

# WASTE MANAGEMENT PLAN

CITY OF YARRA

2009 – 2014

FIRST DRAFT SEPTEMBER 2009

# EXECUTIVE SUMMARY

This Waste Management Plan is a major document in ensuring a sustainable City of Yarra.

The need to reduce waste, increase recycling and recover material resources is a major driver at all levels of government, and this is well supported by the City of Yarra community.

A sustainable community needs to have effective, long-term measures for the management of the waste it generates.

Council's waste management services are well established and performing well. The kerb side collection system is attuned to best practice and contamination levels are very low.

The contract situation is such that domestic garbage, street litter bin and recycling collection costs will experience Consumer Price Index (CPI) rises only, until 2016, when the contracts expire.

Recycling bins have relatively low levels of contamination and the current contract includes material rebates for recyclables until 2016, when the contract expires.

Two new green organic facilities are expected to be operational in approximately twelve months and are expected to have higher charges than currently experienced. However, as the City of Yarra currently disposes of approximately 200 tonnes per annum, total cost increases are expected to be low.


It is not expected that a fully operational ARRT will be available within the life of this Waste Management Plan, i.e. by 2014. However, it is expected that landfill disposal costs will remain competitive but increase by approximately \$160,000 per annum, at the time of the disposal contract renewal in June 2010, after annual CPI adjustments are applied.

With additional focus upon removing recyclables and food from garbage bins to reduce landfill costs i.e. by greater diversion from the garbage bin, increasing home composting and consuming less, the predicted improved diversion rate (10% extra by 2014) should offset the predicted \$160,000 increase by approximately \$45,000.

The domestic waste bin currently contains some items which are recyclable and could be diverted from the waste stream. Increased communication and education of residents will assist them understand the importance of separation of the waste stream to divert waste from landfill.

The promotion of home composting could provide an alternative for some residents.

With the higher density living across the municipality, low volumes of green waste are generated in Yarra so the implementation of a regular green waste bin service is



not recommended. Continuation of the “at call” collection service should meet the majority of residents needs into the future.

Opportunities exist to promote Commercial and Industrial and Construction and Demolition recycling across the municipality. Council should further develop programs and recycling opportunities for owners and operators in these activities.

The Alternative Resource Recovery Treatment facility being promoted by the State Government will assist the recycling effort and reduce the community’s carbon footprint. Council should continue to work closely and cooperatively with the Metropolitan Waste Management Group, Environment Protection Authority, Sustainability Victoria and the State Government to help achieve the establishment of such a facility.

Section 7 contains an Action Plan which has been prepared to direct Council’s resources to achieve the objectives contained within this Waste Management Plan.

To implement the actions contained within this Plan an investment of \$269,250 of ongoing costs and \$109,000 of one off cost will be required over its five year life.

If all of the actions are effectively implemented, it is predicted that the amount of garbage collected and disposed at landfill will reduce by 16 kilograms per person per year and the quantity of materials being recycled will increase by 16 kilograms per person per year, giving an increased diversion from landfill of 10% lifting the current diversion rate from 45% to 55%.

Considering the current impetus for change within the waste management industry and the number of actions required, it is imperative that this document remains current and directional. That is, it is reviewed annually over its’ five-year life or at least, while this major transition continues.

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# 1.INTRODUCTION

## 1.1. PURPOSE

This Waste Management Plan (The Plan) has been developed to provide guidance and direction to the City of Yarra as it moves to provide more sustainable solutions for the collection and disposal of waste generated within its community.

The Plan recommends strategies and measurable actions to be undertaken by the City of Yarra over the next five years. Its key aim is to guide the development and improvement of waste management practices.

It has been developed to support the achievement of the Council Plan 2009-2013 strategic objective of *“Ensuring a Sustainable Yarra”* and the Yarra Environment Strategy – Towards Local Sustainability 2008-2020 vision of *“A vibrant, liveable and sustainable inner city that the community can be proud of.”*

The management of waste is a major component of Councils annual commitment to sustainability and as such, should be appropriately managed.

## 1.2. COUNCIL OVERVIEW

### 1.2.1. Local Waste Management

Waste management in the City of Yarra covers a wide range of activities including:

- Kerbside collection of household garbage and recyclables;
- Processing and disposal of materials collected;
- Collection from street litter bins;
- At-call Hard and Green Waste Collections;
- Street sweeping;
- Management of waste generated at festivals and events;
- Waste reduction education and community support; and
- Ongoing development and implementation of waste minimisation strategies.

### 1.2.2. Local Population Characteristics

The City of Yarra is an inner metropolitan Council, 3 kilometres north-east of the central business district of Melbourne.

It includes the suburbs of Abbotsford, Burnley, Clifton Hill, Collingwood, Fitzroy, North Carlton, North Fitzroy, Richmond and the southern portions of Alphington and Fairfield and has a current population of 74,000 people. The local economy is supported by some 8,720 businesses.

