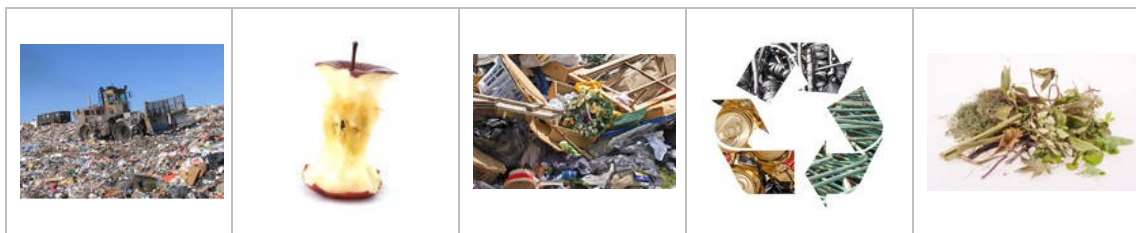




MANNINGHAM CITY COUNCIL

INTERIM WASTE MANAGEMENT STRATEGY

2012 - 2017



JUNE 2012

EXECUTIVE SUMMARY

The Manningham City Council Interim Waste Management Strategy (IWMS) has been developed as a part of the commitment Manningham has made to develop sustainable solutions for the collection, disposal and resource recovery from waste generated within our community.

At the time of drafting this strategy, many issues directly pertaining to the waste sector, and their subsequent impacts upon Council, remained uncertain. These issues will have a substantial impact on the way Manningham City Council deal with waste management. They include:

- Substantial changes to the State Government Waste Policy
- Uncertainty about the future of the organics processing industry
- Landfill levy and Advanced Resource Recovery Technologies (ARRT)
- The impact of the National Carbon Price Mechanism and Carbon Trading Scheme
- Landfill operations and EPA compliance
- The National Product Stewardship Scheme
- Container Deposit Legislation
- Doncaster Quarry feasibility options

With this in mind, the IWMS identifies strategies and measurable actions that can be undertaken by Manningham over the next five years (2012–2017), and its key aims are to guide the development and improvement of current waste management practices. Sustainable approaches to waste management need to be integrated into all future policies, strategies and planning decisions made by Council.

The IWMS takes into consideration the current strategic, financial and operational issues influencing the waste industry, as well as providing sustainable solutions for the collection, disposal and resource recovery from waste generated within the community.

The IWMS was developed to support Council's waste reduction goals and strategic direction for achieving sustainable waste management outcomes.

Key components of the IWMS include:

- A review of Government policies and strategies that influence the management of municipal waste and waste reduction targets.
- The provision of affordable, effective and sustainable Council waste services and programs over the next 5 years.
- The development of a local response to Government and industry programs for improved resource recovery and waste processing facilities.
- The integration and continuous improvement of Council's waste services and community waste education programs.

Council is already implementing resource recovery and recycling programs, including some leading local government waste minimisation initiatives.

The IWMS builds on those successful programs, and considers opportunities for further improvement. The IWMS draws on existing Council strategies and action plans, with supplementary actions to reduce waste as a part of reducing Council's and the community's ecological footprint.

The IWMS provides a direction and framework, with practical actions that Council and the community can implement to minimise waste production and maximise resource recovery and recycling within the municipality. Over the next 5 years, there will be waste reduction programs and new advanced resource recovery treatment (ARRT) and in-vessel composting facilities developed that will support Council to achieve higher levels of resource recovery and diversion from landfill. However, initiatives such as the National Television and Computer Product Stewardship scheme could take 5 years to fully

implement and new facilities are not likely to be built in the eastern region of Melbourne's metropolitan area before 2017, at the earliest.

The IWMS is therefore based on the use of proven services and existing best-practice technologies, and allows for a gradual transition over the next 5 years to using ARRT and in-vessel composting once they are proven to be effective, affordable and sustainable in reducing waste to landfill.

While many actions within the IWMS can be implemented by Council alone, other actions will require Council to work with the community, industry, other councils and other government stakeholders to advance the waste and recovery services within the municipality.

The IWMS sets a revised target for 60% of Manningham's municipal waste to be diverted from landfill by 2017. Council is currently diverting 56.5% of its waste from landfill, which has increased gradually over the past 5 years. To achieve a diversion rate of 65%, it will require the use of yet-to-be constructed ARRT facilities and/or in-vessel composting facilities to recover the large proportion of food and garden waste from household garbage bins that currently goes to landfill. It is likely that the state-wide *Towards Zero Waste* target for recovery and diversion of municipal waste (65% by 2014) will be revised downwards in the near future following the completion of the State Government's Waste Policy Review and ultimately the lack of new facilities in Victoria.

Setting a revised target for Manningham still provides a challenge for Council and the community to continue diverting waste from landfill. The diversion target can be reviewed if Council, through the region, begins using ARRT or in-vessel composting facilities to extract food waste and more garden waste from garbage bins.

The waste and recycling industry is facing other major challenges, including:

- Managing landfills to new best practice standards and dealing with rising compliance costs and operational constraints.
- The viability and availability of EPA-compliant compost facilities that can cope with the volumes of garden waste being collected by Councils.
- Developing new ARRT facilities that are viable, affordable and suitably located.
- Rising costs of waste services as a result of the increased landfill levy and higher performance standards.
- Increasing standards for closed landfills and rising compliance costs.

Actions recommended in the IWMS have taken these challenges into consideration.

Waste management goes beyond municipal boundaries, requiring a planned response greater than the resources or responsibilities of Council. The IWMS recognises the need for Council to work cooperatively with the community, Federal and State authorities, neighbouring councils and other key service providers to successfully reduce the amount of waste sent to landfill. The IWMS continues Council's proactive approach to waste management, tempered by the need to use proven, effective and affordable waste management practices.

To ensure that Council's responses and approaches remain valid and relevant to local priorities, the IWMS will be reviewed and updated periodically. Reviews will consider new opportunities that may arise as a result of the changing policy environment or technology improvements.

Key recommendations and actions in the IWMS will be reviewed as part of Council's annual budget process to ensure that the waste and recycle services, proposed programs and projects remain affordable and within Council's long term financial plan.

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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)
E-waste	Electronic Waste (i.e. computers, tvs)
EPA	Environment Protection Authority Victoria
MGB	Mobile Garbage Bin (i.e. wheelie bin)
MSW	Municipal Solid Waste
MUD	Multi Unit Development
MWVG	Metropolitan Waste Management Group
PPR	Public Place Recycling
TZW	Towards Zero Waste
VARRI	Victorian Advanced Resource Recovery Initiative
IWMS	Interim Waste Management Strategy

1 INTRODUCTION

1.1 PURPOSE

The Interim Waste Management Strategy (IWMS) has been developed as part of the commitment Manningham has made to provide sustainable solutions for the collection, disposal and resource recovery from waste generated within our community.

At the time of drafting this strategy, many issues directly pertaining to the waste sector and their subsequent impacts upon Council, remained uncertain. These issues will have a substantial impact on the way Manningham City Council deal with waste management. Such issues include:

- Substantial changes to the State Government Waste Policy
- Uncertainty about the future of the organics processing industry
- Landfill levy and Advanced Resource Recovery Technologies,
- The impact of the National Carbon Price Mechanism and Carbon Trading Scheme
- Landfills and EPA Compliance
- The National Product Stewardship Scheme
- Container Deposit Legislation
- Doncaster Quarry Feasibility Options

With this in mind, the IWMS describes strategies and measurable actions to be undertaken by Manningham over the next five years (2012–2017) and its key aims are to guide the development and improvement of current waste management practices. Sustainable approaches to waste management need to be integrated into all future policies, strategies and planning decisions made by Council.

The future directions of waste management within this municipality need to be consistent and work towards those identified by all levels of government. As such, the key drivers for this strategy are:

- Government policies relating to the Towards Zero Waste Strategy and targets.
- The need to deal with the projected population increases and economic growth of Melbourne, in terms of sustainability outcomes for waste and materials recovery.
- The need to manage and reduce greenhouse gas emissions and energy and water consumption in response to climate change risk.
- Government policies and strategies seeking to increase energy generation from renewable sources.

The management of waste including kerbside collection and disposal, hard waste, street sweeping and litter, and other waste clearance activities is a major component of Council's annual budget, therefore it needs to be appropriately managed and the risks mitigated to the fullest extent possible. Similarly, the management of waste can be the biggest single greenhouse gas generator by Council, including pollution from waste collection and transport and methane emissions from waste decomposing in landfill.

1.2 OVERVIEW OF MUNICIPALITY

1.2.1 *Local residential properties (households) and population characteristics*

Manningham is located 12km from Melbourne and extends 20kms to the east at the gateway to the Yarra Valley, bringing a unique combination of both cosmopolitan city and country lifestyles together over a total land area of 114 square kilometres.

Manningham includes the suburbs of Bulleen, Doncaster, Doncaster East, Donvale, Nunawading (part), Park Orchards, Ringwood North (part), Templestowe, Templestowe Lower, Warrandyte, Warrandyte South and Wonga Park.

Manningham has an estimated population of 118,000 and is made up of a diverse community, with 34% of its residents born overseas from places including: China, Italy and Greece, which brings a wealth of languages, music, food and cultural traditions to the area.

Analysis of the country of birth of the population in the City of Manningham in 2006 compared to the Melbourne Statistical Division, shows that there was a larger proportion of people born overseas as well as a larger proportion of people from a non-English speaking background.

Overall, 34.3% of the population was born overseas, and 28.3% were from a non-English speaking background, compared with 29.0% and 22.0% respectively for the Melbourne Statistical Division.



The dominant non-English speaking country of birth in the City of Manningham was China, where 4.2% of the population, or 4,544 people, were born.

The major differences between the countries of birth of the population in City of Manningham and the Melbourne Statistical Division were:

- A larger percentage of people born in China (4.2% compared to 1.5%)
- A larger percentage of people born in Hong Kong (2.6% compared to 0.5%)
- A larger percentage of people born in Greece (3.1% compared to 1.5%)
- A larger percentage of people born in Malaysia (2.4% compared to 0.8%)

Table 1 provides a snap shot of Manningham’s population and households – current and projected.

Table 1 Population and Households

	2006 (last census)*		2016 (Projected)		2021 (Projected)	
	Residents	Households	Residents	Households	Residents	Households
Number	115,073	41,528	121,999	46,185	126,207	48,531
Growth Rate			6% increase from 2006	11% increase from 2006	10% increase from 2006	17% increase from 2006

*2011 census data not available at the time of development of the strategy

1.3 WASTE MANAGEMENT OVERVIEW

The IWMS 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) and garden waste.

1.3.1 Local Waste Management

Waste management in Manningham covers the strategic planning and management of a wide range of activities, including:

- Collection of waste and recyclables at the kerbside in mobile garbage bins (MGB – wheelie bins), including:
 - Commingled recyclables
 - Garden waste (including burn off)
 - Garbage (residual waste)
 - Waste and recyclables from a diverse range of residential, mixed use properties (such as schools, care facilities, council operated facilities and small commercial properties)
 - Hard waste
- Street litter collection (including street litter bins)
- Dog litter collection
- Street sweeping
- Public Place Recycling (PPR) and collection of waste and recyclables generated at local festivals and events
- Collection of illegally dumped waste, usually hard rubbish
- Strategic planning of the development, implementation and operation of a waste transfer station, resource recovery centre and/or drop-off facility at the former Doncaster Quarry site
- Garden waste from residential properties disposed of at Council's Garden Waste Recycle Centre;
- Home composting and mulching
- Collection of E-waste, usually as part of a hard waste collection
- Management of drop-off of household hazardous / toxic waste (e.g. household chemicals, motor oils, paint, car batteries, gas bottles)

The cost of providing these services for the 2011/2012 year is expected to be in excess of \$11.5 million dollars. This cost is expected to grow in time to meet the challenges of an increasingly carbon constrained world.

2 STRATEGIC FRAMEWORK

2.1 STRATEGIC CONTEXT

The IWMS 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*, recently launched in late 2009
- Victorian State Government’s *Our Environment Our Future: Victoria’s Sustainability Framework* released in 2005
- Victorian State Government’s *Towards Zero Waste Strategy* (TZW) released in 2005

Figure 2 illustrates how the legislation, policies and strategic plans by various agencies of government are considered and integrated with the IWMS of Manningham.

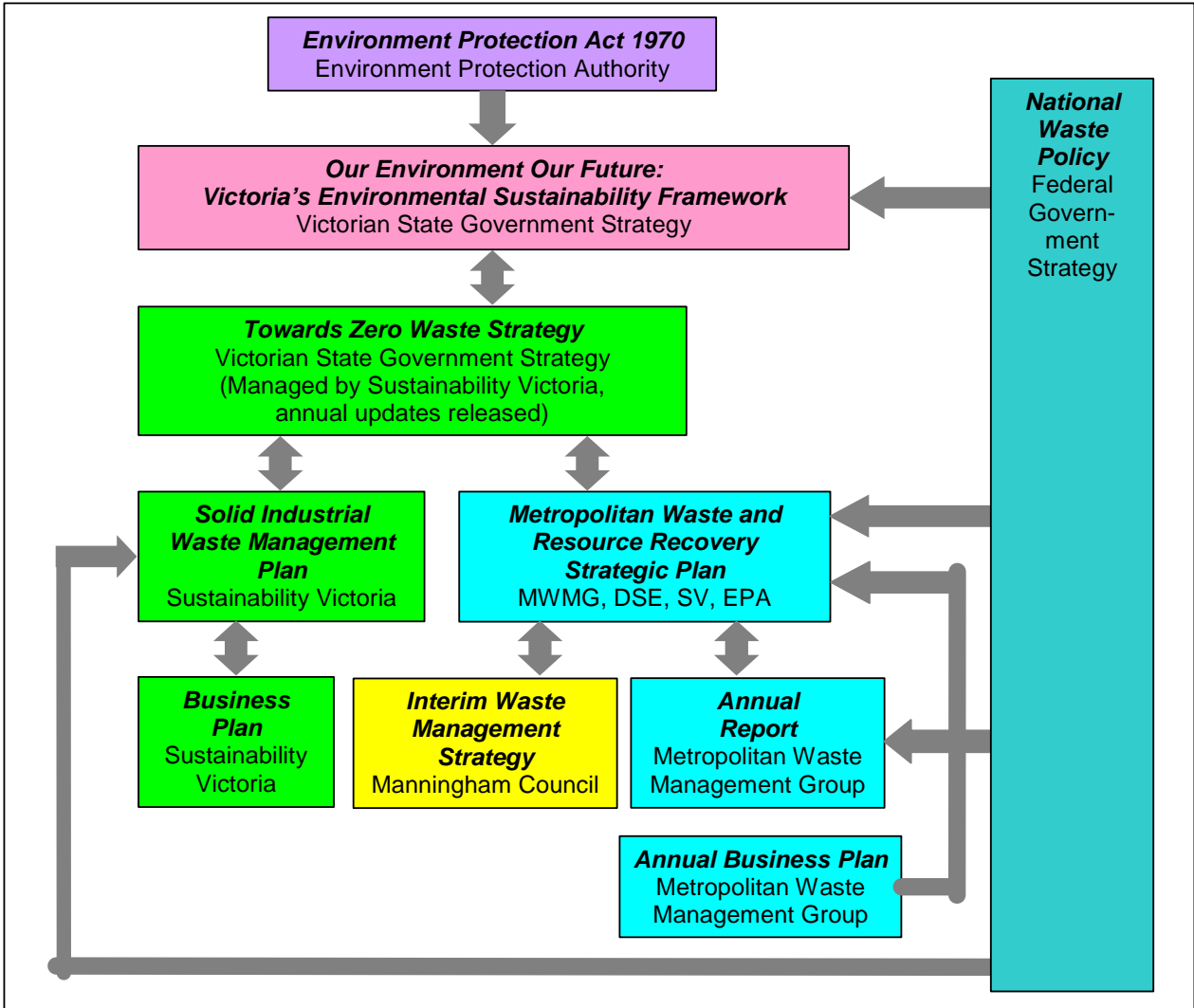


Figure 2 Interlinking of Legislation, Policies and Plans

The Environment Protection Act provides for development of waste management and state environment protection policies. The objectives and targets in these policies and strategies have been used to prepare the Solid Industrial Waste Management Plan and the Metropolitan Waste and Resource Recovery Strategic Plan. The IWMS 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 IWMS is the waste management hierarchy, (Figure 3) 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. Policies developed by all levels of government are based on this principle.

