- assessing the need for, and planning for, municipal waste management infrastructure and landfills in metropolitan Melbourne.

Metropolitan Waste Resource and Recovery Strategic Plan

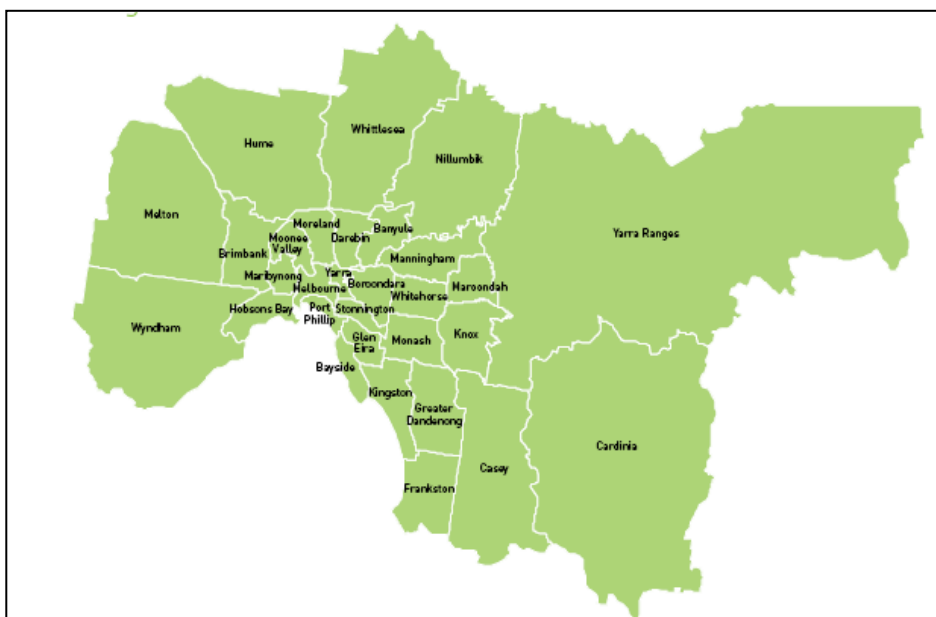
The Strategic Plan has been developed in three separate parts: the Metropolitan Plan, the Municipal Solid Waste Infrastructure Schedule and the Metropolitan Landfill Schedule. MSW consists primarily of material discarded by households for collection from the kerbside. By weight between 40 and 50 per cent of the contents of the average household bin for residual waste (or “garbage”) consists of food and garden organics. Accordingly, the Strategic Plan has a focus on MSW, and the organics component in particular.

A Draft Metropolitan Waste and Resource Recovery Strategic Plan was recently released in 2013. The plan informs metropolitan local governments and the waste industry about the strategic direction for future Municipal Solid Waste, Commercial & Industrial waste and Construction & Demolition Waste management in Melbourne until 2030.

The Strategic Plan’s objectives are to:
provide a long term vision for the management and reduction of waste in metropolitan Melbourne

Five infrastructure priorities have been identified for Melbourne

1. Aligning infrastructure Investment with market development
2. Improved land use planning for waste and using the planning scheme to protect siting of facilities
3. Dealing with the immediacy of the South East half of Melbourne’s waste recovery and disposal needs. Most of the landfills for this half of Melbourne will close in the next five years.
4. Expanding the capacity of Melbourne’s transfer station / resource recovery centre network
5. Continued council cluster procurement of organic facilities



Geographical Boundaries of Metropolitan Local Governments (Source: Victorian Government, 2009, 'Metropolitan Waste and Resource Recovery Strategic Plan')

Maribyrnong City Council Plans, policies and strategies

Council Plan 2013 – 2017

Six strategic objectives are outlined in the Council Plan. These relate to Urban Growth, Liveability, Economic Prosperity, Transport, Environmental Sustainability and Organisational Accountability. The objective for Environmental Sustainability is detailed below.

Environmental Sustainability

In partnership with our community and stakeholders we will educate and promote environmental sustainability.

The strategies outlined under this objective are:

1. Collaborate with the community and key stakeholders to support local sustainability initiatives.
2. Educate the community on environmental issues and best practice in waste management.
3. Ensure all new Council buildings meet high environmental design standards.
4. Protect our natural environment through sustainable practices to create a Greener city.
5. Manage issues relating to landfill and contamination.