2006 (actual)		2011 (est.)		2021 (est.)	
Residents	Dwellings	Residents	Dwellings	Residents	Dwellings
72,376	35,358	76,412	37,835	83,913	42,243

**Table 8.1 - Population and Dwelling Estimates**

2011 (est.)		2021 (est.)	
Residents	Dwellings	Residents	Dwellings
5.57%	7.00%	15.94%	19.47%

**Table 8.2 - Estimated Growth Rate**

Average annual percentage change is 1.01% growth

Residents living in Yarra come from culturally diverse backgrounds. The 2006 census indicates that 38.4% of residents were born overseas, with the main countries of birth outside Australia, being Viet Nam, England, New Zealand, Greece and China.

The 2006 census also found that:-

- 33% of the population speak a language other than English, as the principal language in their home;
- Household composition - Family 47%; Lone-Person 29% and Group Household 14%;
- Average household size - 2.2 persons;
- Median individual income - \$653 per week;
- Median household income - \$1,196 per week;
- Median family income - \$1,640 per week and
- Employment status - 66% full-time, 24% part-time, 5% unemployed.

The City of Yarra has a diverse spread of household wealth, with an increasing number of affluent households, while some sections of the community have relatively low-income levels.

Many residents own or are purchasing their home, a significant number are renting and more than one-in-ten live in public housing.

Recent community surveys indicate that both local and global issues are of concern to the community and they are supportive of an improved focus on environmental sustainability from the Council.

Residents have a strong image of what their municipality should look like into the future and require ongoing communication from Council on what it is doing to ensure that this is achieved.

### **1.2.3. Key Waste Issues for the Municipality**

Council is well placed in terms of Waste Management services. It has a best practice kerb side collection system for recyclables, long term waste contracts in place to service the community's needs, high recycling participation rates with low contaminations levels and a landfill disposal site with many years of airspace left to fill.

The emerging issues for Yarra City revolve around environmental sustainability. Its residents have become very conscious of the need to reduce their environmental footprint and are pushing Council to become leaders in this field.

This means that Council needs to adopt waste management strategies which further reduce the need for landfill disposal of waste, increase community (household, business and the general public) recycling and promote environmentally sustainable practices.

To make substantial additional progress in these areas, Council will need to utilise the services of an Advanced Resource Recovery Technology facility capable of treating its residential solid waste stream.

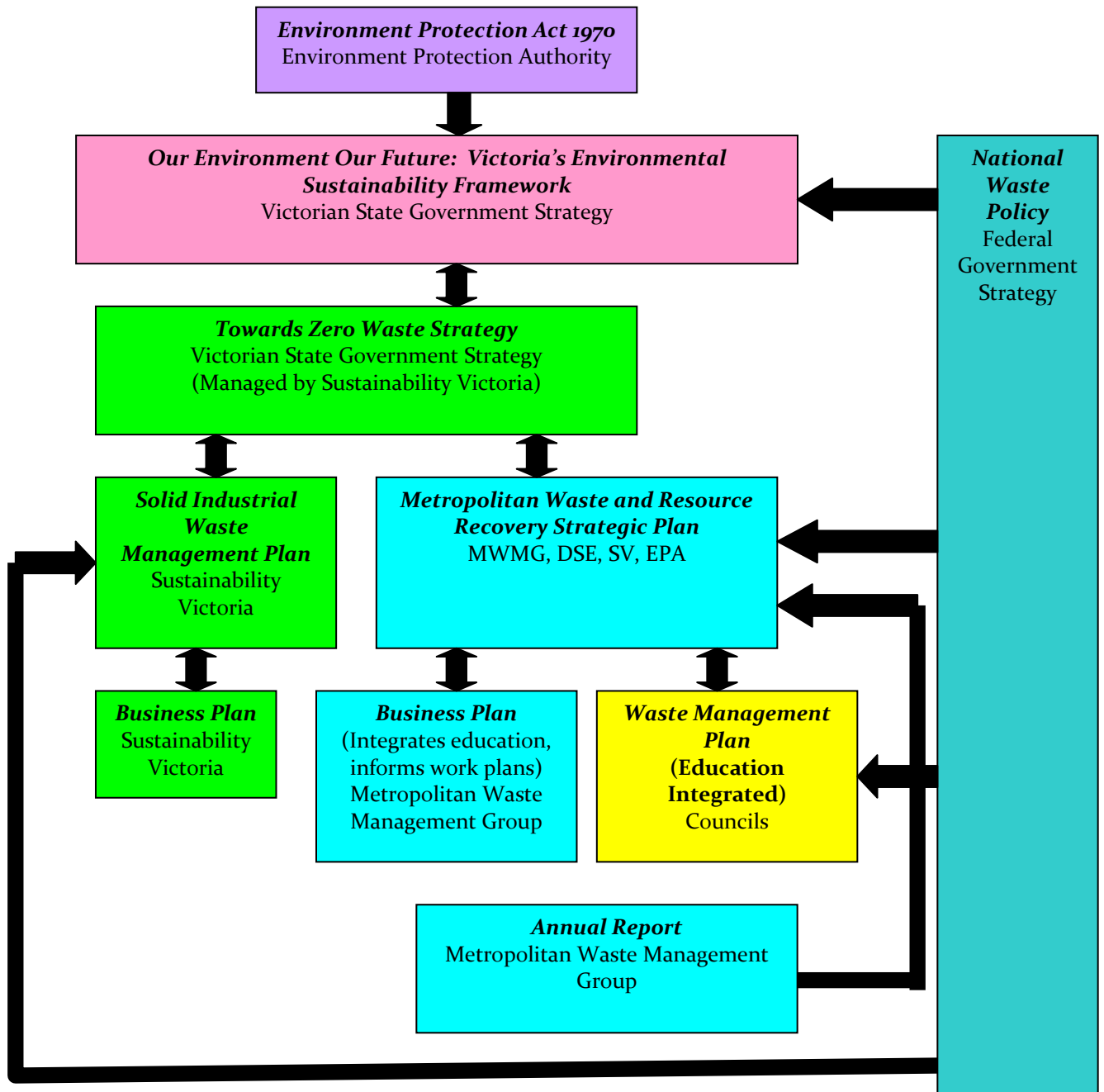
Although the State Government has invested significant resources in an endeavour to develop such a facility, there has been no commercial facility established at this time.