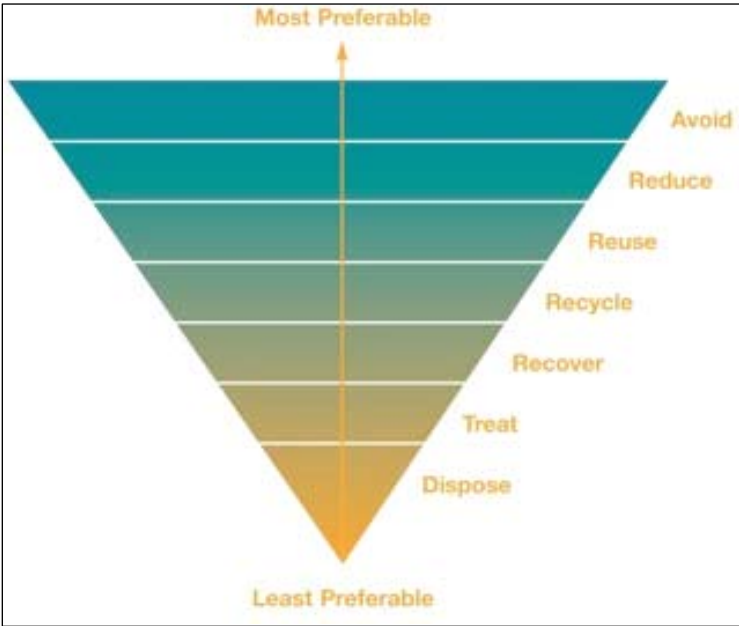


Figure 3 Waste Management Hierarchy

Council continues to use the waste management hierarchy for its waste and recycling programs. The hierarchy assists Council and the community to identify the most appropriate course of action to take for programs and projects that identify potential waste reduction initiatives.

This hierarchy uses existing best practice to identify the most energy efficient and integrated practices possible for any project.

Waste avoidance, reduction and reuse are the most preferred options that produce the greatest greenhouse gas reduction benefits. Avoidance eliminates the production of waste by changing purchasing patterns or product designs. Reduce is similar to avoidance in that it lessens the production of waste. Waste reuse is the transfer of waste to be used again, either in the same form or changed to become another product or material.

Waste recycling requires energy to reprocess materials such as those placed in the kerbside recycle bins. Waste recovery means capturing value in the waste material such as energy from methane capture at landfill. Waste treatment generally does not apply to municipal wastes, it more commonly applies to industrial wastes such as contaminated soils. Disposal is the least preferred option of sending waste to landfill.

2.2 FACTORS INFLUENCING WASTE

2.2.1 Population Growth

Victoria's population is growing, with the State Government forecasting an increase from 5.13 million in 2006 to 7.4 million by 2036. This represents an increase of 2.27 million, or 44.2 per cent. This is expected to translate into increased waste generation, particularly in metropolitan Melbourne.

2.2.2 Climate Change

The National Waste Policy estimates that the waste management sector generates some 15 million tonnes of carbon dioxide equivalent greenhouse emissions a year. Of this, some 11 million tonnes comes from landfills. On the other hand, the system has the potential to generate renewable energy and emission offsets from materials recovery.

Consideration must also be given to the possible impacts of any changes to the climate as a result of new waste infrastructure.

On 1 July 2012, the Australian Government will introduce a fixed carbon price of \$23.80 per tonne. The carbon price will affect markets for recovered materials and the overall costs of waste management. This in turn is likely to affect how organic materials are recovered or sent to landfill.

The introduction of a carbon price also raises questions about the State Government's future waste management role and whether it should still intervene to reduce greenhouse gas emissions from waste management.

2.2.3 Changing Consumption Patterns

Many of the products we consume are produced in a global market. This can affect the viability of recycling, as raw commodity prices, and prices for recycled materials, are set by global markets. The population is becoming more of a 'throw away society', consumers are replacing different types of products, such as electronic goods more often, even when their existing products are still functional. It should be noted that these new products need new recycling processes and markets to ensure these products do not end up in landfills.

2.3 SIGNIFICANT FEDERAL AND STATE LEGISLATION AND POLICIES

2.3.1 Federal Government

National Waste Policy - In November 2009, all Australian environment ministers agreed to the *National Waste Policy: Less Waste More Resources*. The policy aims to:

- Avoid the generation of waste
- Reduce the amount of waste for disposal
- Manage waste as a resource
- Ensure that waste treatment, disposal and reuse is undertaken in a safe, scientific and environmentally sound manner
- Contribute to the reduction in greenhouse gas emissions, energy conservation and production, water efficiency and the productivity of the land

The most significant action so far under the policy has been the *Product Stewardship Act 2011* which provides the framework for national product stewardship schemes for products identified as national priorities. Televisions and computers will be the first products managed under the legislation.

Carbon Pricing – the framework for reducing carbon pollution in Australia will commence with a fixed carbon price from July 2012 for 3 years and in 2015, move to a 'cap and trade' scheme which will require emitters of greenhouse gases to acquire a permit for every tonne of carbon dioxide equivalents

(CO₂-e) they emit. The proposed starting price for carbon emissions will be \$23.80 per tonne. Details of the carbon price scheme are still being finalised at the time of drafting this IWMS. The cost that this will add to Council services is yet to be determined as advice is yet to be received from the landfill operator. The specific impact on waste disposal to landfill will depend on methodologies used to assess methane emissions from landfills. The impact of a carbon price will be assessed once the scheme is introduced and the full details are known. Council in its 2012/2013 waste management budget has made an allowance of \$23.80 per tonne for carbon emissions.

Australian Packaging Covenant (APC) - voluntary initiative by government and industry to reduce the effects of packaging on the environment. Initiatives have included improved design of packaging to reduce waste and increase the amount of recyclable packaging.

National Television and Computer Product Stewardship Scheme – a scheme in the start-up phase in 2011 that introduces an extended producer responsibility for televisions and computers. Local government participation in the scheme is voluntary. Industry and local Councils may choose to partner with industry in the implementation of the scheme. Given local differences, these partnerships are likely to vary across the country. The scheme provides for industry-funded arrangements for the transport, reprocessing and recycling of televisions and computers, including disposal of residual waste.

Local Councils' role could be structured in a number of ways. This could include:

- Collection sites at existing facilities
- Service contracts with local Councils to operate collection sites on behalf of industry
- Short-term site arrangements for focussed 'take back' events as opposed to permanent collection sites
- Access to collection services

The scheme commenced in 2011 and will aim to ensure that the community has reasonable access to collection services in metropolitan, regional and remote areas, within five years of scheme commencement.

2.3.2 State of Victoria

Victoria's waste management system has evolved largely as a result of government action. Local governments first managed waste to protect public health with the *Health Act 1958* providing the policy framework for their activities. They did so by providing kerbside waste collections and local landfills (which were often close to residential areas).

With the enactment of the *Environment Protection Act 1970*, the State Government was increasingly involved in administering the regulatory framework and facilitating regional planning for landfills. The Act was amended in 1992 to recognise that waste management also included waste minimisation and recycling. The State Government's role then expanded to include support for new recycling markets through investment, information provision and regulation.

The Australian Government increasingly intervenes in waste management where businesses operate nationally, and where national processes provide the least cost approach.

Governments intervene when markets fail to deliver the outcomes that businesses and the community expect. The health and amenity impacts of odour, and the environmental impacts of greenhouse gases, are examples of the consequences of market failure. Governments can intervene by:

- Procuring or delivering services and infrastructure
- Providing information and facilitation
- Regulating
- Using market-based instruments.

Environment Protection Act (1970) – is the primary legislation for waste management in Victoria. The Act:

- Establishes government waste agencies and defines their objectives, functions and powers.
- Sets out environment protection principles that provide agencies with guidance about the environmental outcomes to be achieved through the exercise of their powers.
- Imposes restrictions and controls (either directly or by establishing powers to create regulations) on individual and business activities, in order to prevent pollution and environmental damage.

Sustainability Victoria Act (2005) - establishes Sustainability Victoria, sets out guiding sustainability principles and defines the objectives and functions of Sustainability Victoria.

Some of these principles include:

- That decision making processes should effectively integrate both long-term and short-term economic, environmental, social and equity considerations.
- The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection.
- The need to adopt cost effective and flexible policy instruments such as improved valuation, pricing and incentive mechanisms.

At the time of drafting the IWMS, the Victorian Government had completed a review of Sustainability Victoria. Some of the key recommendations from the review include:

- Re-establishing Sustainability Victoria's state wide leadership in the area of waste strategy and program implementation in partnership with portfolio agencies.
- Sustainability Victoria working with the EPA to consider programs that support business to improve energy efficiency where there is a positive return on investment.
- Investing in building capability and developing measures to evaluate triple bottom line outcomes.
- Developing a long term investment strategy for Sustainability Victoria's programs funded from the Sustainability Fund to support waste and resource recovery.

In a separate report dated June 2011, the Victorian Auditor General has recommended that Sustainability Victoria conduct a review to assess the appropriateness of TZW's targets and has commented that ...'projections indicate that the municipal waste stream is unlikely to meet its 2014 targets'. It is therefore likely that the TZW actions and targets will be revised.

Towards Zero Waste Strategy 2005 (TZW) - objectives of TZW are to reduce and recover solid waste and to reduce the environmentally damaging impacts of waste.

Towards Zero Waste was Victoria's first statewide waste management policy and it requires updating to keep pace with the times. As it stands, the waste management plans of waste management groups and local governments must align with Towards Zero Waste.

Towards Zero Waste's current purpose is to ensure Victoria will be well advanced towards being a low waste society by 2014. Its objectives are to:

- Generate less waste from our activities
- Increase the sustainable recovery of materials for recycling and reprocessing
- Reduce damage to the environment caused by waste disposal

Towards Zero Waste set targets for waste management and has 28 actions including industry incentives, education and support. A number of these actions are funded from the landfill levy. The policy also refers to regulatory interventions (such as investigating landfill bans).

The three key targets of the TZW strategy are:

1. Reduce the amount of solid waste generated by 1.5 million tonnes per annum by 2014, compared to 2002/2003.
2. Increase the recovery rate in all solid waste generated from 48% in 2003 to 75% by 2014 comprising:

- 65% recovery rate (by weight) of MSW for reuse and recycling by 2014. An interim target of 45% recovery rate is established for year 2008/2009.
 - 80% recovery (by weight) of C&I waste for reuse and recycling by 2014. An interim target of 65% is established for year 2008/2009.
 - 80% recovery rate (by weight) of C&D waste for reuse and recycling by 2014. An interim target of 65% is established for year 2008/2009.
3. A 25% reduction in littering behaviour compared with 2003 levels.

Victorian Litter Strategy – Creating Cleaner, Safer Places (2009) – the strategy aims 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) – the objectives of VARRI are to facilitate the development of Advanced Resource Recovery Technology (ARRT) facilities in metropolitan Melbourne. This initiative is currently being reviewed by the government.

Solid Industrial Waste Management Plan (2009) - developed to establish goals and targets for solid waste management (e.g. C&I and C&D waste) in Victoria.

Landfill Levy - The Victorian Government has substantially increased the landfill levy in recent years and proposes to continue to increase the levy by approximately 10% per annum until 2014/2015. This has driven up the cost of disposing of waste to landfill and has raised additional revenue for funding waste, litter and environmental programs.

Other waste issues or initiatives include, but are 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
- Occupational health and safety, WorkCover and Worksafe guidelines and standards

2.4 METROPOLITAN WASTE MANAGEMENT GROUP

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

As a member of the MWMG, Council is represented on the MWMG through councillor attendance at the Local Government Forum and by officer representation on the Technical Advisory Reference Group (TARG).

The MWMG, representing the State Government has prepared a Metropolitan Plan for the treatment of waste from the 30 metropolitan councils. The MWMG has developed policies and guidelines for community education on minimisation, collection, recovery disposal and treatment of wastes on a regional basis.

2.4.1 MWMG Objectives and Targets

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.

- Assessing the need for, and planning for, municipal waste management infrastructure and landfills in metropolitan Melbourne.

In line with the TZW strategy, the MWMG's targets include:

- 65% recovery rate (by weight) of MSW for reuse and recycling by 2014.
- 25% improvement in littering behaviour by 2014.

2.4.2 Metropolitan Waste Resource and Recovery Strategic Plan (2009)

The Metropolitan Waste Resource and Recovery 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 garbage (residual) consists of food and garden wastes. Accordingly, the Strategic Plan has a focus on MSW, and the organics component in particular.

A step change in the way the residual waste and garden organics streams are managed is proposed in the Strategic Plan. It is proposed that recyclable materials and the readily degradable organic fractions of residual wastes be recovered in purpose built ARRTs across Melbourne to be established in the future.

To date, progress has been slow in setting up these facilities as a result of factors that include uncertainty in the level of State Government support, delays in obtaining suitable sites and planning approval; high capital costs; and long lead times in establishing contracts to guarantee supply of sufficient volumes of waste and end markets for the processed products. There is concern about the impact of using advanced technology facilities due to the substantially higher gate fees compared to landfill. The Strategic Plan is based on the premise that landfill costs will rise significantly in the coming years and the price gap between using landfill and ARRT facilities will gradually reduce.

The Strategic Plan assesses the current waste management situation in metropolitan Melbourne and sets out a framework for the future management of municipal and commercial wastes in metropolitan Melbourne. The framework and recommendations included in the Strategic Plan aim to influence the waste management programs and activities of the 30 councils of metropolitan Melbourne (Figure 4).



Figure 4 Geographical Boundaries of Metropolitan Local Governments

2.5 MANNINGHAM PLANS, ISSUES, POLICIES AND STRATEGIES

Manningham City Council recognises its responsibilities in demonstrating strong leadership in environmental sustainability, which includes facilitating the management and reduction of waste generation within the municipality. As a custodian of the local environment, Council has a number of mechanisms to support these endeavours which are outlined in the following sections on local policies, strategies and plans.

Manningham City Council is committed to balancing planning and economic growth with environmental responsibility and sustainable practices that reduce its footprint.

2.5.1 Council Plan

The Council Plan provides the direction Council will focus upon over the next four years.

Two of the key elements of the Council's Vision include:

- A municipality that supports sustainable development and achieves a balance between lively activity areas supporting a healthy local economy, and preserving our rural areas and abundance of open space.
- A community that protects and enhances our natural environment and wildlife, and is concerned about reducing our carbon footprint in all that we do.