Waste Policy

Council has a Waste Policy that provides guidance as to how waste and recycling services and resources are to be allocated and the requirements around the provision of waste and recycling services to different classifications of property.

The Objectives Of This Policy Are To Ensure:

- That the allocation of waste and recycling services are provided in a consistent and reliable manner.
- Access to waste and recycling services is provided equitably to all residents.
- New residential and commercial developments are provided with appropriate and safe waste and recycling services.
- Transparency and accountability in Council decision making

The structure of the policy identifies the waste and recycling services available and the requirements relating to these for each building type.

It outlines services available to:

- Residential - Houses
- Residential - Multi Unit Dwellings
- Commercial and Industrial Waste – Small Business
- Construction and Demolition Waste
- Non Rateable Properties

The Waste Policy has been updated in 2014.

Local laws

Section 56 of Maribyrnong Councils local law relates to refuse. It outlines the use of approved bins, avoidance of contamination of bin contents, maximum bin weight, bins lids must be able to be closed, cleanliness of the bin and surrounds, placement of bins, replacement of damaged bins, requirement to remove bins from the nature strip within 24 hours and the need to follow Council direction for the collection of hard and green waste collections.

Planning Strategies

The Waste Policy contains the following requirements in relation to planning permits and waste management plans.

Design for Waste Minimisation in Multi-Unit Dwellings

1. Applicants for a planning permit for multi unit dwellings in the City of Maribyrnong are required to prepare a waste management plan that addresses
 - ▶ The volume of waste to be generated specifying:
 1. Garbage
 2. Recycling
 3. Green Waste
 4. Hard Waste
 - ▶ How the waste (and reusable and recyclable materials) are to be stored and treated on site
 - ▶ How the residue is to be disposed of
 - ▶ How ongoing management of the waste and recycling will operate at the site.
2. The waste management plan should include a site plan showing
 - ▶ Waste storage, recycling and composting areas
 - ▶ Location of collection points
 - ▶ Collection access pathways and safe turning areas
3. Waste management plans for multi-unit dwellings of over 10 units should be completed by a qualified civil or environmental engineer with experience in waste management.
4. Where private contractors are proposed to be engaged to collect waste and recycling from multi-unit dwellings, a risk management plan is required to be completed by an Occupational Health and Safety specialist and included with the waste management plan. Waste and recycling

collection services provided by private contractors must comply with Occupational Health and Safety guidelines for waste and recycling collectors.

Private Contractors – Requirement for a Risk Assessment.

Developers or bodies corporate that engage a private contractor to collect household waste and recycling, must ensure that the waste collection system complies with Victorian Workcover Authority's **Occupational Health and Safety Guidelines for the Collection of Domestic and Commercial Non-Hazardous Waste and Recyclable Materials (2003)**. Council requires a risk assessment to be completed by a qualified occupational health and safety specialist where residential waste and recycling is to be collected by private contractors.

Private Contractors – Inform Prospective Residents.

Council recommends that developers who engage contractors to collect waste prior to building occupancy should inform prospective buyers:

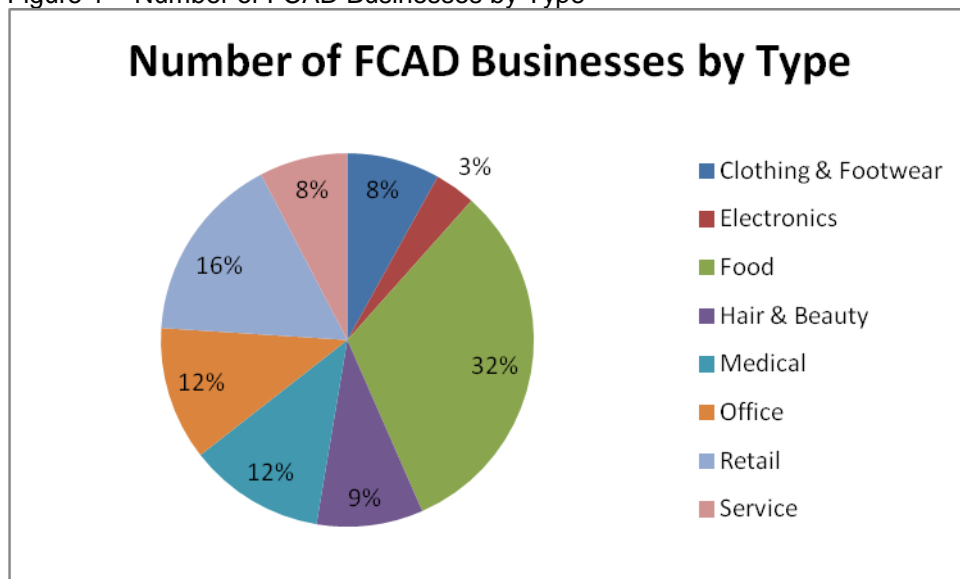
- ▶ That an external contractor has been engaged
- ▶ About details of additional costs that are involved
- ▶ That council will not provide a refund where private contractors are engaged to collect waste and recycling