Should such a facility be developed Yarra will need to work with its community to further increase "separation at source" recycling.

### 1.3. LOCAL CONTEXT

The City of Yarra Waste Management Plan has been developed in-line with overarching legislation and policies which have been developed at both the Federal and State level.

The legislative framework is shown below.



**Figure 8.1-Interlinking of Legislation, Policies, Strategic and Business Plans**

State Government agencies, namely Sustainability Victoria and the Metropolitan Waste Management Group develop plans and strategies which guide metropolitan Councils in the way they manage their waste.

The key State Government strategies and policies which influence the development Council's Waste Management Plan include:-

- Our Environment Our Future: Victoria's Sustainability Framework
- Towards Zero Waste Strategy
- Metropolitan Waste and Resource Recovery Strategic Plan
- Solid Industrial Waste Management Plan
- Victorian Waste Management Strategy

The key principle underpinning the waste management plan is the Waste Hierarchy. The Waste Hierarchy places waste avoidance as the most preferred option and waste disposal as the least.




**Figure 8.2 - Waste Hierarchy**

All policies developed by all levels of government are based on this principle.

#### **1.4 WASTE OVERVIEW**

The Waste Management Plan incorporates the strategies and actions for a variety of waste materials. The focus of the Plan is on Municipal Solid Waste (MSW) although, where appropriate, the Plan addresses Commercial and Industrial Waste and Construction and Demolition Wastes.



Municipal Solid Waste materials include:-

- Kerbside Municipal Solid Waste:-
  - including recyclables ,organic/green waste and residual bins and
  - waste from a diverse range of residential and mixed use properties;
- Hard waste collections;
- Transfer Stations/Resource Recovery Centre drop-off;
- Street litter;
- Public Place Recycling (PPR);
- Illegally Dumped Waste;
- Waste Generated at Festivals and Events;
- E-waste and
- Household Hazardous Waste (e.g. household chemicals, batteries, gas bottles etc).

## 2. STRATEGIC CONTEXT

### 2.1. POLICIES AND INITIATIVES

Federal and State policies and strategies provide strategic direction for improving waste management practices. This section provides a brief summary of these documents and how they impact on local government.

### 2.2. METROPOLITAN WASTE MANAGEMENT GROUP (MWMG)

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

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

In response to the State Government's Towards Zero Waste strategy, the MWMG has set waste reduction targets for its member Councils:-

- A 45% recovery rate (by weight) of municipal solid waste for reuse and recycling by 2008-09;
- A 65% recovery rate (by weight) of municipal solid waste for reuse and recycling by 2014 and
- A 25% improvement in littering behaviour by 2014.

#### 2.2.2. Metropolitan Waste Resource and Recovery Strategic Plan (MWRRSP)

The Metropolitan Waste Resource and Recovery Strategic Plan was jointly prepared by the Department of Sustainability and Environment (DSE), Sustainability Victoria (SV), the Metropolitan Waste Management Group (MWMG) and the Environment Protection Authority (EPA) Victoria.

This Strategic Plan has been developed in three separate parts:-

- The Metropolitan Plan;
- The Municipal Solid Waste Infrastructure Schedule and
- The Metropolitan Landfill Schedule.

The MWRRSP assesses the current waste situation in Victoria and sets out a strategic framework for the management of solid waste in metropolitan Melbourne. A principal focus of the Strategic Plan is to better manage the municipal solid waste stream.