The Council Plan addresses the community's aspirations for Manningham.

The Council Plan commits Council to implement sustainability through waste management by embedding sustainable practice and principles in planning and development, pursuing consistent design principles of excellence in current and future built environment, as well as enhancing its leadership role in the education, marketing and awareness of environmental practices to the community. The achieving of the vision will be measured through the reduction in Council's greenhouse gas emissions as well as increasing in the volume of municipal solid waste to be recovered, recycled and/or diverted from landfill.

2.5.2 Generation 2030 Community Plan

The Generation 2030 Community Plan is a reflective strategy which provides Council with the communities view of 'their' vision, aspirations and priorities for 2030. The Generation 2030 Community Plan is an overarching strategic document, which provides a long-term shared vision for Manningham and its community. The Community Plan will guide the development of policy and strategies over the next 20 years and identify innovative and exciting ways of working together to achieve the plan. Numerous stakeholders have been engaged in the development of the Community Plan and will continue their involvement throughout its implementation and achievement of the community's vision for 2030.

One of the goals of the Community Plan is to proactively seek innovative solutions to address the effects of climate change as well as working together to protect the environment. Actions of the Community Plan include encouraging, supporting and resourcing sustainable living practices with the view of having the community embraces the principles of reduce, reuse, recycle.

2.5.3 Issues for the City

In waste management, the traditional role of local government has been to (i) educate the community on waste reduction and (ii) to collect and dispose of garbage for public health and sanitation reasons.

More recently, Councils have considered ways of reducing the environmental harm caused by waste disposal by developing systems to recycle household materials.

New technologies are now enabling leading councils, to use waste management as a way of improving sustainability. These advanced technologies can recover resources from waste, including recovering the energy it contains. This approach is then integrated with waste avoidance and reuse, reduction of greenhouse emissions, and sustainable waste systems.

Council will consult and work with the community to reduce the amount of waste produced, and expand the re-use of disposed items. To sustainably manage waste, Council must also adopt systems that maximise the recovery of resources and ensure the left over 'residual waste' is treated, so that it does not pose a risk to the health of our community or our environment – now, or in the future.

The aim is to provide targeted systems, infrastructure, and support to ensure people can effectively manage waste at each level of the waste hierarchy (see Figure 3).

Council will need to build on the waste patterns of the past and continue to adopt more innovative and sustainable solutions for dealing with waste.

2.5.4 Council's Waste Management Team

Waste Management is a primary service area that is highly sensitive and visible, and which directly affects every citizen. The service provided by Council's Waste Management Team is to manage Council's waste services. In recently conducted Customer Satisfaction surveys, the waste services rated as one of the highest of all the services that Council provides to the community. The Waste Management team strives to keep Manningham at the forefront and as a leader in the waste industry. The team is committed to best practice service delivery and focuses on providing a service which is safe as well as ensuring work is undertaken with relevant controls in place to maintain safety of staff, work crews, general public, environment, infrastructure, plant and equipment.

The Waste Management Team seeks to establish a sustainable recycle and waste collection service through effective community education and promoting a partnership approach between the community, Council and the contractors, to provide effective and efficient waste collection and material recovery and treatment services.

The Waste Management Team is responsible for the provision of the following services:

- Contract management and administration of all Council waste service contracts.
- Maintaining a high level of service to residents via the waste management call centre.
- Maintaining the waste service database on Council's corporate system, and providing linkages to the contractor and service units to facilitate the management of contracts and development of pricing policy.
- Providing information and answering telephone, written and counter customer enquiries, and dealing promptly and courteously to address complaints and requests.
- Undertaking site investigations for customer requests, insurance claims, and new service provision and service improvements.
- Developing and implementing annual education and marketing strategies and action plans.
- Undertaking promotion activities to assist with the minimisation and recovery of waste.
- Liaising with and participating in regional activities, developed in conjunction with the Metropolitan Waste Management Group.
- Managing the Council's Garden Waste Recycle Facility at Tikilara Reserve.
- Developing and updating Council's Waste Management Strategy.

2.5.5 Local Laws - Collection of Household Waste and Commercial Refuse

Council's local law addresses a range of amenity issues. In respect to waste management, these include but are not limited to the following issues:

- Waste service requirements
- Capacity and maintenance of receptacles
- Use of receptacles and street litter bins

- Prohibited use of receptacles
- Storage of receptacles
- Collection requirements
- Garbage, recyclables, garden waste and hard waste collection
- Commercial refuse and rubbish
- Placement of rubbish hoppers

2.5.6 Planning Strategies - Design and Development Provisions

Waste and recycling collections are some of the key services Council offers to its residents. Provision of garbage, recycle and garden waste bins are one of the first issues new residents enquire about when they move into the municipality.

Up until more recent times, many development applications submitted to Council have failed to consider the appropriate design elements to facilitate the collection and disposal of domestic waste and the provision of waste management services to residential developments.

It is essential to ensure that the services to these properties are convenient, safe and sustainable, and that aspects of the delivery of waste management services are carefully considered in the building design of a development. Proper design and management can save a great deal of difficulty and inconvenience to the community.

Council has prepared Multi Unit Development Guidelines to assist developers and designers in preparing waste management plans for residential developments. Section 2.8 provides further details on the Multi Unit Development guidelines.

2.6 EDUCATION & MARKETING PLAN

Manningham's Waste Management Education and Marketing Plan titled 'WasteSMART' is an essential component in the delivery of a sustainable waste management service to the community.

The Plan specifically targets waste related to Manningham's waste management services, generally concentrating on the domestic and commercial kerbside collections and associated activities.

With the introduction of the Council's current waste services contracts in April 2007, Council recognised the importance of providing ongoing community education to ensure that the environmental and economic outcomes derived from waste services provided by Manningham are maximised and maintained.

The Waste Management Education and Marketing Plan has been developed within the context of working towards the objective of achieving the State Government set goal of 65% diversion of municipal solid waste from landfill by 2014. This Plan has recognised that a combined effort from Council, residents and businesses is required to achieve this goal however the need for the State Government to implement ARRT and in-vessel composting facilities is essential in assisting Council to achieve the ultimate goal.

Council has made significant gains in increasing its diversion of waste from landfill goal since the introduction of the 'three-bin' domestic waste service in 1999. With recyclables, garden waste and garbage being collected and processed separately, waste diversion from landfill is currently at approximately 56.5% with the ultimate aim of achieving 65% diversion of municipal solid waste by 2014. However, this target is currently being reviewed by the State Government as part of its review of the State's Waste Policy.

The challenge is to maintain and improve upon these achievements by providing a creative WasteSMART Action Program that engages the community and further improves the communities understanding of:


- The opportunities to 'avoid' the creation of waste through the use of extended producer responsibilities of acceptance of waste returned to the original supplier with or without levies.
- The need to address the issue of waste minimisation through reduction and reuse.
- The environmental and cost benefits to the community in adopting and fully utilising the new recycling and waste system.
- The advantages of reducing garbage to landfill by maximising the collection of recyclable and garden waste material.
- The need to maximise the quality of the recycled material through less contamination.
- The path to a true sustainable waste reduction system includes a reduction in the overall amount of waste produced from the home through better purchasing habits, composting and worm farms and reuse of material.

WasteSMART is structured to target five key stakeholder groups in the community. By identifying and prioritising sectors within the community, Manningham City Council can ensure that appropriate resources are used to their greatest effect.

The stakeholder groups include:

- Residents
- School Teachers, Children and Parents
- Business Owners / Operators
- Sporting and Community Clubs using Council Facilities
- Council Staff

The Plan outlines the actions and methods that will be used to actively involve these stakeholder groups and identifies the key performance indicators that will be used to evaluate the program's achievements.



All initiatives aim to actively encourage the different stakeholder groups to provide input into the programs. This is vital, as it provides a sense of ownership and ensures that programs are sustained over the long term.

As part of the Waste Management Education and Marketing Plan, seven program areas have been designed and developed to reach the relevant targeted audiences. Each of the seven program areas has identified objectives and a detailed set of actions. The seven program areas include:

- Reduce Waste to Landfill and Composting Facilities– Residential
- Reduce Contamination in Recyclables and Garden Waste
- Recycling and Waste Minimisation for Businesses
- School Education
- General Product Information
- Recycling at Sporting / Community Clubs using Council Facilities
- Changes to Behaviour

The Action Program also identifies priorities, expected outcomes, key performance indicators, timing and estimated cost. The initiatives in the Plan have regard to the State Government policy on waste management and outline the need for Council to lead and provide vision to encourage the community to change their attitudes towards waste management, with the view of reducing waste, recycling and changing purchasing habits to provide long term benefits to society and the environment.

2.7 LITTER MANAGEMENT

Local governments are the major players in controlling, cleaning up and trying to prevent litter. The 2006 Victorian Litter Action Alliance survey found that 76% of local governments or Regional Waste Management Groups reported that they had run a litter prevention program. Litter reduction programs conducted by local government have been shown to be effective in reducing littering behaviour.

Around the world it is agreed the most effective litter prevention behaviour change programs include a mix of approaches across the three critical areas of education, infrastructure and enforcement. The mix of these elements needs to be adapted to the local conditions and include incentives, communications and evaluation. These are the elements that characterise Victoria's approach to litter prevention.

Manningham's Litter Prevention Strategy aims to establish a strategic direction and priorities that can form a common agenda for the many stakeholders who can contribute to a solution in litter management. The strategy forms the framework to the development of a comprehensive approach to litter prevention and the establishment of action plans in the categories of education, enforcement and infrastructure. The key to the strategy is the identification of target groups and the development of an action program, supported by a budgetary plan.

The strategy specifically targets litter related to Manningham and the problems associated with its adverse impacts on civic precincts, shopping centres, waterways and the environment.

The strategy provides a framework for working towards a litter free municipality. An Action Plan has been developed and coordinated with other strategies and action plans, both internally and externally to the organisation. Many stakeholders have responsibilities for the management of litter, and these include Sustainability Victoria, EPA, MWMG, Victorian Litter Action Alliance and local government.

The strategy builds upon the knowledge and relevant programs in the waste management industry, recognising the complexity of litter management, changing trends, techniques and delivery of education programs.

The initiatives detailed and recommended in the Plan have regard to the State Government policy on litter prevention and management. They outline the need for Council and the community to change its attitudes towards litter, with the view of reducing dumping and changing behaviour to provide long term benefits to society and the environment.

The Strategy is underpinned by the following program goals:

- To increase awareness of litter issues and encourage behaviour change and participation in litter prevention activities.
- To reduce the incidence of rubbish dumping within the municipality.
- To increase community and individual responsibility for cigarette butt litter prevention and management and decrease butt litter in public spaces by 30% by 2014.
- To reduce health and safety risks associated with litter and improve the quality of Council's waterways.
- To discourage littering by increasing the rate of identification and prosecution of litter offenders.
- To gather baseline and project performance data in order to demonstrate, improve and communicate project outcomes.

These goals will be achieved by government, industry and community sectors working together to meet their shared responsibility to achieve a litter-free Victoria.

Underpinning this strategy is Council's commitment to improve the liveability, public safety and image of the municipality by reducing litter, improving public amenity and environmental quality.

2.8 MULTI UNIT DEVELOPMENTS GUIDELINES

Manningham's Multi Unit Development Guidelines have been developed to assist developers and designers in preparing waste management plans for residential developments for the approval by Council.

The Guidelines aim to:

- Provide developers with general information regarding waste collection for residential developments in Manningham.
- Highlight the essential issues related to waste management that need to be considered when designing a residential development in Manningham.
- Specify the unique requirements for particular types of development.
- Detail the minimum requirements in provision of waste management services which are functional, safe and sustainable.

The Guidelines apply to residential developments and include the provision of services to:

- a) Subdivisions
- b) Single and/or double storey dwellings, either attached or not
- c) Low rise residential developments of 2 to 3 storeys
- d) High rise residential developments of between 4 to 7 storeys
- e) High rise residential developments with greater than 7 storeys

It should be noted that Council requires waste to be collected by Council's nominated waste collection contractor. Collection of waste is to be carried out from the main road. If this requirement is not achievable, the developer is to discuss the matter with Council.

Generally, Manningham City Council has a preference for waste to be collected by Council's contractors engaged to deliver the designated range of services specified by Council. The use of a private waste collection contractor for a particular development will be considered in special circumstances. In the event private collection contractors are engaged, the waste must be source separated, collected and disposed separately in a manner consistent with Council's services. Contractor details and methodology of collecting and disposing the waste separately must be supplied to Council as part of the development requirements. The use of private waste collection contractors will be subject to the approval through the planning permit process and the Responsible Authority.

There is a requirement that waste being collected by a private waste collection contractor will need to be done so from within the confines of the development (within the property boundary). Placement of bins (being collected by a private waste collection contractor) on the Council nature strip or road reserve is prohibited.

Development proposals are reviewed and assessed to determine if Council waste services can be provided.

Accordingly, the design of any development needs to cater for the minimum waste management services for each tenement that includes:

- Separate service for garbage and recyclable collections
- Optional garden waste collection, where the development includes landscaping that requires maintenance
- Hard waste collection

To achieve residential development that provides reasonable standards of vehicle accessibility, design standards should be at minimum in accordance with ResCode – Clauses 55 and 56. ResCode sets the minimum standards to achieve the appropriate access arrangements and site facilities for the collection and disposal of waste from the development. The standards contain the specific requirements to meet the relevant objectives.

3 CONSULTATION AND ENGAGEMENT

3.1 STAKEHOLDER ENGAGEMENT

The development of the IWMS included consultation and engagement with the community, MWMG, other councils, representatives from the waste industry and Council staff. Research and initial consultation established the local context for the IWMS. This was supported by broader internal and external consultation to consider a wide range of waste management and reduction issues, and how these might be best integrated.

Council's waste services should satisfy the needs of the community. During the development of this IWMS, Council's Waste Management team gathered community views and comment about the waste service and waste management issues through a number of sources, including:

- Resident requests to Council regarding the kerbside collection service.
- Monitoring and resolving resident complaints about the performance of Council's waste collection contracts.
- Annual performance surveys that rate Council's services and provide comment about service improvement.
- Feedback provided at community sustainability forums and workshops.
- Conducting a telephone survey with residents seeking specific feedback on possible service improvements and key waste issues affecting Council and the community.

3.2 COMMUNITY FEEDBACK

The key findings of the community feedback included:

- Waste services – Approximately 70% of the community rate the current waste services as either very good or excellent.
- Collection frequency – Approximately 60% of the community were satisfied with the collection frequency of the waste services. However there was some support for weekly garden waste collections from the beginning of Spring to the end of Summer.
- Bin sizes – Approximately 80% of the community were satisfied with the current bin sizes provided by Council.
- Hard waste collections – Approximately 80% of the community understood how the 'at call' hard waste collection service operated.
- Compost bins and worm farms – Approximately 36% of the community would purchase compost bins or worm farm if Council were to offer to residents at a reduced rate.
- Education and marketing – Approximately 87% of the community believe Council provide the community with adequate information in relation to the waste services.
- Accessing information – Approximately 80% of the community would seek further information about Council's waste services by either calling Council or via the Waste and Recycling Services annual calendar and booklet.
- Littering – Approximately 66% of the community do not identify litter as an issue for Manningham.
- Transfer station – Approximately 80% of the community would support Council establishing a transfer station for use by the community.
- Garden Waste Recycle Centre – Approximately 35% of the community have made use of the Garden Waste Recycle Centre which operates every Sunday except on public holidays.
- Other items for collection – Approximately 90% of the community believe Council's current waste service satisfies all their current waste disposal needs.