Additional costs relating to waste and recycling contractors should be provided in the S32 Vendors statement on sale of the property.

APPENDIX 2 - FOOTSCRAY BUSINESS DISTRICT – RETAILER WASTE SURVEY

A team of four staff including three Vietnamese speakers visited every business in the Footscray Business district and conducted a waste survey. Business owners were asked about the number of waste and recycling bins they used, the composition of waste and recycling that they typically placed in their bins, whether they used Council waste services, contractor waste services or a combination of both. In addition they were surveyed about other types of waste and recycling services that they use. Results from 509 retail and commercial outlets are shown. Some of the larger facilities which manage waste and recycling centrally and use private contractors were treated as one business although they may have a number of retail outlets operating from them. A further 67 businesses were closed or were being renovated or demolished at the time of the survey, so are not included.

Figure 1 – Number of FCAD Businesses by Type



Food based businesses make up the majority of businesses in the FCAD with significant numbers of Medical, Office and Retail businesses.

Table 1 - Number of Garbage Bins.

Number of bins	Clothing & Footwear	Electronics	Food	Hair & Beauty	Medical	Office	Retail	Service	Total
No Bins	12	7	23	19	14	14	30	18	137
1 bin	21	10	67	26	34	36	36	13	243
2 bins	3	1	23	1	6	2	5	5	46
3 + bins	0	0	13	0	3	1	3	0	20
Contractor Bins	5	0	52	1	4	8	10	5	85
Total	41	18	178	47	61	61	84	41	531
Both Council and Contractor	0	0	16	0	1	2	1	2	22
Total Businesses	41	18	162	47	60	59	83	39	509

Food based businesses such as restaurants and cafes used the largest numbers of bins supplied by both Council and private contractors. From the survey it appears that there are a significant number of businesses, mainly food based business and medical businesses, that are using additional council garbage bins. Not all of these businesses pay for additional bins. This needs to be addressed as part of the strategy.

There are also a significant number of businesses that do not have any bins at all, most say they produce very small amounts of waste, share bins of other businesses, use street litter bins or take waste home. Some of these are businesses with no bins have another party that is responsible for waste, e.g. head office or a property manager collects waste regularly from the premises and they do not necessarily store them in bins but may use bags.