Municipal solid waste (MSW) consists primarily of material discarded by households for weekly collection from the kerbside. By weight, between 40 and 50 per cent of the contents of the average household bin consists of food and garden organics. Accordingly, the Metropolitan Waste Plan has a focus on MSW and the organics component, in particular.

It proposes a stepped change in the way the residual waste stream is managed.

The MWRRSP proposes to ultimately remove recyclable materials and the readily degradable organic fractions from the residual wastes, in purpose built advanced resource recovery technology facilities across Melbourne. The state government has initiated a funding program to develop these advanced resource recovery facilities across Melbourne however they are yet to be built.

The Metropolitan Waste Plan covers the thirty councils of metropolitan Melbourne (see Figure 2.1 below). Councils who are members of the Metropolitan Waste Management Group are expected to align their Waste Management Plans with the Metropolitan Waste Resource and Recovery Strategic Plan. The City of Yarra is a member of this group.



**Figure 8.3- Geographical Boundaries of Metropolitan Local Governments (Source: Victorian Government, 2009, 'Metropolitan Waste and Resource Recovery Strategic Plan')**

## 2.3. KEY FEDERAL LEGISLATION AND POLICIES

### 2.3.1. National Waste Policy

The Australian Federal Government is currently in the process of developing a *National Waste Policy* that will set objectives and priorities for the next ten years, with regard to waste management in Australia.

The policy will articulate the respective roles for each level of government and provide over-arching vision, objectives and targets that enable local government and industry to drive change and provide a basis for measuring performance.

The overarching aims of the *National Waste Policy* will be to:-

- Avoid the generation of waste;
- Reduce the amount of waste for disposal;
- Manage waste as a resource and
- Ensure that waste disposal is done in a safe, scientific and environmentally sound manner.

This Policy is expected to be released by November 2009 and will require reviewing to understand its impact on Yarra.

### 2.3.2. Proposed National Legislation – Carbon Pollution Reduction Scheme (CPRS)

The Australian government has proposed the Carbon Pollution Reduction Scheme as part of a framework for reducing carbon pollution in Australia.

CPRS comprises a 'cap and trade' scheme which will require emitters of greenhouse gases to acquire a permit for every tonne of carbon dioxide equivalents (CO<sub>2</sub>-e) they emit.

The quantity of emissions produced by corporations will be monitored, reported and audited. At the end of each year, each liable entity will need to surrender a permit for every tonne of CO<sub>2</sub>-e emitted by them/their facilities in that year.

The number of permits issued by the government each year will be limited and corporations will have to compete in an open, market environment to purchase the number of permits that they require.

A number of sectors are included under the CPRS, including waste.

The proposed legislation will potentially impact on entities that produce greater than 25,000 tonnes CO<sub>2</sub>-e per annum.

This may impact upon the City of Yarra but to what extent cannot be determined at this time as the amount of CO<sub>2</sub>-e generated is dependent upon both tonnage and composition of waste produced. The landfill site at Wyndham, where Yarra deposits its kerb side collected waste, receives quantities in excess of 25,000 tonnes per year.

Consequently, their gate fees are expected to increase to fund the required permits and it is expected that a proportion of this cost increase will be passed onto the City of Yarra.

As the Federal Government's carbon pollution reduction scheme has not been finalised at the time of preparation of this report, no cost estimates can be provided as to its likely impact on the City of Yarra.

### **2.3.3. National Packaging Covenant (NPC)**

The National Packaging Covenant is a voluntary initiative by government and industry to reduce the effects of packaging on the environment.

The Covenant is funded by the recycling industry and provides a comprehensive list of commitments that signatories should consider with regard to packaging.

Some of the overarching targets of the covenant, with respect to recycling and waste minimisation targets include:-

- Increasing the amount of post consumer packaging recycled from its current rate of 48% (2003 baseline data) to 65% in 2010;
- Increasing the recycling of difficult or non-recycled materials, including plastics coded (4) to (7) and non-recyclable paper and cardboard packaging from the existing 10% recycling rate (2003 baseline data) to 25% by 2010 and
- Ensuring that there is no increase in the amount of packaging going to landfill (against baseline data).

The National Packaging Covenant partly funds the "Recycle Right at Home" project, together with MWMG and local government.

The project will help reduce the level of contamination of the recycling stream and increase the recovery of recyclable packaging.

#### ***Opportunities for Improvement***

- *Participate in Recycle Right at Home project, with other metro Municipalities, focussing on improving the recovery of recyclable packaging from households.*

## **2.4. KEY STATE LEGISLATION, POLICIES AND INITIATIVES**

### **2.4.1. Environment Protection Act 1970**

The Environment Protection Act was prepared to establish the legislative framework for the protection of the environment in Victoria. It established the Environment Protection Authority.