3.3 OPPORTUNITIES FOR IMPROVEMENT

Feedback from the community has provided opportunities for improving Council's waste services. In some cases, the triple bottom line (economic, environmental and social) implications of identified opportunities will need to be assessed and considered by Council in the future.

The feedback from the community has shown that Council should place greater emphasis on educating the community on waste avoidance, reduction and reuse. Targeting avoidance can eliminate, as well as reduce the production of waste by changing purchasing patterns. Importantly, promoting the materials reuse or recycling to create another product is pivotal in reducing waste disposal. Disposal is the least preferred option of the waste hierarchy.

Opportunities pertaining to the issues raised by the community include:

- Garden waste – Approximately 40% of the community questioned whether garden waste collection could occur on a weekly basis from the beginning of Spring to the end of Summer. Introducing weekly collection would be costly, hence the better promotion of the Garden Waste Recycle Centre, which operates on a Sunday, could assist those residents requiring additional collections due to the amount of garden waste material that is being generated at their property. The introduction of an 'aeration' type garden waste bins could assist in the reduction of the contents of the bin through increased evaporation, while providing up to 30% more space when compared to a current standard MGB.
- Bin sizes – With Manningham's population ageing, it is becoming more difficult for the elderly to manoeuvre the 240 litre size recycle bin to the kerb for collection. The introduction of a 120 litre size recycle bin could alleviate this problem. Also, for those properties generating significant amounts of waste and recyclable material, the introduction of 360 litre size recycle bin may provide them with the opportunity to better dispose of their excess material.
- Hard waste collections – The community support the current 'at call' hard waste collection service. Opportunities exist to better promote the service through Council's own publications and website.
- Compost bins and worm farms – Approximately 10% of the community questioned whether Council could provide larger garbage bins. Currently approximately 50% of the composition of the garbage bin is compostable material. Rather than introducing larger MGBs, opportunities exist for Council to provide to the community (at cost) compost bins or worm farms. Removal of the compostable material from the garbage bin would provide the community with additional space in the MGB for the disposal of other waste material.
- Education and marketing – Council is currently providing the community with a substantial amount of information regarding its waste service via the annual waste services calendar and booklet; brochures and publications; Council's website and through direct phone calls. It is recommended that Council continue to produce information for the community relating to its waste services using the means detailed above, while exploring other avenues to promote the waste services.
- Littering – Approximately 34% of the community identified litter as an issue for Manningham. Council has recently employed a Litter Prevention Officer through funding received from the EPA to investigate, educate and enforce issues relating to litter across the municipality. Opportunities exist for the Litter Prevention Officer to investigate locations where the community have identified as having ongoing littering issues.
- Transfer station – Approximately 80% of the community supported Council establishing a transfer station for use by the community. Council is currently working with the MWMG on undertaking a feasibility study on whether the former Doncaster Quarry site could be a viable site to establish a transfer station or other ARRT facility. The findings of the feasibility study will not be known until June 2013.

3.4 ANNUAL STATE GOVERNMENT SURVEYS

Council's waste services ranked very highly in the annual survey conducted by independent analysts in 2010/2011. In the State Government's Local Government Community Satisfaction Survey 2011 for Councils across the State, Manningham City Council's waste services scored the highest result for all

services for outer metropolitan Councils (78/100, which was 6 points above the score for all other outer metropolitan Councils).

While these survey results indicate a high level of satisfaction with Councils existing waste services, there is always room for improvement.

Opportunities to improve the waste services are detailed in section 6.

The Victorian Local Government Annual Survey for 2009/2010 (which was released in March 2012) ranked Manningham 4th of all Victorian Councils (2nd of all metropolitan Councils) for its diversion rate of waste from landfill at 56.5%.



4 CURRENT WASTE MANAGEMENT SERVICES

4.1 INTRODUCTION TO WASTE MANAGEMENT OPERATIONS

Council's kerbside waste and recycling collection services are designed to meet the average domestic waste disposal needs for residential households. The services have been progressively improved over time and the current suite of collection services is comparable with local government best practice.

Council's residential garbage collection service is available to small to medium-sized businesses and other non-residential organisations whose waste needs can be satisfied by a domestic waste collection service however this is subject to approval by Council. Larger businesses or organisations that produce high volume, commercial or industrial waste must engage the services of a private commercial waste collection contractor. Council uses suitably experienced and qualified contractors to provide its kerbside waste and recycling collection services. Contractors are appointed through a competitive public tender process every 7 to 10 years. Kerbside waste and recycling collection contracts are typically based over 7 to 10 years to allow for the multi-million dollar cost associated with providing new waste collection vehicles or new bins at the start of each contract to be spread over the period of the contract (amortisation). Long-term contracts ensure that waste and recycling services can be provided in a reliable and affordable manner.

The waste service is funded as a separate Council waste rate based on which waste service option configuration the resident has chosen for their property.

The waste service charge is separately itemised on the Council Rates Notice. Having the charges itemised allows the property owner to clearly review what costs they are incurring, hence there is an onus on each property owner to ensure that they are being charged correctly.

The IWMS reiterates that all properties in the City of Manningham pay a Council waste service charge when Council is able to provide a waste collection service to that property. This charge applies irrespective if Council is providing the service or if the service is being provided by a private waste collection contractor. An authorised officer will determine if Council can and will provide a waste service to a property.

If an owner opts to use a private waste collection service (whether or not Council can provide a service to the property), the owner is still liable to pay a Council waste service charge.

A person not using a Council waste service can only do so with the consent of an authorised officer. Waste being collected by a private waste collection contractor will need to be done so from within the confines of the development (within the property boundary). Placement of bins (being collected by a private waste collection contractor) on the Council nature strip or road reserve is prohibited.

4.2 WASTE MANAGEMENT SERVICES

In 1998 a new waste collection system, based on three bins, was introduced in Manningham to replace the outdated 240 litres garbage bin, bottle bag and bundled paper collections.

The three bin system has proven to be successful and is now well accepted by the community and provides a convenient waste service.

During 2010/2011, 56.5% of the total waste collected waste was diverted from landfill to either be recycled (recyclables) or re-used as compost/mulch (garden waste).

This IWMS recognises the continuation of the current service, as detailed in Figure 5.



4.3 RESIDENTIAL AND COMMERCIAL WASTE COLLECTION SERVICES

Detailed information on the kerbside collection services provided to residential properties by Manningham is provided in Table 2.

Table 2 Current Council Waste Services to Residential Properties

Waste type	Type of service	Type of container	Frequency	Type of waste materials and exclusions	Number of services in 2010/11
Garbage	Kerbside collection	Mostly 120L MGB, with optional 80L	Weekly	All household, not hazardous waste such as asbestos, chemicals etc.	42,860 + 1,270 = 44,130 [#]
Commingled Recyclables	Kerbside collection	240L MGB	Fortnightly	Dry paper and cardboard, Plastics, Glass containers, Metal containers etc.	42,590
Garden Waste	Kerbside collection	Optional, mostly 240L MGB, optional for 120L	Fortnightly	Organic garden waste only, no other contaminants etc.	36,720
Hard Waste	At call	Collected from nature strip	At call, booked through Council	Pile to be no larger than 2m ³ , mattresses to be piled separately, no garden waste, hazardous waste or chemicals, etc.	17,390
Commercial Garbage	Kerbside collection	240L MGB	Weekly	All commercial garbage, not hazardous waste such as asbestos, chemicals etc.	1,270

[#] The household numbers also include 1,270 small businesses from which Manningham collect garbage.

4.4 COUNCIL'S WASTE CONTRACTS

Council's current kerbside waste and recycle contracts are due to expire on 30 June 2015. The common expiry date for the domestic garbage, recycle (and recycle receiveal), garden waste and hard waste collection contracts allows for these kerbside services to be tendered as a suite of contracts that should attract the most competitive prices due to economies of scale.

The provision of reliable services, high quality customer service and resources at a competitive price are the key criteria considered in awarding the contracts. Future contracts will require Council to consider contractors with fuel-efficient fleets and environmentally sensible processes and procedures.

The new contracts for 2015 and beyond will be guided by actions identified from this IWMS such as bin sizes, service options and waste minimisation initiatives.

Waste and recycle collection contracts require a long lead time before commencing, due to the need to purchase a large number of new collection vehicles that typically require between 6-9 months to manufacture and fit out. Hence, establishing new contracts requires careful planning and seamless handover to ensure that collection schedules are maintained and there is minimal interruption to service delivery.

Information on the waste contracts currently being serviced by Manningham is included in Table 3.

Table 3 Current Council Waste Contracts

Service	Contractor	Contract Expiration (plus extensions)
Kerbside Collection & Receiveal Contracts		
Garbage collection	Citywide Service Solutions	June 2012 (+1+1+1)
Garbage disposal to landfill	Sita Environmental Solutions	March 2015 (+2+2+2)
Garden waste collection	Citywide Service Solutions	June 2012 (+1+1+1)
Garden waste receiveal	Interim MWMG overflow arrangements for receiveal and processing	October 2012 (+1+1)* April 2014 (+1+1)#
Commingled recyclables collection	Citywide Service Solutions	June 2012 (+1+1+1)
Commingled recyclables receiveal	Visy Recycling	June 2012 (+1+1+1)
Hard waste (at call)	WM Waste Management	June 2012 (+1+1+1)
Commercial collection	Citywide Service Solutions	June 2012 (+1+1+1)

* Original overflow contract arrangement from 2009 facilitated by MWMG

Additional overflow contract arrangement from 2011 facilitated by MWMG

4.5 WASTE MANAGEMENT FACILITIES USED BY MANNINGHAM

Manningham City Council utilises a range of waste disposal and resource recovery facilities to maximise the recycling of the materials collected and to ensure the safe and proper disposal of materials that cannot be recycled. Waste and recyclables are transported to the respective facilities several times each day. Large scale processing facilities and landfills are typically located in industrial zones or in outer metropolitan areas due to planning and licence requirements for a significant buffer from residential zones.

Figure 6 provides an overview of the current waste management contracts from which the contractor collects the waste to where the material is taken for recycling, re-use or disposal.

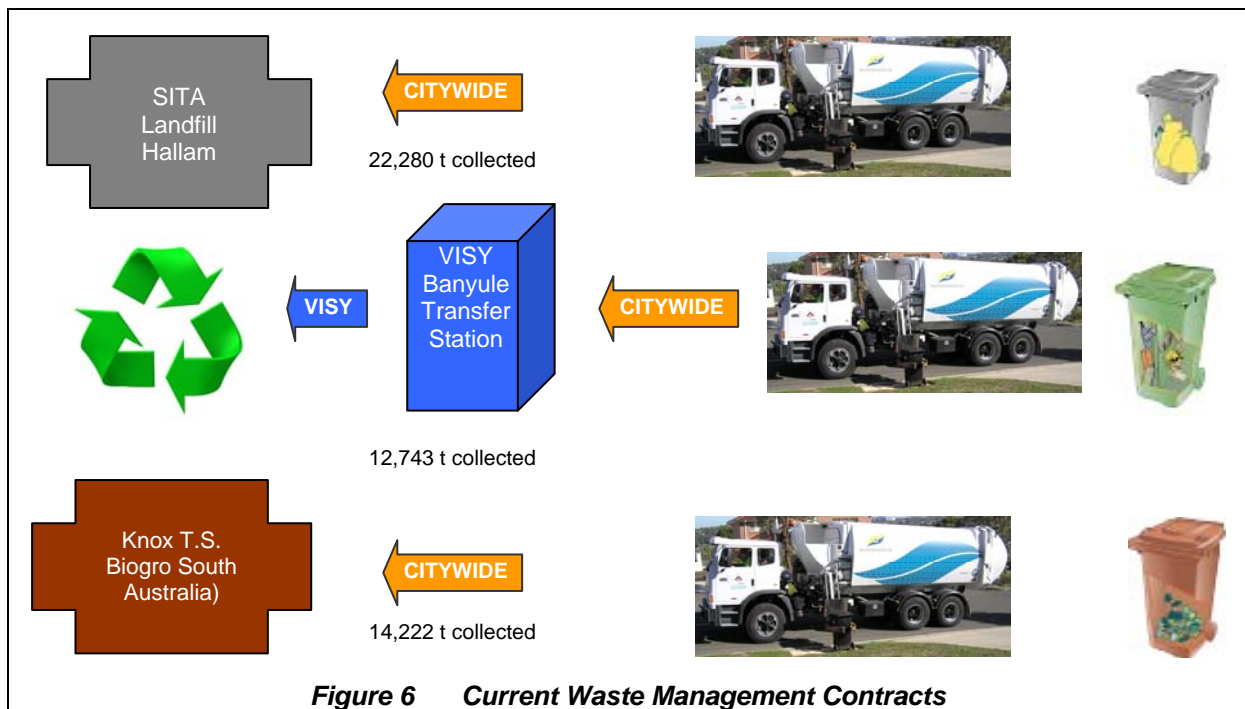


Figure 6 Current Waste Management Contracts

4.5.1 Landfills

Council's garbage is disposed of at the Sita landfill site in Hampton Park under a metropolitan waste management contract facilitated by the MWMG. The landfill used by Manningham is licensed by the EPA and are required to comply with stringent environmental controls including landfill gas collection and leachate management.

4.5.2 Recyclables

Council's kerbside recyclables are processed of a dedicated materials recovery facility to ensure that all recyclable materials are reprocessed and genuinely recycled. Council's current recyclables processor Visy Recycling operates high technology equipment to sort the various streams of recyclables into their separate components such as plastics, glass, cardboards, aluminium, steel etc. Some recyclable streams such as plastics are further sorted into different polymer streams through the use of high-technology optical scanners.

The use of improved technologies for sorting and reprocessing recyclables has reduced the component that cannot be recycled to less than 10% of the incoming materials. The non-recyclable component mainly consists of non-recyclable items placed in the recycle bins in the first place, rather

than any losses in processing. Community education about correct recycling practices is an important component in maximising the amount of recyclables recovered and re-processed.

4.5.3 *Garden Waste*

The kerbside garden waste bin organics are mulched and blended with other organic material for recycling as quarry and landfill site rehabilitation cover material at various locations. This arrangement commenced in 2010 following the closure of a regional composting facility that was previously processing Council's garden waste into quality compost. The processing facility was using open windrow composting technology that resulted in odours adversely affecting nearby residential areas, and following persistent objections and EPA action, the facility closed down in 2010 leaving a significant shortfall in available garden waste processing facilities for Melbourne.

Council will continue to use the interim garden organics processing arrangements until suitable alternative arrangements can be found.

Council is participating in a regional eastern organics processing contract for a high-technology enclosed composting facility that will be built and operated by private contractors. The affordability and viability of Manningham using such a facility will be assessed as more details are known. Currently the eastern region CEO's have committed to participating in this process.