Table 2 - Number of Recycling Bins

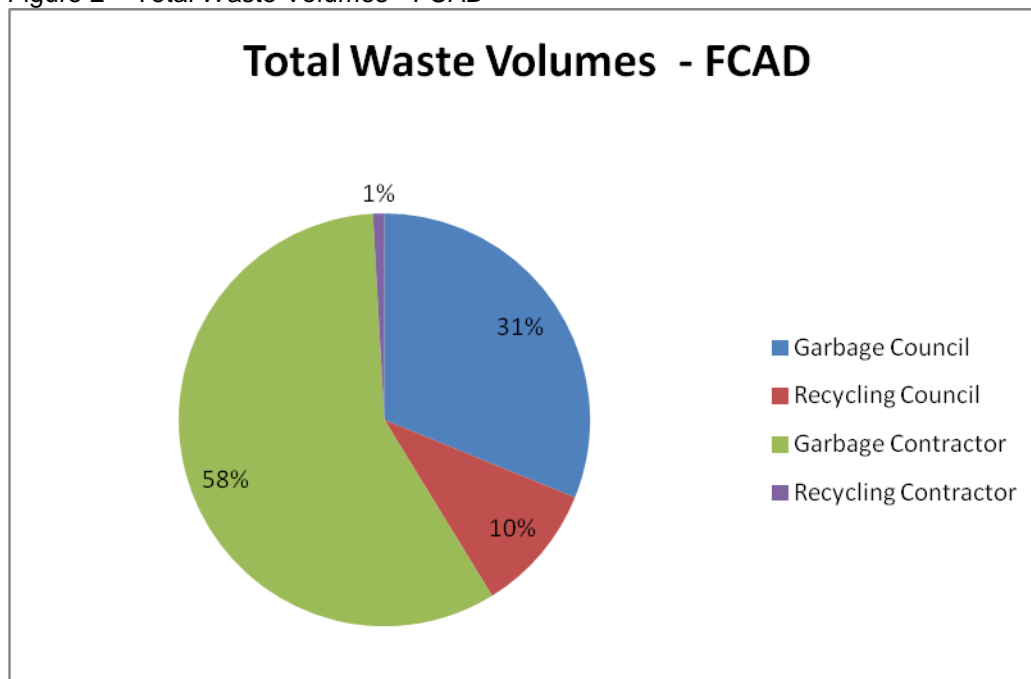
Number of bins	Clothing & Footwear	Electronics	Food	Hair & Beauty	Medical	Office	Retail	Service	Total
No Bins	31	11	93	35	27	29	57	25	308
1 bin	9	7	51	10	27	23	17	14	158
2 bins	0	0	10	1	6	3	5	0	25
3 + bins	0	0	1	0	0	0	0	0	1
Contractor Bins	1	0	7	1	0	4	4	0	17
Total	41	18	162	47	60	59	83	39	509

* 3 retail businesses also have both council and contractor bins.e.g.secure document recovery

Significantly fewer businesses have a recycling service and the majority of recycling is undertaken by Council collections. Only 17 have contractor recycling bins and three businesses used both contractor and council bins.

Again the largest number of recycling bins are used in food based businesses within the municipality.

Figure 2 – Total Waste Volumes - FCAD



Based on the volume capacity of bins surveyed which, garbage collected by recycling contractors makes up the majority of waste collection in the CBD. This is despite collecting from less than a third of the businesses in the Footscray Activities District (85) compared to over 300 council collections. This reflects that the smaller Council collection services are not appropriate for commercial volumes of waste. Private contracted services are generally used where the capacity of available Council bins is not sufficient.

Council collections make up 31% of the total waste stream with only 11% by volume recycled. This does not take into account cardboard collections.

Table 3 - FCAD Number of Boxes per week

Business Category	Total Boxes pw	Average pw per business
Clothing & Footwear	565	14
Electronics	380	21
Food	3665	23
Hair & Beauty	200	4
Medical	670	11
Office	222	4
Retail	1285	15
Service	150	4
Total	7137	14

The table above shows the survey estimate of number of boxes put out for the Council cardboard recycling collection. Most of the cardboard was collected by the Council service, with a further 7 businesses using a private contractor to collect cardboard.

Again food based businesses produced the most cardboard waste with electronics and retail stores producing above average amounts of cardboard waste.