It has a number of decision making principles embedded in the legislation which include:

- The integration of economic, social and environmental considerations;

- The precautionary principle;
- The principle of intergenerational equity;
- The principle of shared responsibility;
- The principle of product stewardship;
- The principle of wastes hierarchy; and
- The principle of integrated environmental management.

The waste hierarchy identifies the following order of preference:

1. Avoidance
2. Reduction
3. Re-use
4. Recycle
5. Recovery of Energy
6. Treatment
7. Disposal

#### **2.4.2. Towards Zero Waste Strategy (TZW)**

The State Government's *Sustainability in Action; Towards Zero Waste Strategy* was developed in line with the Environment Protection Act.

The objectives of the *TZW Strategy* are to reduce and recover solid waste and to reduce the environmentally damaging impacts of waste.

The Strategy sets out an overall Environmental Sustainability Framework and state waste recovery targets for Sustainability Victoria, the EPA, regional waste management groups and local government.

Some of the *TZW Strategy* targets are:-

- Reduce the amount of waste generated, by 1.5 million tonnes per annum by 2014, compared to 2002/03;
- Increase the recovery rate in all solid waste generated from the current 48% (2003) to 75% by 2014 comprising:-
- 65% recovery rate (by weight) of municipal solid waste for reuse and recycling by 2014 (an interim target of 45% is established for 2008-09);
- 80% recovery (by weight) of C&I solid waste for reuse and recycling by 2014 (an interim target of 65% is established by 2008-09) and
- 80% recovery rate (by weight) of C&D solid waste for reuse and recycling by 2014 (an interim target of 65% is established for 2008-09) and
- 25% reduction in littering behaviour.

Sustainability Victoria released a progress report in 2006-07 which indicated that recovery of *Commercial and Industrial* waste (C&I) and *Construction and Demolition* (C&D) waste are on track to meet the TZW recovery targets.

	Actual	TZW Recovery Targets	
	2006-07	2008-09	2013-14
Municipal Solid Waste (Metro Melbourne)	41% (43%)	45%	65%
C&I Waste	68%	65%	80%
C&D Waste	71%	65%	80%

**Table 8.3 - Waste Recovery in Victoria**

To meet the 65% state wide target for Municipal Solid Waste recovery, more significant change is required, particularly with the recovery of green waste.

It is expected that Metropolitan Councils and some larger regional councils will have to exceed the 65% MSW diversion target if the State wide target is to be met.

In effect, the target for metropolitan councils is around 70%.

#### **2.4.3. Victorian Advanced Resource Recovery Initiative (VARRI)**

To support the implementation of the Metropolitan Waste and Resource Recovery Strategic Plan, the Victorian Advanced Resource Recovery Initiative (VARRI) has been instigated by the Victorian State Government to facilitate the development of Alternative Resource Recovery Treatment (ARRT) facilities in metropolitan Melbourne.

The incorporation of ARRT facilities as waste processing facilities in Victoria could significantly increase the quantities of material recovered from the waste stream. Their ability to process garden and food organic material would divert significant quantities of waste from landfill.

The State Government planned to have two ARRT facilities constructed and operating by 2010, however this is looking increasingly unlikely.

#### **2.4.4. Solid Industrial Waste Management Plan**

The State Government's Solid Industrial Waste Management Plan was developed to establish goals and targets for solid waste management e.g. commercial and industrial waste (C&I) and construction and demolition waste (C&D) in Victoria.

The outlined goals of the plan included:-

- To increase materials-use efficiency and reduce waste generation;
- To increase the sustainable recovery of materials for recycling and reprocessing and
- To reduce the environmentally damaging impacts of waste.

The key targets are:-

- Reduce the quantity of waste generated by 1.5 million tonnes by 2013;
- 65% recovery rate in SIW by July 2008 (towards an 80% rate by 2013);
- Reducing greenhouse emissions, litter and toxic materials in the waste stream.

## **2.5. YARRA CITY COUNCIL**

### **Key Strategic Driver - Waste Management**

The increasing cost and long term environmental impacts of continuing to utilise landfill as a waste disposal solution demonstrates an increasing need to recover as much waste as possible for recycling, re-use, or energy generation.

Other benefits arise from reduced waste and increased recovery, namely reduced greenhouse emissions from organic waste being converted to methane and the lower embodied energy involved in producing goods from recycled materials, rather than virgin materials.

The community of the City of Yarra has indicated in community forums and surveys that it wants Council to lead by example to promote environmental sustainability and to conduct more programs to assist residents and businesses reduce their environmental footprint. This has been reflected in a number of Council's Strategies.

#### **2.5.1. Council Plan 2009 - 2013**

The Council Plan sets out the medium-term direction of Council.

The Plan has a strategic focus, concerned with setting out strategic objectives and outlining some of the values, policy, research and evidence sitting behind each objective.