4.6 WASTE COMPOSITION AND QUANTITIES

4.6.1 Waste Materials Collected at the Kerbside

Quantities and composition of waste materials collected from across the municipality are detailed in Table 4:

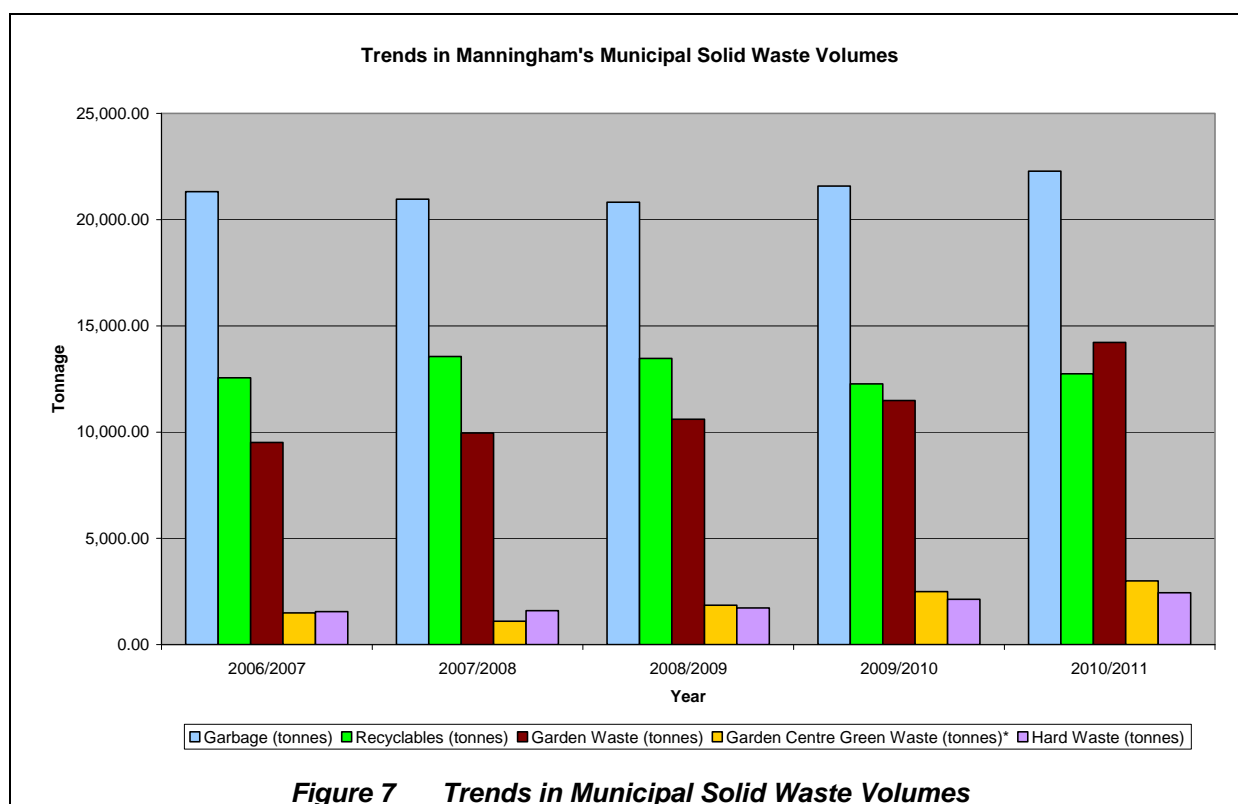
Table 4 Quantities of Materials Collected between 2006/2007 to 2010/2011

	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
Garbage (tonnes)	21,317	20,962	20,826	21,576	22,281
Recycling (tonnes)	12,561	13,564	13,466	12,269	12,743
Garden Waste (tonnes)	9,515	9,959	10,607	11,485	14,223
Garden Centre Green Waste (tonnes)*	1,500	1,100	1,850	2,500	3,000
Hard Waste (tonnes)	1,548	1,596	1,731	2,132	2,438
Total	46,440	47,181	48,479	49,962	54,685

* Estimated figure

Council's current diversion rate of waste from landfill is approximately 56.5%.

Figure 7 provides a comparison between the total tonnage of garbage, recyclable, garden waste and hard waste collected per year since 1 July 2006.

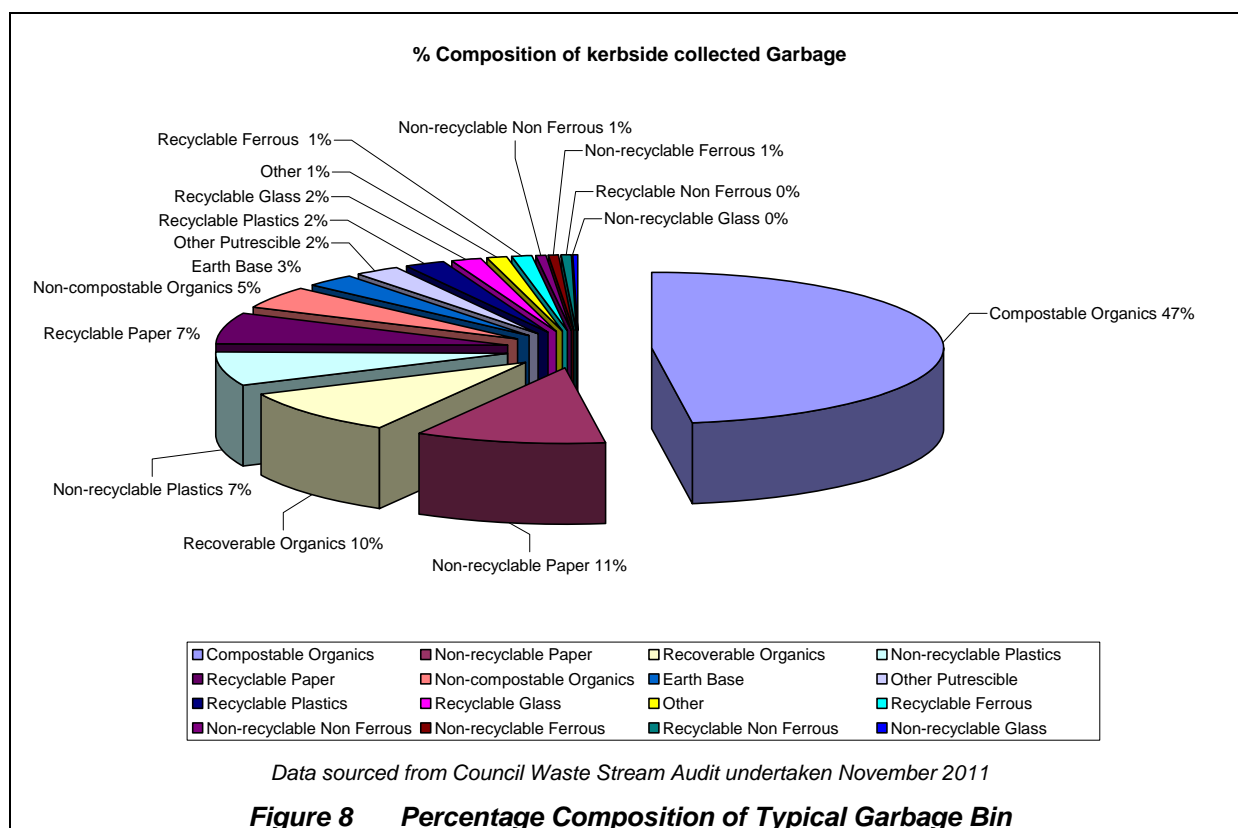


4.6.2 Garbage Bin Composition

The typical composition of a garbage bin are detailed and shown in Table 5 and Figure 8:

Table 5 Composition of Typical Garbage Bin

Waste Type	% Composition
Compostable Organics	47.85%
Non-recyclable Paper	10.52%
Recoverable Organics	9.67%
Non-recyclable Plastics	7.13%
Recyclable Paper	6.75%
Non-compostable Organics	4.85%
Earth Base	2.80%
Other Putrescible	2.35%
Recyclable Plastics	2.17%
Recyclable Glass	1.81%
Other	1.15%
Recyclable Ferrous	0.88%
Non-recyclable Non Ferrous	0.66%
Non-recyclable Ferrous	0.61%
Recyclable Non Ferrous	0.50%
Non-recyclable Glass	0.30%
Total	100%

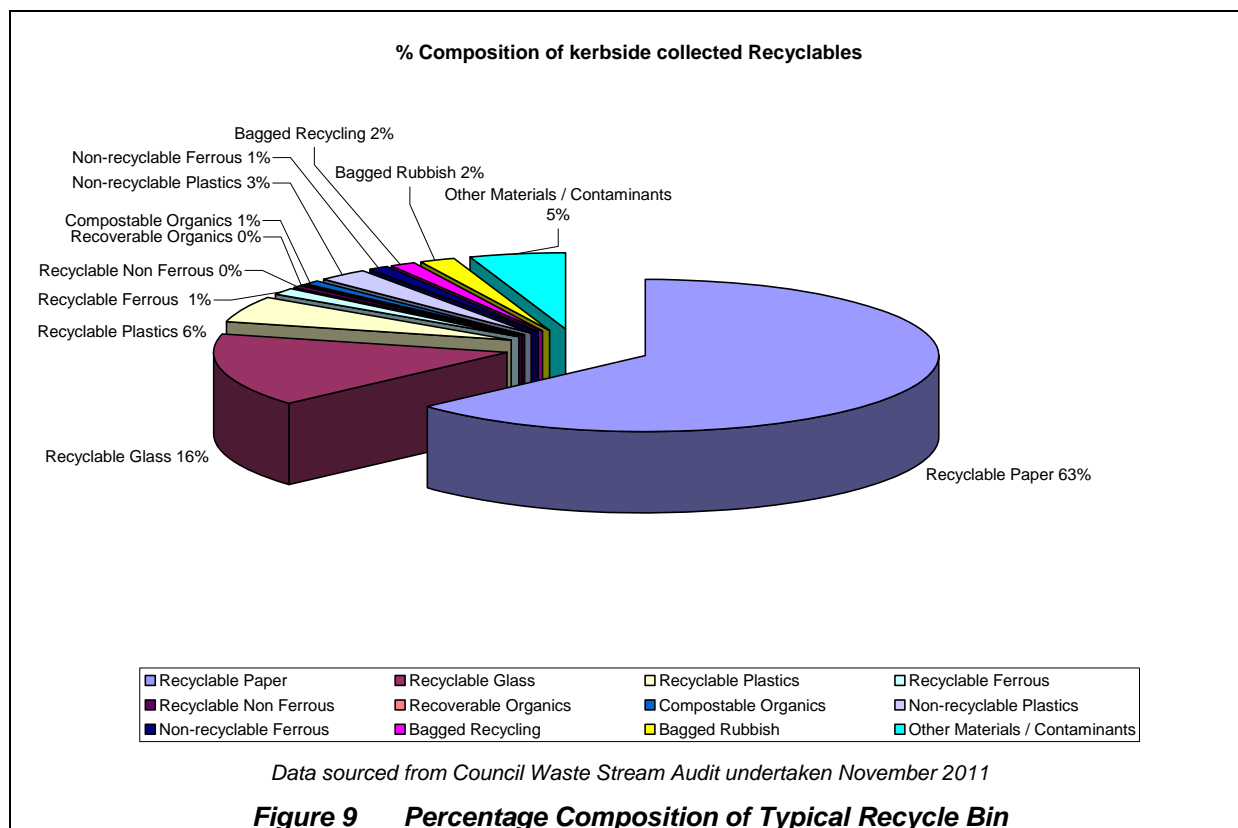


4.6.3 Recycle Bin Composition

The typical composition of a recycle bin are detailed and shown in Table 6 and **Error! Reference source not found.**

Table 6 Composition of Typical Recycle Bin

Waste Type	% Composition
Recyclable Paper	63.35%
Recyclable Glass	15.54%
Recyclable Plastics	5.63%
Recyclable Ferrous	1.44%
Recyclable Non Ferrous	0.42%
Recoverable Organics	0.35%
Compostable Organics	0.84%
Non-recyclable Plastics	2.78%
Non-recyclable Ferrous	0.95%
Bagged Recycling	1.57%
Bagged Rubbish	1.98%
Other Materials / Contaminants	5.15%
Total	100%

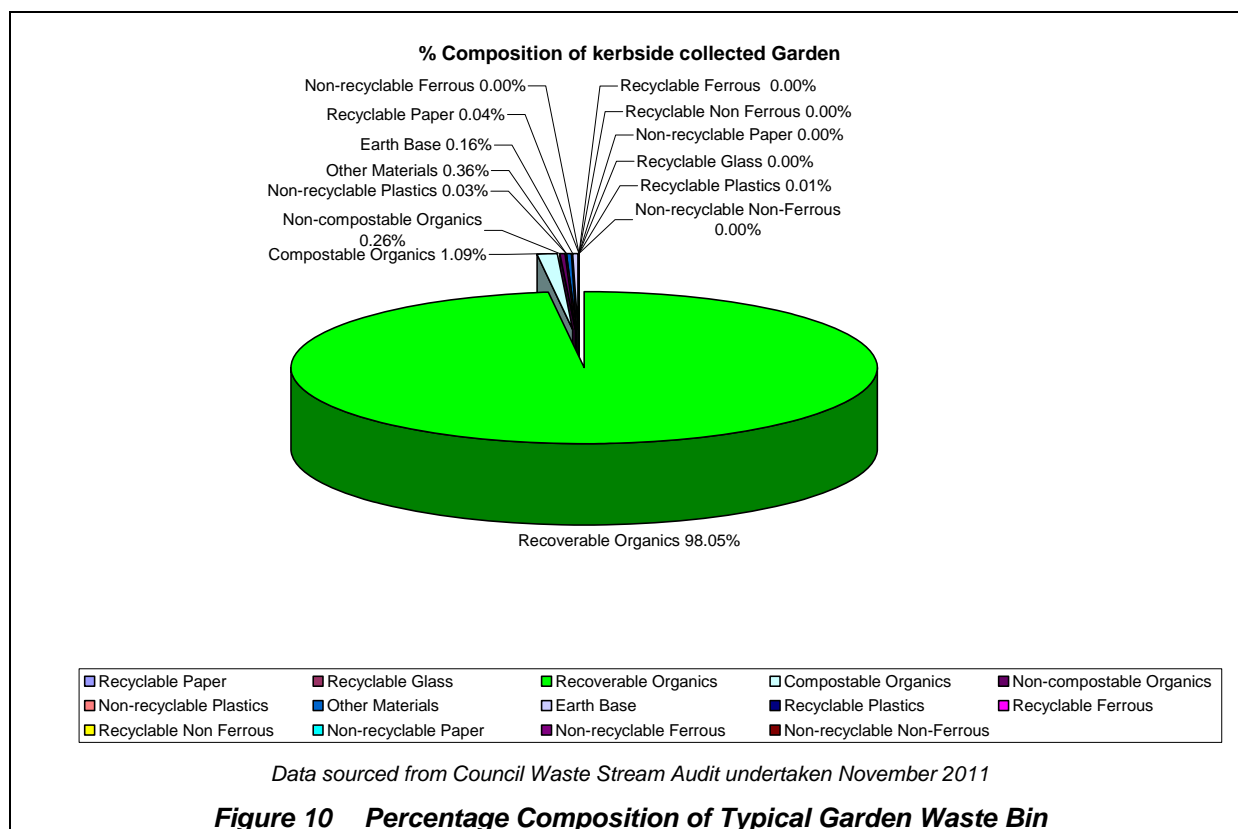


4.6.4 Garden Waste Bin Composition

The typical composition of a garden waste bin are detailed in Table 7 and **Error! Reference source not found.:**

Table 7 Composition of Typical Garden Waste Bin

Waste Type	% Composition
Recyclable Paper	0.04%
Recyclable Glass	0.00%
Recoverable Organics	98.05%
Compostable Organics	1.09%
Non-compostable Organics	0.26%
Non-recyclable Plastics	0.03%
Other Materials	0.36%
Earth Base	0.16%
Recyclable Plastics	0.01%
Recyclable Ferrous	0.00%
Recyclable Non Ferrous	0.00%
Non-recyclable Paper	0.00%
Non-recyclable Ferrous	0.00%
Non-recyclable Non-Ferrous	0.00%
Total	100%



4.7 GARDEN WASTE RECYCLE CENTRE

Council currently operates a garden waste recycle facility at the corner of Warrandyte and Blackburn Roads, Templestowe.