Figure 3 – Percentage of cardboard boxes by Business Category

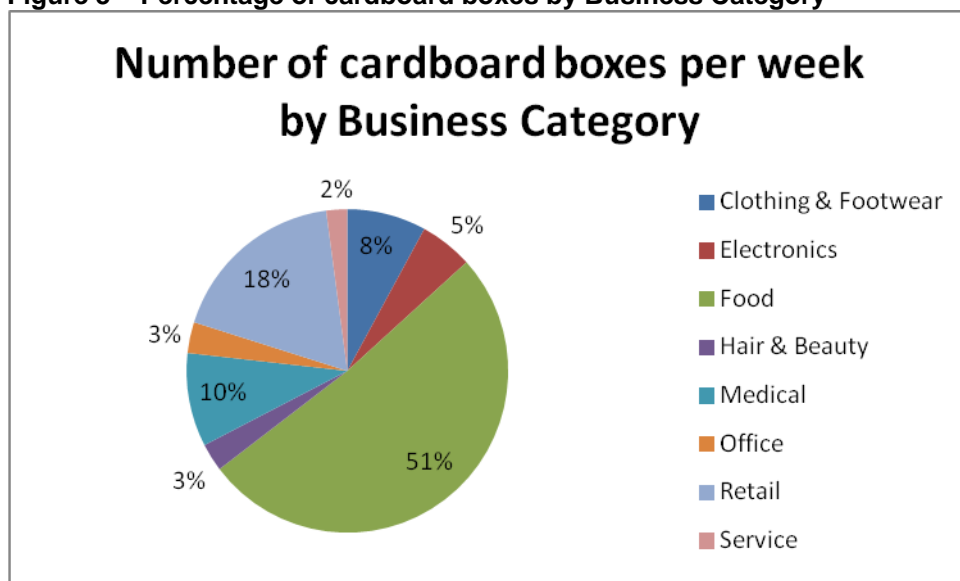


Table 4 - Total Council Collected Waste Volumes in Litres - FCAD

	Food	Glass	Hard Plastic	Alum	Steel	Cardboard/ Paper	Soft Plastics	Other	Total
Clothing & Footwear	108	-	156	108	-	384	1,920	3,120	5,796
Electronics	36	-	-	-	-	552	660	1,524	2,772
Food	32,518	1,140	912	1,620	96	3,074	5,083	16,226	60,670
Hair & Beauty	72	72	24	48	-	348	288	4,728	5,580
Medical	912	72	456	72	-	2,496	1,476	7,308	12,792
Office	756	96	168	77	-	1,224	1,116	5,622	9,059
Retail	2,372	48	276	48	24	1,484	1,596	6,480	12,328
Service	288	48	48	-	-	384	552	3,936	5,256
	37,062	1,476	2,040	1,973	120	9,946	12,691	48,944	114,252

Figure 4 – Total Waste Volumes by Commercial Category

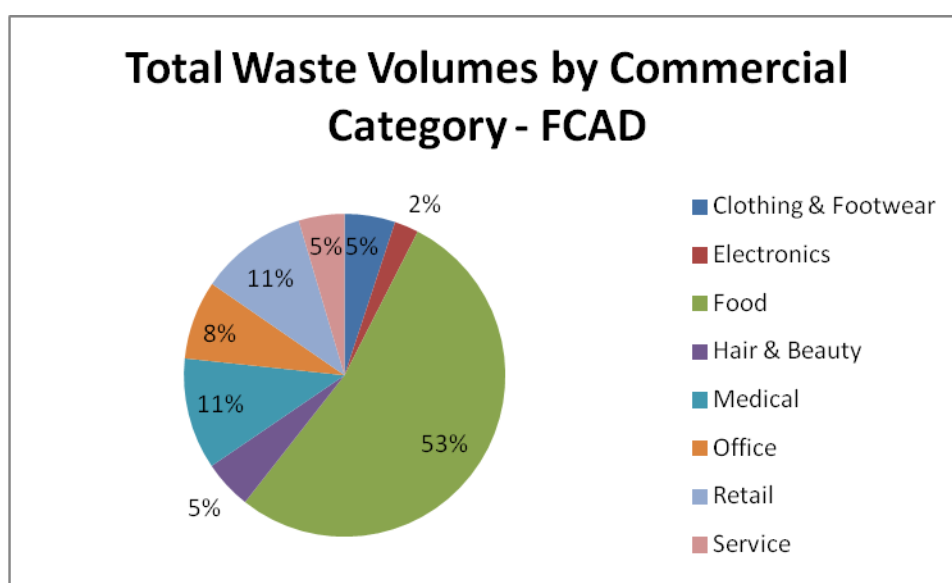
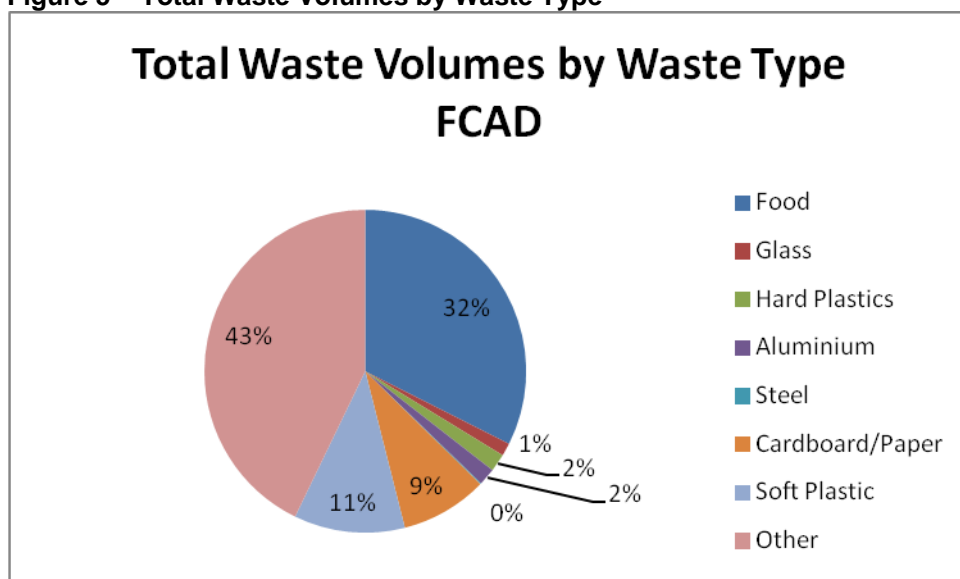