Council has arrived at five Strategic Objectives, each picking up a different aspect of Council's service delivery over the term of the Plan:-

- Making Yarra More Liveable – a focus for many of Council's core activities;
- Ensuring a Sustainable Yarra – working to address our environmental impacts;
- Serving Yarra's Community – providing human services that meet the needs of a wide range of residents to maintain their health and wellbeing;
- Supporting a Diverse and Dynamic Yarra – supporting vibrant communities as well as neighbourhood and activity centres and
- Building Council's Capacity and Performance – ensuring our internal systems, processes and people are equipped to deliver responsive, high-quality services.

Within the Plan, Council has determined that, effective waste management contributes to the local amenity of the City and is a major community service provided by Council.

Minimising waste and increasing recycling and reuse are important environmental priorities for Council.

## 2.5.2. Environment Strategy 2008 - 2020

Councils' Environment Strategy states *“Every sector in society will need to modify its behaviour to reduce its environmental footprint and increase its resourcefulness in order to move towards environmental sustainability. We will need to adapt together.”*

The Waste Management Plan forms an integral part of the Environmental Strategy and a number of the City of Yarra actions contained within the Plan both complement and reinforces the Environment Strategy.

Councils' Environment Strategy recommends the development of a new Waste Management Plan to inform future waste management operations and services. This should be developed to align with the Metropolitan Waste Management Group's Regional Waste Management Strategy.

The Environment Strategy also identifies a number of other actions that will assist to reducing waste to landfill. These actions vary from establishing a Litter Task Force, working with other Authorities to consolidate recycling programs at high-rise estates, promoting regional services for chemical waste disposal and increasing resource recovery of solid waste for recycling at public places. These and any other actions for waste reduction determined by the Environment Strategy are accommodated by the Waste Management Plan

### ***Opportunities for Improvement***

- *Increase community understanding and engagement in waste reduction and sustainable resources consumption;*
- *Reduce the quantity of resources consumed in council operations and where council has direct influence or control and*
- *Continue to develop partnerships and alliances to develop and implement sustainable solutions to over resource consumption and waste.*

## 2.6. OTHER WASTE ISSUES OR INITIATIVES


### **Eco-Buy Program**

Eco-Buy is an initiative funded by the Department of Sustainability and Environment (DSE) and Sustainability Victoria (SV), which encourages the purchasing of environmentally preferable products and services.

Both State and Local Governments have adopted Eco-Buy demonstrating a commitment to attaining a more sustainable future.

The City of Yarra is currently a participant in the Eco-Buy Program which is producing encouraging results.

### **Environment Protection Authority (EPA) Business Sustainability Program**



The EPA has a number of programs and activities scheduled over the next 12 months which may impact on the waste operations of Council:-

- Impact strategy study on banning organics to landfill – detailed assessment to be conducted;
- Input into levy development – new legislation being developed by DSE;
- Review of Organic regulations and guidelines - Publication 508;
- Development of regulations and guidelines for future ARRTs; and
- Review Landfill BPEM - Role of MWMG in landfills (BPEM review and Schedule).

### **Product Stewardship Programs**

Encouraging companies to take responsibility for the full life cycle of their products can significantly reduce the environmental impacts associated with those products and materials.

Producers, users and consumers should share this responsibility from design to manufacture through its use to the end of its life and ultimate disposal.

Federal and the State Government have both introduced initiatives to promote product stewardship schemes.

The federal government has product stewardship initiatives for:-

- Degradable plastics;
- Oil;
- Tyres and
- PVC.

E-waste has also been identified as a national priority waste with the Federal Government currently developing a program for its inclusion into a product stewardship program.

### **Occupational Health and Safety**

There have been significant OH&S issues identified with the kerbside collection of waste.


Consequently, Workcover identified the industry as “posing a high risk to employee health and safety”.

As a result, *Occupational Health and Safety Guidelines for the Collection of Domestic and Commercial Non-Hazardous Waste and Recyclable Materials* were released in 2003.

The OH&S issues addressed in the guidelines include:-

- A ‘No-Lift’ approach to the handling of containers;
- A ‘No-Riding on the outside of vehicles’ approach to prevent serious injuries and fatalities;
- A ‘No-work at heights’ approach except in workshops or by fully equipped service crews and
- Compliance with OH&S legislative requirements.

Kerbside collection systems that require manual lifting have been replaced with mechanical collection trucks, while Hard and Green waste (at-call) collection continues to be an



employee and community risk, particularly if waste is required to be left on the nature strip in front of residential properties.

Specific instructions are given to the service users relating to the presentation of the waste, to minimise injury potential for the at-call collection.

All current waste contracts contain specific clauses in the handling of waste materials.

Contractors are required to maintain an OH&S management system; attend monthly meetings with Council's OH&S staff and other contractors and notify Council of any incident, injury, property damage or environmental damage.

### **Contamination – Problematic Waste Items**

Separation of waste materials at source (e.g. using separate bins at home) is fundamental to promoting cost-effective resource recovery and processing. Separation by the resident helps to reduce the labour and energy required to sort materials and manage contamination at processing sites.