The facility operates within limited hours on a Sunday and provides a drop off point for self haul garden waste. The garden waste is regularly mulched and offered free of charge to the community.

The facility processes between 1,500 – 3,000 tonnes of green waste per year.

4.8 OPEN AIR BURNING

Manningham City Council recognises the importance of burning off for legitimate fire reduction purposes and burning off to reduce the level of fuel that would feed bushfires is one of several ways to prepare for the bushfire season. Burning off also assists residents in reducing the amount of excess garden waste material at their properties. This in turn reduces the amount of material requiring collection processing through Council's collection service and demand on Council's Garden Waste Recycle Centre reducing the overall garden waste processing costs.

Council's Waste Management Team will work with Council's Communications & Marketing and Health & Local Laws Units to better promote this garden waste reduction option to the community.

In 2012 Council introduced a new open air burning law. The changes to the law were initiated for the protection of the environment and to maintain the amenity of persons who live in bushfire prone areas.

The purpose of this local law is to:

- Control the use of open air burning
- Encourage alternative disposal and recycling
- Minimise the nuisance caused by smoke
- Allow burning for the purpose of fuel reduction for fire prevention purposes

The new laws aim to strike a balance between burning off for legitimate fuel reduction purposes and decreasing the impact of smoke on residents and the environment.

The categories below explain the options which are now available to the community.

Category A

If a resident owns or resides on a property located east of Mullum Mullum Creek which is greater in size than 4000 square metres, they are eligible for an annual Permit to Burn. The rules which apply to these residents are unchanged from previous years, except that they can no longer burn on Sundays, until the first Sunday in September.

Category B

If a resident owns or resides on a property located west of Mullum Mullum Creek which is greater in size than 4000 square metres, they are eligible for a restricted Permit to Burn. They are permitted to burn during the months of May, September and November only and they cannot burn on any Sunday.

Category C

If a resident owns or resides on a property which is between 2500 square metres and 4000 square metres in size, there are now changes to their ability to burn. These are:

- To be eligible for a Permit to Burn, they must have owned or resided on the property prior to 31 July, 2003.
- Restricted periods to burn will apply. Residents will be permitted to burn during the months of May, September and November only.
- Residents cannot burn on any Sunday.

Conditions apply to all permits to burn. Residents are therefore being encouraged to be aware of all laws and conditions prior to engaging in open air burning.

4.9 OTHER WASTE COLLECTION & DROP-OFF SERVICES

4.9.1 Public Place Recycling

Public Place Recycling (PPR) is the provision of the placement of a dedicated recycle bin for the collection of recyclable materials such as bottles, cans, paper and cardboard in a public place such as an activity centre / shopping centre. Council currently has 4 public place recycle bins provided in and around Tunstall Square shopping centre that were installed on a pilot or trial basis in 2007.

While PPR provides some benefit in diverting recyclable products from the waste stream, it is often subject to high levels of non-recyclables being placed in the bins, that at times result in contamination levels so high that the bin contents cannot be recycled. While the performance of PPR bins and the understanding of the public are improving over time, the cost-effectiveness of installing PPR bins in every major shopping centre is yet to be proven. Servicing and sorting costs of PPR bins are considerably higher than normal recycle bins, for a lower yield of recyclable materials.

Installation costs are higher for PPR bins. The bins require good signage and because bins form part of the streetscape, they are usually enclosed in steel surrounds similar to the street litter bins. A more extensive rollout of PPR would be very costly from both a capital and servicing perspective. The steel frames can cost in excess of \$3,500 per facility and collection from these systems is also costly.

Expansion of the PPR bin network is not proposed at this time, but the existing public recycle bins in and around Tunstall Square will remain and will continue to be monitored. Consideration is also being given to the removal of these bins.

4.9.2 Detox Your Home

Sustainability Victoria offers a program for the collection and safe disposal of household chemicals and some potentially hazardous waste items. The Detox Your Home program operates in two ways – as a mobile service that visits different regions on a periodic basis, and with regional permanent sites that cater for the less toxic and dangerous items such as paint, oils, car batteries, household batteries, fluorescent tubes and compact fluorescent globes.

Manningham City Council has successfully hosted the mobile Detox program at the Council Depot every few years, the most recent being in August 2010. These drop-off days are very popular and yield significant volumes of materials.

The nearest permanent Detox site is located at neighbouring Banyule City Council's Transfer Centre in Heidelberg. These sites are funded by the Victorian Government and limited funding and few suitable locations are available.

4.9.3 Byteback

Computers, printers, monitors and other computer parts can be recycled free of charge as part of a computer industry-funded scheme called Byteback that has been extended until 2012/2013 until the national product stewardship scheme is introduced. The nearest drop off location to Manningham is at neighbouring Boroondara City Council's Transfer Centre in Camberwell. The Byteback scheme recycles a wider range of computer components than Council's 'at call' hard waste service can also accept. The Byteback program is expected to be incorporated into the National TV and Computer Recycling scheme being launched by the Australian Government during 2012/2013.

4.9.4 *Mobile Muster*

Mobile phones can be recycled through this industry-funded program available at selected telephone, Australia Post and retail outlets as well as at the Council Civic and Depot offices. Unwanted mobile phones can be dropped off or mailed back for recycling. Council promotes the program in its publications, as well as on the Council's website.

4.9.5 *Renew Program*

The Renew Program is an annual kerbside collection of unwanted but potentially reusable household goods using the recycle bin on the day after the normal recycling collection. The use of existing recycle bins for a special, separate household goods collection was an initiative of the City of Moonee Valley.

In recent times other independent organisations have provided means to the community to dispose of unwanted goods. One such organisation is 'ziilch'. Ziilch is a user-friendly, reuse and recycle website that allows users to give away items they may no longer need while also finding free goods they may want. As the name implies, everything is free. It is free to list your unwanted goods, free to take, which means the only thing the user needs to organise is the postage or collection. Ziilch promotes itself as a 'simple, no-fuss, quick, cost-effective way to declutter and clear unwanted goods once and for all'.

4.9.6 *Light Globes and Household Batteries*

Since 2010 Council has managed a service enabling households to recycle all used and unwanted light globes. This came about as the old-style pear-shaped incandescent light globes were phased out and no longer allowed into Australia. CMA EcoCycle, a Melbourne-based light-globe recycling organisation, supplies wheelie bins and boxes to collect the globes. Collection bins are currently located at the Depot office. Almost all of the components, including mercury from the compact fluorescents, are recycled.

In 2012 Council set up a recycle service for Council staff to recycle used household batteries. The service accepts all domestic alkaline batteries up to the size of a 9 volt battery at the Council Civic Centre and Depot office.

4.9.7 *Litter Bins*

Council has over 1,300 litter bins located in shopping centres, at bus stops, sporting reserves and various other public locations near sources where litter is generated. Litter bins are typically provided inside a metal enclosure in shopping centres and at high profile locations, to assist with clear identification of the public litter bins and ensure that the appearance of the street or shopping centre is enhanced. The bins are intended for public litter, not trade or domestic waste.

These litter bins are serviced at schedules that vary, depending upon the volume of litter that is regularly placed in the bins. Litter bins in major shopping precincts are serviced 2 or 3 times per week, whereas litter bins located in the vicinity of small shopping centres may only require servicing once or twice per week. Sporting ground litter bins are serviced via a collection schedule that reflects the different volumes generated and seasonal factors.

The purpose of public litter bins is to help to maintain a neat and tidy streetscape. The number of litter bins provided and their location are reviewed periodically to remove bins that may no longer be required, or add bins where the generation of litter becomes a problem that can be resolved if a litter bin was installed. Experience at Councils across Australia is that the presence of a litter bin does not guarantee to resolve a littering problem, or that there will not still be litter dropped in the vicinity of the bin. Incidents of commercial and household waste being dumped in Council litter bins continues to be an issue of concern, because bins become over-filled and further litter spills onto the street. This drives up the cost of clearing up litter.

4.9.8 Streetsweeping

Council's street sweeping service contributes to the collection of litter and waste that falls or is thrown onto the roadside. The street sweeping program operates on a varied schedule, sweeping streets on average every 6 weeks for most of the municipality. Although there are often a high proportion of the sweepings that is organic material such as leaves, it is difficult to recycle because of the dirt, rubbish, packaging and other contaminants that are swept up at the same time.



5 KEY WASTE ISSUES

The following key waste issues have been taken into consideration in the preparation of the IWMS. These issues have influenced the scope, timing or priority of the proposed actions in the IWMS. The issues do not represent all of the influencing factors for this strategy, and are presented here in brief summary only.

5.1 COMMUNITY NEEDS AND EXPECTATIONS

Council's waste and recycle services will be managed and progressively improved to meet community needs and expectations. The community needs and expects Council's waste services to be high quality, reliable, and compliant with relevant Federal and State Government standards, policy and legislation. The Manningham community supports Council's strategic objectives to reduce waste, increase diversion from landfill, and to provide more opportunities to recover and recycle waste items. There is a clear expectation that these objectives must be achieved in a sustainable and affordable manner.

The actions within the IWMS generally reflect the input from the community for the progressive improvement to waste services and facilities that the community currently support and utilise. The strategy includes actions to ensure that future changes to the waste and recycle services are reasonable and justified, and that any transition to new service arrangements involves clear communication with the community.

5.2 POTENTIAL CHANGES TO STATE GOVERNMENT WASTE POLICY AND PROGRAMS

At the time of drafting the IWMS, the State Government has reviewed the roles and responsibilities of Sustainability Victoria and MWMG (as detailed in section 2.3.2), and the Victorian Auditor General has recommended a review of the state's leading waste strategy, TZW. The status of the Victorian Advanced Resource Recovery Initiative (VARRI) to stimulate the development of ARRT facilities in Melbourne is unknown.

The IWMS assumes that the intent and general direction of current Victorian Waste Policy will continue, but the implementation timetable will be slower than anticipated. The timeline for achieving the waste diversion targets for TZW is likely to be delayed by at least 5-years as a result of the delays in developing suitable ARRT facilities.

5.3 UNCERTAINTY ABOUT THE FUTURE OF THE ORGANICS PROCESSING INDUSTRY

The number of processing facilities available for composting garden waste has substantially reduced in the past 2 years. The facility that Manningham used to process garden waste closed due to odour issues and rising compliance costs. Across Melbourne, the supply of material from municipal collections exceeds the capacity of the remaining processing facilities. Interim arrangements are in place to mulch and reuse the organic material to rehabilitate quarry and old landfill sites, with some material going to trial use on farms. These options may not be sustainable over the long term.

The MWMG is currently developing tenders for the construction and operation of modern processing facilities that will employ technologies such as enclosed vessels. It is intended that these processing facilities will be able to operate without the odour concerns that have forced the closure of a number of organics processing facilities across Melbourne.

Councils in the north and west of metropolitan Melbourne recently accepted a collective tender with Veolia to develop an in-vessel composting facility to service the needs of the region. This involves the participating Council's committing to send their garden waste exclusively to this facility as part of a long-term contract arrangement, making it viable for a private contractor to invest in the development

of a suitable processing facility. The gate fee is expected to be at least 50% above previous garden processing prices to cover the cost of establishing such a high-technology facility. The benefit is that in time, such a facility may be able to process food waste as well as garden waste. The facility is yet to get planning approval and start-up is not expected until 2013 at the earliest.

Councils in the south-eastern suburbs of Melbourne are currently scoping a similar tender and collective contract arrangement. The increased capital and operational costs for these new processing facilities means that gate fees will be significantly higher than present costs.

Council is participating in a regional eastern organics processing contract for a high-technology enclosed composting facility that will be built and operated by private contractors. The affordability and viability of Manningham using such a facility will be assessed as more details are known. Currently the eastern region CEO's have committed to participating in this process.



5.4 LANDFILL LEVY AND ADVANCED RESOURCE RECOVERY AND TREATMENT

The landfill levy is a tax levied by the Victorian State Government on every tonne of waste deposited at landfills. Landfill levies increased from \$9 per tonne for municipal waste in 2009/2010 to \$30 per tonne on 1 July 2010, to \$44 per tonne on 1 July 2011, and will increase to \$48.40 per tonne on 1 July 2012. These increases were due to government policy to act as an incentive to reduce waste disposal to landfill and to provide additional and ongoing funding to support efforts by government, industry and the community to reduce waste.

The increase in the landfill levy between 2009/2010 and 2011/2012 added \$35 per tonne to the cost of disposing of the 22,280 tonnes of municipal waste each year, imposing an annual cost increase of \$800,000 on Council waste services.

The landfill levy will continue to increase by 10% each year until 2014/2015. This will continue to have a significant cost impact on Council's waste and recycle services and rates. As the increasing amount of landfill levy drives up the cost of landfill, it is expected that the gap between the gate fees required to sustain ARRT facilities and the gate fee to dispose of waste to landfill will progressively reduce. The gate fee for ARRT facilities where they are more established in NSW ranges from \$150 to \$200 per tonne, more than double the current cost of disposing of waste to landfill in Victoria.

The role of the landfill levy in providing an incentive for the development of these ARRT facilities is not known at this time. The business case for the development of ARRT facilities has been detailed in a yet to be released VARRI document.

5.5 IMPACT OF PROPOSED NATIONAL CARBON PRICE MECHANISM AND CARBON TRADING SCHEME

At the time of drafting the IWMS, details of the impact of the Australian Government's carbon price scheme are still not fully known. The cost that this will add to the Council's waste services is yet to be determined and will depend in a large extent on how landfill gas emissions are to be measured and treated under the scheme.

Council's waste and recycle services will be impacted by any cost increase in fuel for transport vehicles and rising utility costs. The carbon price is expected to provide incentives for the development of renewable energy and programs to reduce Council and the community's environmental footprint.

5.6 LANDFILLS AND EPA COMPLIANCE

In 2010, the EPA introduced the Best Practice Environmental Management - Siting, Design, Operation and Rehabilitation of Landfills (Landfill BPEM). The landfill BPEM raised the expected standards for managing landfills to incorporate new technology and the latest understanding of improved management practices at landfills. The revisions to the document also respond to a number of the recommendations of the Victorian Ombudsman's report Brookland Greens Estate — Investigation into Methane Gas. Every landfill is required to improve its landfill management practices to meet these new standards, especially the management of methane gas, leachate, and the reduction of landfill odour.

Compliance with these new standards is adding considerably to the operating costs of modern landfills. It is also increasing the cost of rehabilitating closed landfills and capping completed areas of existing landfills.

The EPA is currently undertaking stricter enforcement actions on landfills and waste processing facilities to ensure compliance with the new BPEM.