Figure 5 – Total Waste Volumes by Waste Type

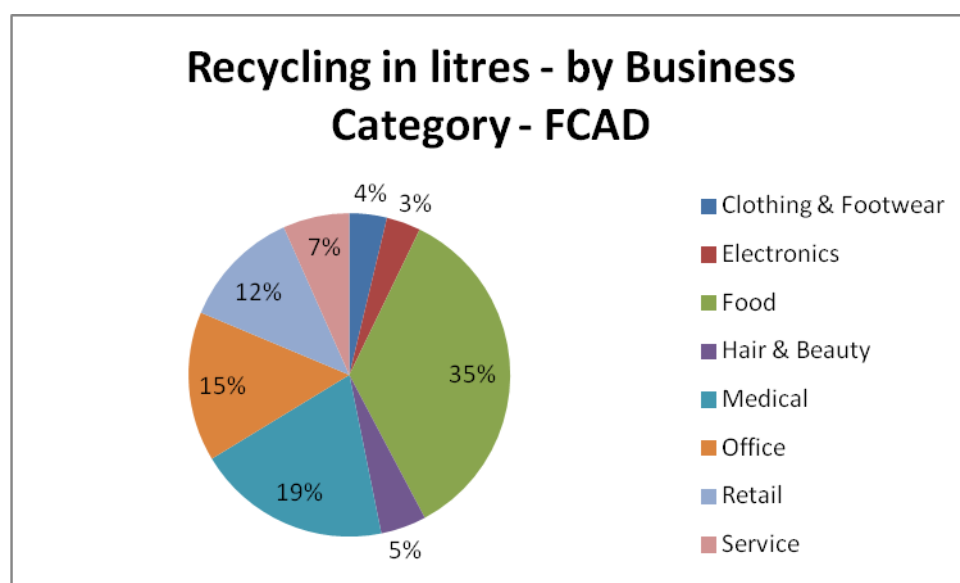


As part of the FDB survey, business owners were asked to estimate the percentage of each type of waste they produced. Based on the volumes of waste bins and the frequency of collection, estimations for the Council collection were produced. Food waste businesses produce more waste than any other business category. The largest proportion of waste placed in waste bins are estimated to be food waste and paper and cardboard and soft plastics. "Other waste", is the highest category, however does not provide much clarity as business owners were unsure about the composition of their wastes, or did not have the time to consider the question at any great length and did not differentiate what their waste was but considered it to be a general waste category. The general waste category is also likely to contain recyclable items. An actual waste audit of waste samples of the footscray activities district would be likely to provide more exact estimations of the waste categorised as other or general waste.

Table 5 - Recycling Volume Estimates in Litres.