Yarra City Council has relatively low contamination within its various waste streams however it must remain vigilant. Comprehensive education programs about the appropriate use of the kerbside system are required to improve kerbside collections by reducing inappropriate disposal of potentially hazardous materials and items that damage processing infrastructure and end-product markets.

Contamination can also pose health and safety risks to staff and cause equipment damage.

Problematic waste items include plastic in green waste, non-recyclable plastics, such as, meat containers and hazardous materials, such as, batteries in recyclables bins.

### **Landfill Levy and Disposal Costs**

Landfill levies have increased significantly since their inception in 2001 from \$4 per tonne for municipal waste and industrial waste to \$9 per tonne and \$15 per tonne for municipal and industrial waste respectively.

It is expected that, landfill levies and consequently, disposal costs at landfill, will continue to increase.

The move towards ARRTs is expected to significantly increase the life expectancy of landfills as considerably less material will be deposited, with the majority returning as various reused, recycled, recovered or treated products.

The expected cost, per tonne, of the ARRT process is yet to be determined.

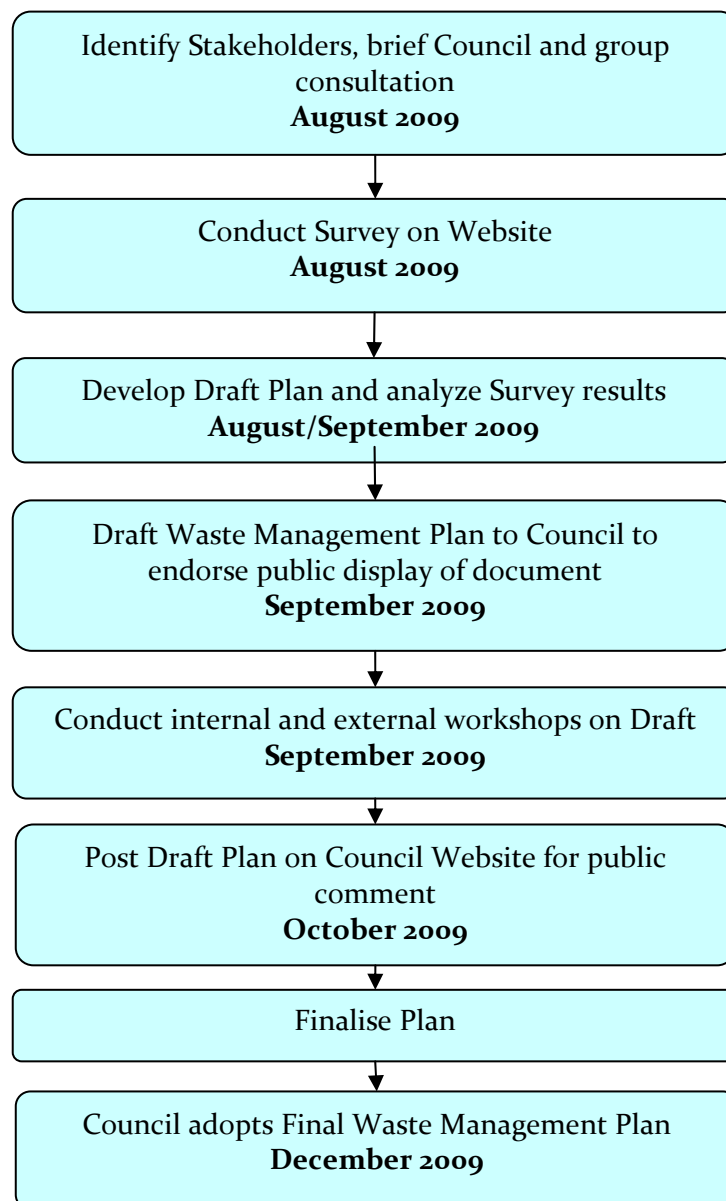
### ***Opportunities for Improvement***

- *Council supports the product stewardship scheme and seeks to ensure that its role in the full life cycle management of e-waste is recognised and appropriately resourced with any national initiative.*

# 3. CONSULTATION AND ENGAGEMENT

## 3.1. IDENTIFICATION AND ENGAGEMENT

The diagram below displays the process of developing the Waste Management Plan and engaging stakeholders to provide input;



**Figure 8.4 - Waste Management Plan Development**



Table 8.4 displays potential stakeholders that could be engaged in developing this Plan.

Internal	External
- Contract services/operations (parks, roads, rates)	- Local community/residents
- Waste management	- Local community reference groups/committees.
- Senior Management/Exec	- Metropolitan Waste Management Group
- Environment	- Waste Service providers
- Events/Arts/Culture	- Sustainability Victoria
- Planning	- Waste processors
- Councillors	- VLAA
- Local Laws	- Adjoining municipalities
- Building Construction and Maintenance	- Parks Vic
- Communications	- Melbourne Water
	- DPCD

**Table 8.4- Table of Potential Stakeholders**

The results of the workshops will be included into the final version of the Waste Management Plan that will be presented to Council in December

### **3.1.1 COMMUNITY CONSULTATION SUMMARY**

#### **Back Ground**

A community survey on Council's waste management processes and practices has been undertaken as part of the development of this Plan.