5.7 FUTURE KERBSIDE WASTE AND RECYCLING CONTRACTS

As discussed in section 4.1 of this strategy, Council's kerbside waste and recycle collections will be based on long-term 7 to 10 year contracts to ensure that the services use quality collection vehicles and capital costs are spread over the contract period (amortised). While it is possible to vary kerbside contracts during the contract period to take into consideration new legislation or collection practices, substantial changes to technology or infrastructure such as bins or trucks would involve major changes to the contract, including cost implications.

It is likely that the development of ARRTs will not impact the kerbside collection contracts before the expiry of the contract term. However the proposed basis of future kerbside contracts is that they will meet Manningham needs for the foreseeable future and will allow for a sensible transition to utilising these facilities once they are established and their viability is proven. The new contracts will have sufficient flexibility built in to allow for reasonable change and improvement as required.

5.8 DONCASTER QUARRY

Manningham City Council has owned and operated the Doncaster Quarry for over 45 years. As the commercially available rock reserves have been exhausted, consideration is now being given to other options for the site.



Council has engaged EPH (Envirofill) Pty Ltd to undertake an initial stage of rehabilitation of the site through partial filling of the old quarry using approximately 300,000 cubic meters of clean fill to address site safety issues and requirements. The partial filling, currently in progress, will take between 3-5 years to complete, allowing Council time to assess the viability of options for the final use of the quarry site either as partially filled for waste management recycling and recovery purposes or complete the filling for other potential uses, i.e. recreational, residential or open space purposes.

At the time of drafting this IWMS, Council is working with the MWMG on undertaking a detailed analysis of waste facility options for the use of the former Doncaster Quarry site.

The purpose of the project will be to determine the most viable waste facility option (based on social, political, environmental and economic factors) for the future use of the Quarry site which will:

- Provide a diversified and sustainable use of the valuable resource.
- Reduce waste disposal/transfer/transport costs.
- Increase resource recovery.
- Reduce greenhouse gas emissions.
- Attract potential development and investment.
- Provide an opportunity for the Manningham community to share in the benefits derived from the facility.
- Support emerging industries and increase employment opportunities.
- Demonstrate the provision of a waste facility as an opportunity to innovate and lead a replicable initiative for carbon reduction and community resilience.
- Determine a best practice governance model for the establishment and operation of the facility.
- Have minimal impact on surrounding areas.

Once completed, the findings of the waste management feasibility study will be reported as part of the overall Doncaster Quarry study being undertaken by the Strategic Projects Unit. The Strategic Projects Unit study will review all options for the site, not just waste management opportunities.

6 IMPROVEMENT OPPORTUNITIES

There have been a number of opportunities for improvement identified during the preparation of the IWMS. Potential improvements to the recovery and recycling of resources using advanced waste treatment facilities have been discussed in Section 5 and throughout the IWMS. Significant improvement in the proportion of waste diverted from landfill will depend on the availability and affordability of ARRT and in-vessel composting facilities. ARRT are not expected to be available for another 5 years. In the interim, the key areas for improvement of Council's waste and recycle services and facilities are:

- Improvements to the kerbside collection services.
- Changes to the kerbside bins to encourage improved diversion of waste from landfill.
- Incentives and programs to reduce the amount of food and garden organic material that is currently going to landfill.
- Community awareness about Council's waste services and waste reduction practices.

6.1 FOOD AND GARDEN WASTE

The 2011 Manningham Waste Services Bin Audit revealed that the average Manningham garbage bin consisted of over 48% food waste and up to 10% of garden waste. Achieving the State Government's 65% waste diversion target will require diversion of food and garden waste from the garbage waste stream. The State Government Strategy is to reduce waste to landfill through the introduction of ARRTs such as anaerobic digestion, enclosed vessel composting and energy from waste; that effectively extract food and garden waste from the residual waste stream. Council supports the introduction of these initiatives, however, the timing and costs to introduce these schemes is not certain.

The introduction of food waste into the current garden waste stream is not recommended at this time due to a lack of processing facilities. If suitable processing facilities are introduced in the next 5 years, then food into the garden waste stream may be considered once these facilities prove to be viable and affordable. In addition to the availability of suitable processing facilities, issues such as collection frequency, management of contamination, cost/benefit, community participation and education programs would need to be addressed.

The separate collection of food would similarly require considerable capital costs to establish new bin and collection vehicle infrastructure, so it is considered to be a less viable option at this time. However sections 6.2 and 6.3 discuss the different issues which will need to be considered to the introduction of new 'standard' bin size options which may include a mandatory garden waste bin as part of the 'standard' waste service provided by Council following the introduction of ARRTs.

As discussed in section 4.5.3, Council is participating in a regional eastern contract for a high-technology enclosed composting facility that will be built and operated by private contractors. The affordability and viability of Manningham using such a facility will be assessed as more details are known. Any consideration of collecting food waste should be evaluated with support from MWMG and the State Government as the primary requirement is the availability of suitable facilities to process the waste in a sustainable and affordable manner.

In the interim, there are schemes that can be introduced at a local level that will reduce garden and food waste to landfill. Home composting provides the greatest opportunities to reduce waste to landfill. Some feedback obtained during consultation with the community indicated the uptake of home composting is limited by the issues often encountered by many home worm farmers or composters. These issues include:

- Vermin such as rats and mice
- Flies
- Odour
- Excessive worm mortality

- Excess garden waste

These problems are all solvable, but require a level of effort beyond the time available to many residents. More advanced composting systems, such as Aerobins or tumbler systems, offer simpler operational procedures, but they are more expensive to purchase. These systems also offer the advantage that they can be operated on concrete or unsealed surfaces, making them more convenient to access and potentially suitable for multi unit dwellings.

A project with similar aims as the Aerobin trial is the City of Frankston 'Halve Garbage Waste', which was a project that aimed to reduce waste-to-landfill by composting or worm-farming. Funded through Sustainability Victoria, the 'Half Garbage Waste' project involved 1,000 households from across Frankston City. These households were given a free compost bin or subsidised worm farm, and received a \$20 rebate on their waste charges, subject to changing from a weekly to fortnightly household garbage collection. Their garbage bins were identified by a red lid, to ensure compliance with a fortnightly collection schedule.

The project was capped at 1,000 participants. The majority of participating households were single occupants or couples. The City of Frankston provided the following comments:

- Households needed the weekly bin pick up at peak times .
- Data indicated that, on average, the waste in the garbage bins was halved.

The cost of Aerobins is between \$250 to \$300; depending on the number of bins purchased. The cost of a rollout of an Aerobin trial would therefore need to be carefully managed, as there would be additional costs associated with:

- Delivering the bins
- Explaining their use and the purpose of the trial
- Monitoring the trial
- Collecting the bins
- Auditing the waste disposal
- Analysing results and benchmarking with other households

It is worthwhile considering a trial for Manningham, building on the learnings of the Frankston trial, however, the support of sponsors or external funding may be necessary to ensure the trial is cost-effective.

In an effort to assist residents with the collection of excess garden waste material, Council currently offer residents the opportunity to access an additional garden waste bin(s) at cost. Due to seasonal increases in garden waste (usually from the beginning of Spring to the end of Summer), access to an additional bin would alleviate issues residents may be experiencing in disposing of excess garden waste material. The better promotion of this service would assist those residents encountering issues with the disposal of excess garden waste material.

6.2 RESIDUAL WASTE REDUCTION & BIN SIZE OPTIONS

As discussed in section 6.1, the average Manningham garbage bin consisted of over 48% food waste.

The Manningham domestic garbage service currently uses either an 80 or 120 litre MGB as its standard size bin that residents are entitled to as a part of their waste service. Approximately 30% of the domestic garbage bins are 80 litre in size, while 70% of the domestic bins are 120 litre in size. Businesses are currently entitled to a 240 litre MGB. Council will be reviewing the appropriateness of waste collection from businesses due to the ongoing issues being encountered by providing the service, namely relating to access issues for waste collection vehicles as well the constant overloading of bins.

Sustainability Victoria's survey data indicates that the 120 litre garbage bin is the most common garbage bin collection system in use in Victoria with approximately 65% of Councils using this system

as at 2010/2011. Most councils offer a range of garbage bin sizes from 80 litre to 240 litre, and there is an increasing trend towards councils using either an 80 litre or 120 litre bins as its preferred garbage bin size.

Manningham residents and small businesses currently dispose of an average 504kg per tenement per year. This average yield is inclusive of all the household garbage collected, as well as garbage collected from small businesses. The small business garbage yields cannot be separately itemised as the same waste collection vehicle collects waste from both Manningham households and from small businesses across the municipality. Sustainability Victoria's survey data indicates that smaller bins, such as the 80 litre bin, produced on average 402 kg of garbage per household per year, compared to the 120 litre bin that typically yield an average of 464 kg per household

Manningham is continually reviewing ways to reduce its garbage tonnage without adversely contaminating the other waste streams (recycle and garden waste bins). To reduce the volume of waste that goes to landfill is not as simple as reducing the size of the garbage bin. Deciding on an acceptable minimum size garbage bin that will satisfactorily cater for 'average' household use is difficult. Waste disposal needs vary from household to household, depending upon the number of people in the household and their dedication to minimising their waste. There are also seasonal factors - the tonnes of waste going to landfill increases significantly in Spring and Summer each year.

Manningham has 42,860 domestic garbage bins in use of which 30,000 are 120 litre in size. If every household with a 120 litre bin was encouraged to change its garbage bin to an 80 litre bin, as well as being provided with other means to dispose of their food waste (i.e. worm farms, compost bins – as discussed in section 6.1), an average reduction of 60 kg per annum (based on Sustainability Victoria survey data) could be achieved; an overall reduction of 1,800 tonnes of residual waste being sent to landfill.

With the landfill levy fee increasing to \$48.40 per tonne in 2012/2013, this would potentially save \$87,120 per annum in waste levy fees. If the total gate fee of approximately \$90 per tonne is avoided, the savings could be even more significant, of the order of \$160,000 per annum. However the extra waste is not going to vanish and not everyone would cope with an 80 litre garbage bin, particularly large families and families with young children.

Reducing the standard garbage bin size to 80 litre capacity, but retaining the option to use the existing 120 litre bin would enable:

- Some residents and small businesses to use the 80 litre bin because they already dispose of 80 litres or less of waste per week (i.e. minimal or no reduction in tonnes disposed to landfill).
- Some residents to change their waste disposal practices if the financial incentive to reduce bin size was sufficient to change behaviour (i.e. reduced waste to landfill).
- Other residents to retain the 120 litre garbage bin due to their waste disposal needs (i.e. minimal or no waste reduction to landfill).

The percentage of Manningham residents that would change to an 80 litre garbage bin and the corresponding reduction of waste to landfill difficult to quantify.

In order to facilitate this reduction in bin sizes, Council need to provide both a financial incentive and a means to reduce residual waste. A reduction in the generation of waste through programs that divert food from landfill, as well as increased recovery / recycling of other waste streams in anticipation to the introduction of advanced resource recovery technologies.

6.3 WASTE SERVICE OPTIONS

As part of the development of the IWMS and as discussed in section 6.2, any change in standard bin sizes would also require a review of Council's waste service charging options (waste rates). The cost of providing Council's waste services is currently covered by a separately itemised waste charge.

An underlying principle of charging a separately itemised waste charge is that all property owners pay a fair share of their waste service cost dependent on the waste service option they may be using at their property.

Typically a household using larger bins or more services would pay a higher waste services charge than a household using smaller bins or fewer services. For example, a property using a 120 litre garbage bin would have a higher charge than a property using a 80 litre garbage bin.

Council's waste and recycle services are available for use by all rate-paying properties, but in some cases, the services are not able to meet their needs. These properties typically require larger bin capacity and more frequent collections.

In recent years, the escalating cost of the State Government landfill levy has significantly added to the cost of providing municipal waste services. Councils have taken varied approaches to showing the community the impact of the rising landfill levy. Some Councils have separately calculated the percentage increase or amount of rates and charges necessary to pay the landfill levy to the State Government, but there is not yet a consistent approach to how this charge is shown on the council Rates notices. Manningham City Council currently includes the cost of paying the landfill levy in the waste service charges for the various waste collection services.

One of the important challenges in determining waste charges is to do so in a manner that covers the full cost of providing the services, as well as encouraging behaviour change to reduce waste to landfill and garden waste facilities, yet remaining affordable. The continuation of the current waste service charges consistent with user-pays principles is preferred, i.e. the larger the garbage bin capacity, the higher the charge.

As discussed in section 6.1, once ARRTs and in-vessel composting facilities become operational and in light of the principles discussed in section 6.2, Manningham's 'standard' waste services could be configured to the following mandatory services:

- Weekly collection of domestic garbage in a 80 litre garbage bin (120 litre bin available at additional cost)
- Fortnightly collection of recyclables in either a 120 litre or 240 litre recycle bin
- Fortnightly collection of garden waste and food waste bin in either a 120 litre or 240 litre garden waste bin
- Two at-call hard waste collections

In principle, all residents would pay for the 'standard' mandatory waste services (as a minimum). If a resident opted not to have a garden waste bin, the waste service charge would still be charged in full.

The waste service charges are currently determined each year in Council's annual budget process. The waste service charge is expected to increase in line with the increasing landfill levy and landfill operational costs, however, incentives need to be investigated on ways to reduce the amount of waste being sent to landfill and garden waste sites.

6.4 COMMINGLED RECYCLABLE IMPROVEMENTS

The 240 litre recycle bin is used by nearly all Councils in Victoria. Fortnightly recyclable collections using the 240 litre bin have proved to be satisfactory for most households for many years. With the increase in the amount of recyclable packaging available and improved recycling sorting technology that has enabled the collection of a wider range of recyclable items in recent years. The 240 litre recycle bin may not always be adequate to meet the recycling needs for all households.

Manningham residents are excellent recyclers and there are seasonal factors with peak recycling yields in Spring and Summer. Increased capacity may be required to reduce the potential for overflow into the garbage bin.

The current Manningham commingled recyclable material collections provide a best practice level of service. Material collected includes plastics, metals, glass containers, paper, cardboard and composite paper packaging.

The 2011 Manningham Waste Services Bin Audit revealed that there is approximately 19% of recyclable materials being disposed of in the garbage bin.

Feedback from the consultation program indicated that some residents found that the current 240 litre bin was inadequate for the amount of recyclables that they generate each fortnight.

Options to provide a larger volume of recyclable collections include:

- Weekly collections
- Provide additional 240 litre bin to residents (current system)
- Provide option for larger commingled bin

However, the survey indicated that no residents wanted a weekly commingled recyclable collection service.

A possible option for residents who have capacity issues with their recycle bins is the introduction of a 360 litre mobile garbage bin. The introduction of this bin as an option to residents would provide 50% more capacity, without the inconvenience of having to provide two bins or increased collection frequency. This bin, however, currently cannot be picked up by the same collection vehicle as a 240 litre bin.

The appropriate time to introduce this bin would be at the introduction of the new collection contract. Collection contractors may seek a higher lift rate for a 360 litre bin compared to a 240 litre bin as it may reduce the number of properties that could be serviced in a given run. Inclusion of this option at the time of tendering for the new waste services will result in the most competitive price.

The value of the collected recyclable materials varies over time, depending upon commodity prices and fluctuations in the demand for items made from the recycled materials. The value of kerbside recyclables has stabilised and increased in recent years as a result of improvements to processing technology that has resulted in a better quality of recycled product. Council's current contracts have resulted in the Council receiving payment for their recyclables, rather than having to pay per tonne to process them.