	Glass	Hard Plastic	Alum	16Steel	Card & Paper	Other	Total
Clothing & Footwear	72	168	120	-	912	120	1,392
Electronics	24	-	-	-	1,080	168	1,272
Food	2,112	2,592	2,364	636	4,644	660	13,008
Hair & Beauty	96	60	48	42	1,212	240	1,698
Medical	180	648	216	-	4,992	1,188	7,224
Office	384	84	168	12	4,152	768	5,568
Retail	648	120	72	156	3,264	199	4,459
Service	216	41	127	-	1,920	168	2,472
	3,732	3,713	3,115	846	22,176	3,511	37,093

Figure 6 – Recycling Volumes by Business Category



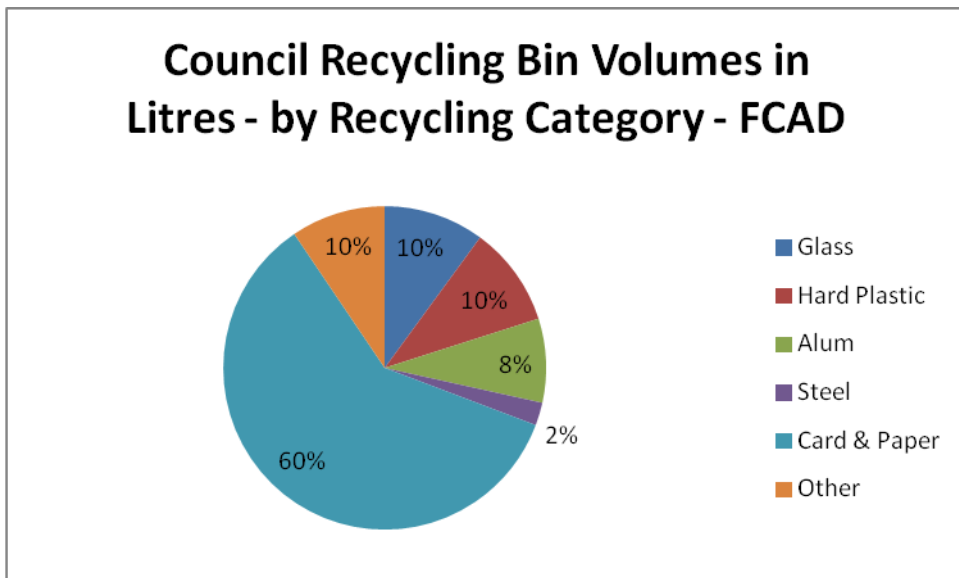


Figure 7 – Recycling Bin Volumes by Recycling Category

Based on bin sizes and percentages of recycling types specified by business owners, an estimate of the volume of recycling was calculated. This information shows that the largest quantities of recycling by volume are paper and cardboard at 60% with smaller quantities of glass, hard plastic and aluminium containers. The largest producers of recycling were food based businesses, followed by medical, office and retail businesses.

APPENDIX 3 - WASTE DISPOSAL AND RESOURCE RECOVERY FACILITIES

Waste management facilities currently operating in or near the municipality

Table 1 *Waste Disposal and Resource recovery facilities near the municipality of Maribyrnong City Council*

Disposal facility	Wastes Accepted	Cost in 2013/14 (GST Inclusive)	Unit
Moonee Valley Transfer Station - 188 Holmes Road, Moonee Ponds	Recyclables (metals, white goods, computers, electrical, cardboard/paper, plastic containers, lead/acid batteries, up to 20Litres of motor or cooking oil)	\$0.00	Free per item
	Mattresses	\$31.00	Per item
	Tyres - Car	\$13.50	Per item
	Hard Waste	\$27.00	Boot load
	Hard Waste	\$120.00	Single Trailer
	Green Waste	\$14.00	Up to 0.25m3
	Green Waste	\$62.00	Up to 1.1 m3
	Green Waste	\$112.00	Up to 3 m3
Citywide Transfer Station 387-437 Dynon Rd Kensington	Recyclables, Glass, plastic containers, metals, garden organics, car batteries, paper and cardboard, whitegoods..	\$0.00	Per item
	Car boot	\$35	
	Station wagon	\$50	
	Utility or single axle trailer	\$85	sides to 600mm and weight to 500kg
	Single axle trailer	\$155	, sides more than 600mm
	Panel/kombie van	\$85	
	Tandem trailer –	\$155	filled to water level
	Mattresses (each)	\$45	Each
	Gate fee (per tonne)	\$155	Per tonne
	Metal (non-residential) steel for recycling	\$15	Per load