7 FUTURE DIRECTIONS

7.1 OBJECTIVES AND PRIORITIES

The current kerbside landfill diversion rate at Manningham is 56.5%. The State Government target for waste diversion from landfill is 65% by 2014. However, the State Government is currently reviewing its waste diversion targets as part of its Waste Policy Review.

As discussed in the IWMS, achieving this target will require the introduction of ARRTs and/or in-vessel composting, and improvement to the viability of markets for recycled food and garden waste.

This IWMS, while supporting the introduction of these technologies, seeks to deliver improvements in sustainable waste management over at least the next five years when it is unlikely that there will be sufficient ARRTs available.

Monash City Council's current kerbside landfill diversion rate is at 60% (the highest diversion rate in Victoria). The 60% diversion rate has been achieved through continuous improvements to the recovery of materials from the different waste streams.

Manningham can aim at achieving a similar diversion rate following the commencement of the new waste collection contracts in 2015, however in the short term, a reduction in the generation of waste through programs that divert food from landfill, as well as increased recovery / recycling of other waste streams that currently go to landfill, are areas which Council can develop in preparation for the introduction of ARRTs. The potential establishment of some type of waste facility at the former Doncaster Quarry site will assist in increasing the landfill diversion rate.

It should be noted that the existing bin stock in Manningham is approximately 13 years old. The MGBs have a finite life and as the plastic ages, breakage increases. Bins with a higher percentage of recycled resins have a shorter life expectancy. The life expectancy of a new resin bin is expected to be 10 to 15 years. If a bin is stored under cover it would have a greater than 15 year life expectancy. It is envisaged that the existing stock will be replaced in 2015/2016 and the new bins should comply with Australian bin standards and will accommodate the needs of a future ARRT.



8 ACTION PLAN

The following Action Plan has been developed to achieve identified objectives, issues and opportunities for improvement detailed throughout the IWMS:

8.1 RESOURCE CONSUMPTION & REDUCTION STRATEGIES

Objectives:

- Reduce household and Council waste generation rate.
- Implement programs that target efficient use of food in the home and minimise waste by reducing spoilage.
- Targeted education and incentive programs that address reducing the volume of food, recyclables and garden waste that goes to landfill.

Actions:

- 8.1.1 Monitor Council's performance against State targets.
- 8.1.2 Continue to extend its community education role to focus on waste management.
- 8.1.3 Collect performance data on Council's resource recovery rates and other relevant waste and recycling trends, to feed into Council's sustainability reporting and performance review processes.
- 8.1.4 Amend Council's municipal waste recovery and diversion target to 60% by 2017.
- 8.1.5 Following the introduction of advanced resource recover technologies, review the standard garbage bin size to encourage further waste reduction.
- 8.1.6 Trial advanced home composting systems to determine the viability of such systems to reduce the volume of food and garden waste in garbage bins, commencing in 2014/15.
- 8.1.7 Support Metro Wide home composting and worm farm education programs.
- 8.1.8 Continue to promote home composting (and mulching) by providing incentives for home composting, worm farms, bokashi bins and like products; and provide information on 'how to' compost and reduce food and garden waste.
- 8.1.9 Seek that community education is strongly focused on diverting recyclable materials out of the garbage stream and into the recycle services currently provided, as well as decreasing contamination rates in the relevant waste streams.

8.2 ADVOCACY ROLES FOR COUNCIL

Objectives:

- Waste policy is needed to provide guidance on the entitlement to a waste service and charges for a waste service.
- Waste Strategy is to utilise performance data to ensure continuous improvement, and be updated when significant changes occur to government policy.

Actions:

- 8.2.1 Continue to actively participate in local, State and Federal Government forums.
- 8.2.2 Continue with membership of key industry bodies such as the Waste Management Association of Australia and other industry bodies, forums etc.
- 8.2.3 Continue to support and advise Council's Environmental Sustainability Advisory Committee.
- 8.2.4 Periodically review and update the IWMS in light of changes to the State Governments Waste Policy, the implementation of ARRT, or other significant changes that affect the waste industry.
- 8.2.5 Advocate the MWMG on undertaking a feasibility study on whether the former Doncaster Quarry site is a viable site for the establishment of a transfer station or other alternate waste technology facility.

8.3 GOVERNMENT SUPPORTED COLLECTION & EXTENDED PRODUCER RESPONSIBILITY SCHEMES

Objectives:

- Continue advocating for material recovery programs and extended producer responsibility schemes for all household products and packaging.
- Prioritise processes for recovery including electronic waste, household chemicals, mobile phones.
- Improved education and organics processing facilities to reduce contamination.

Actions:

- 8.3.1 Continue involvement with the Eco-Buy program to promote the purchase and use of environmentally-friendly and sustainable products.
- 8.3.2 Continue to participate in and promote product stewardship programs such as Detox Your Home, Mobile Muster, Byteback and the proposed National TV and Computer recycling program.
- 8.3.3 Consider participating in further product stewardship or priority waste programs as they become available, subject to these programs being in line with Council priorities and resources.
- 8.3.4 Strengthen and better promote 'Waste Wise' initiatives across Council, including at Council events and facilities.

8.4 METROPOLITAN WASTE MANAGEMENT GROUP

Objectives:

- Continue to actively support the MWMG, including directives which maximise environmental outcomes consistent with responsible financial management principles.

Actions:

- 8.4.1 Continue to monitor and evaluate Manningham's progress in meeting and seeking to exceed its waste management obligations under the MWMG, TZW Strategies and new State Government Waste Policy.
- 8.4.2 Work with the MWMG on projects and programs where regional or shared contracts and services would support Council waste services.
- 8.4.3 Address partnership opportunities as they arise with the MWMG for the provision of some services, and for the trialing of new programs and systems.
- 8.4.4 Continue to participate in the MWMG landfill services contract, reviewing the option to extend participation in the contract or seek alternative arrangements at least 12-months prior to contract expiry.
- 8.4.5 Consider participation in regional contracts that will result in ARRT infrastructure for the processing of garden and/or food waste, pre-treatment of waste going to landfill, or other such projects that will help to achieve or exceed Council's waste diversion targets.
- 8.4.6 Continue to engage in the MWMG facilitated networks and forums.
- 8.4.7 Consider participating in an eastern regional contract for a new regional composting facility to be established in eastern region within the next 5 years (by 2017/2018).
- 8.4.8 Ensure that any future decisions on the establishment of ARRT facilities are made after consultation and consensus with metropolitan Councils to ensure their commitment to providing the long term dedicated feedstock required for these facilities.
- 8.4.9 Work with MWMG to ensure that the gate pricing structure for the ARRT facility is affordable by local government and builds on Council's existing collection arrangements. Council does not want to diminish the importance of avoidance, separation at source and onsite reuse within the waste stream.

8.5 KERBSIDE WASTE & RECYCLE SERVICES

Objectives:

- Develop new kerbside waste and recycle specifications for new contracts to commence mid 2015 which meet procurement requirements.
- Implement contracts that are based on best practice performance and waste service standards.
- Continue to expand education and behavioural change programs in support of proper source separation of household waste and recyclables.

Actions:

- 8.5.1 Prepare new kerbside waste, recyclable collection and receipts, garden waste and hard waste collection contracts to commence in July 2015. New contracts are to be based on best practice performance and customer service standards, be cost-effective, and sustainable.
- 8.5.2 Investigate incentive schemes to encourage further waste reduction and diversion into recycling.
- 8.5.3 Conduct bin audit programs in conjunction with targeted education to reduce contamination of organics and recyclables.
- 8.5.4 Continue to monitor the kerbside recycle service to ensure that the higher collected yields translate into higher sorted and recycled material with minimal contamination, at diversion levels that are either equal to or above the TZW targets.
- 8.5.5 Continue to support community education focused on correct disposal of recyclables.
- 8.5.6 Consider the introduction of a 360 litre commingled recycling bin option with the new recycling service contract.
- 8.5.7 Review the appropriateness of waste collection from businesses due to the ongoing issues being encountered by providing the service, namely relating to access issues for waste collection vehicles as well the constant overloading of bins.

8.6 GARDEN WASTE PROCESSING

Objectives:

- Support the upgrade and development of organics processing infrastructure.
- Consider collection arrangements such as combined food and garden waste when suitable processing facilities are available.

Actions:

- 8.6.1 Continue the garden waste collection service on an optional basis until such time as a viable, sustainable and accessible ARRT processing or in-vessel composting facility is established .
- 8.6.2 Participate in a eastern regional contract for a new regional composting facility to be established in eastern region within the next 5 years.
- 8.6.3 Extend and investigate alternative interim garden waste processing facilities to ensure garden waste from Council's bin service are recycled and kept out of landfill.
- 8.6.4 Continue to monitor the kerbside garden waste collection services to ensure that the higher collected yield translates into higher sorted and recycled material with minimal contamination, at diversion levels that are equal to or above the TZW targets.
- 8.6.5 Promote to residents living in bushfire prone areas of the municipality the open air burning processes as a viable way of disposing of green waste materials (as is detailed and allowed in Council's Local Law).
- 8.6.6 Investigate alternate (innovative) opportunities to collect garden waste from residential properties.
- 8.6.7 Promote the use of additional bin services (particularly for garden waste) during seasonal peak periods.

8.7 FOOD WASTE

Objectives:

- To maximise the recovery of food waste and avoid contaminants in the kerbside garbage bins.
- Support the establishment of new organics recovery infrastructure and/or significantly upgrade existing windrow compost facilities.

Actions:

- 8.7.1 Continue to participate in the review of ARRTs as a member of the MWMG.
- 8.7.2 Trial advanced home composting systems to determine the viability of such systems to reduce the volume of food and garden waste in the domestic garbage bin, commencing in 2013/2014.
- 8.7.3 Investigate the potential for subsidised provision of compost bins, worm farms and Bokashi systems through Council.
- 8.7.4 Continue to promote home composting by providing incentives for home composting, worm farms, bokashi bins and like products; and provide information on 'how to' compost and reduce food and garden waste.
- 8.7.5 Promote composting and food waste recycling at Council facilities wherever possible.
- 8.7.6 Run targeted community education programs about the importance of recovering and reprocessing food waste.
- 8.7.7 Evaluate options for the most effective and affordable collection and processing of food waste to divert food from going to landfill.
- 8.7.8 Subject to the outcome of the evaluation of options to collect and process food waste, provide the appropriate bin configuration and service for collection of food waste.

8.8 KERBSIDE 'AT CALL' HARD WASTE

Objectives:

- Hard waste collection systems which maximise resource recovery and provide safe collections systems

Actions:

- 8.8.1 Continue to offer 'at call' hard waste collection services to all residents, however continually review the delivery of the service to improve both the waste management and financial outcomes.
- 8.8.2 Monitor hard waste collection system to ensure compliance with Worksafe guidelines.
- 8.8.3 Encourage communal use of 'at call' hard waste services from multi unit developments.
- 8.8.4 Consider the introduction of the Moonee Valley City Council 'Renew' collection program within the City of Manningham.
- 8.8.5 Better promote the 'at call' hard waste collection service through Council's own publications and website.
- 8.8.6 Promote the availability of other waste collection and drop off services (Detox your Home, Byteback, MobileMuster, Renew, Ziilch, etc) through Council's own publications and website.
- 8.8.7 Review the viability of whether the current 'at call' hard waste collection service could be expanded to undertake collections of other waste materials (ie. bundled garden waste and other material currently not designated as acceptable hard waste material).

8.9 COUNCIL'S GARDEN WASTE RECYCLE CENTRE

Objectives:

- Provide a garden waste drop off facility to the community for the disposal of excess garden waste material.

Actions:

- 8.9.1 Continue to receive and process garden prunings at the Council's Garden Waste Recycle Centre.
- 8.9.2 Promote the services available at the Centre to the community.

8.10 DONCASTER QUARRY SITE

Objectives:

- Determine the most viable waste facility option (based on social, political, environmental and economic factors) for the future use of the Quarry site.

Actions:

- 8.10.1 Work with the MWMG on undertaking a feasibility study on whether the former Doncaster Quarry site is a viable site for the establishment of a transfer station or other alternate waste technology facility.

8.11 ACTIVITY CENTRE / EVENTS / SPORTING CLUBS WASTE AND RECYCLING

Objectives:

- Continue to expand education and behavioural change programs in support of proper source separation of waste and recyclables at sporting clubs / festivals / events.

Actions:

- 8.11.1 Seek practical support including resourcing / funding from MWMG and Sustainability Victoria where appropriate.
- 8.11.2 Strengthen and better promote 'Waste Wise' initiatives at festivals, events and sporting clubs.
- 8.11.3 Implement where possible recycling programs / collections at festivals, events and sporting clubs.

8.12 MULTI-UNIT DEVELOPMENTS

Objectives:

- Continue to ensure waste and recycling services are provided at all Multi Unit Developments (MUD)

Actions:

- 8.12.1 Review the Manningham Multi Unit Development Guidelines and determine the best suite of options for servicing MUDs in the municipality.
- 8.12.2 Provide more specific guidance to developers and require more detailed waste management plans from them through the planning permit process for MUDs.
- 8.12.3 Investigate whether skip bins could be introduced at multi unit developments across Manningham to assist in waste collection.

8.13 EDUCATIONAL PROGRAMS

Objectives:

- Continue to expand education and behavioural change through the implementation of innovative education and marketing programs to the community.

Actions:

- 8.13.1 Ensure that all the education related actions throughout this IWMS are addressed and implemented.
- 8.13.2 Provide regular promotion and information to the community on the range of services offered by Council in relation to waste and recycling.
- 8.13.3 Continue consulting with the community on its attitudes towards Council's waste minimisation and recycle service delivery performance.
- 8.13.4 Continue to include requirements around the delivery of education programs in Council's waste related contracts, and extend these to include a focus on business related education programs where appropriate.
- 8.13.5 Continue to engage in and encourage broader community and business participation in education programs facilitated by partner agencies such as the MWMG and Sustainability Victoria, including the Resource Smart program.
- 8.13.6 Continue to participate in and investigate opportunities for engaging in industry professional associations and networks in relation to waste education.
- 8.13.7 Ensure that the introduction of any new waste services includes effective communications programs to explain the benefits and requirements of the new waste service arrangements.
- 8.13.8 Focus community education programs to target the following contaminants – plastic bags, hard waste items, food waste, clothing and textiles, printer cartridges and residual domestic waste.
- 8.13.9 Review community grant arrangements with a view to reducing waste at community events.
- 8.13.10 Support standardised Metro Wide recycling sorting criteria with an education program, including advocacy for expansion of the range of materials that can be recycled through the kerbside system.
- 8.13.11 Provide education forums for Manningham residents on waste related issues.
- 8.13.12 Continue to support the recently employed Litter Prevention Officer to investigate, educate and enforce issues relating to litter across the municipality.
- 8.13.13 Seek funding from Victorian Government landfill levy funds for resources, programs and infrastructure to increase resource recovery and waste education.

9 ACKNOWLEDGEMENTS

Manningham City Council acknowledges with gratitude the following organisations that have assisted, contributed and provided ideas and information to the development of the Manningham City Council Interim Waste Management Strategy.

Many similarities and issues regarding the waste sector exist across local government and hence extracts of other Councils strategies, policies and plans have been used in the preparation of this strategy.

Boorondara City Council

Brimbank City Council

City of Sydney

EPA Victoria

Maribyrnong City Council

Metropolitan Waste Management Group

Moonee Valley City Council

Sulo MGB Australia

Sustainability Victoria

Whitehorse City Council