The survey was advertised in the Yarra News; was available on the Council website and copies were distributed to individuals and groups interested in environmental issues and to the Yarra panel.

There were 142 completed responses to the survey.

The survey asked questions relating to:-

- The satisfaction with the current services;
- How Council could improve its services;
- Why certain services are not being used;
- The attitude to waste reduction
- Opinions on possible changes/increase to services and
- Waste reduction programs.

## Overview of Responses:-

- The local community wishes to reduce waste going to landfill and it believes the way to do this is by Council providing certain services to achieve this goal.
- The majority of the feedback is focused upon hard, green and household organic waste collections.
- The at-call services are widely utilised.
- However, comment was made in relation to the belief that the former kerbside collection provided a “*fantastic opportunity for local reuse and recycling of materials*”.
- Council should increase the plastic recycling from codes 1-3 to 1-7 (which is a service Council already provides).

## Existing Services

Respondents were asked “**How satisfied are you with the following existing services?**”

	Very Satisfied	Satisfied	Dis-satisfied	Very Dis-satisfied	Don't Know About	Don't Use
Weekly kerbside collections waste (garbage bin)	50%	43%	4%	0%	0%	3%
Weekly kerbside collections recycling (for paper, cans, etc)	49%	44%	4%	1%	0%	4%
At call Green Waste collections	16%	30%	12%	8%	10%	24%
At call Hard Waste collections (2 per annum)	17%	34%	14%	12%	5%	18%
Council's Drop Off Centre	8%	11%	6%	2%	36%	37%
Provision of reduced cost home compost bins and worm farms	14%	16%	1%	1%	42%	27%
Free Mulch when available	13%	13%	1%	1%	45%	26%

A large percentage of people are not aware of the extent of Council services offered, particularly Council’s Drop Off Centre (73% did not know or want to use this service).

Ninety three percent (93%)of residences are satisfied or better, with kerbside collections and 56% of respondents were satisfied or better, with the hard and green waste services,

however 34% (Green Waste) and 23% (hard waste) either did not use or were not aware of the service.

Those who were dissatisfied with the at-call models were mainly concerned about:-

- Accessibility to the hard waste service and wanting to scavenge and
- Preferring the convenience of a bin/receptacle for green waste,

**Service Improvements**

Respondents were asked **“What would improve Council's waste service for you?”**

Green / garden waste collections	29%
Hard waste collections	29%
Recycling collection / drop off / in parks	19%
Litter	9%
Food scraps collection	5%

As with existing services, residents again focused upon green and hard waste improvements.

Further comments included:-

- Reduce plastic bags in Yarra;
- Provide food recycling options;
- Better communication about what can and can't be recycled and
- Better customer service

**Payment for Extra/More Services**

The majority of residents would like extra/more services and respondents were asked **“Would you be prepared to pay for extra waste services?”**

Yes	25%
No	43%
Unsure	31%

## Hard waste services

Residents were asked '**Have you used Council's at-call hard waste service in the past 12 months?**

Yes	35%
No	64%
Unsure	1%

There were three themes for why this was quite low:-

No need / not enough hard waste	63%
Not convenient / used other	26%
Unaware of service / change	7%

Further comments about why people don't use the hard waste service:-

- The old system is better for recycling and reusing;
- A few neighbours get together and call once and
- Never get around to it

## Green waste services

Residents were asked "**Have you used Council's at call green waste service in the past 12 months?**"

Yes	28%
No	70%
Unsure	1%

There were four themes for why this is:-

No need / not enough green waste	43%
Not convenient / use general waste	19%
Other service / compost it	19%
Unaware of service / change	18%

Further comments about why people don't use the green waste service:-

- Too difficult to tie together;
- If I knew it was coming I would use it and
- Not organised enough

## Ways to reduce waste

Council is exploring new incentives that could possibly reduce residential waste. Residents were asked “**Are there any other ways Council could help you reduce your waste?**”

No or already answered	32%
Shared service (e.g. street or block), connect creators & users (eg surplus compost, furniture)	17%
Improved recycling	17%
Reduce packaging in local stores	15%
Information	8%

***“Would you use a mulching unit if Council made it available to borrow?”***

Yes	35%
No	40%
Unsure	25%

As 60% said yes or maybe, a mulching unit would substantially reduce the green waste going to landfill.

***“Does your household use a compost bin?”***

Yes	50%
No	49%
Unsure	1%

There were four themes for why this is:-

No / small garden, can't use compost	41%
No space for bin e.g. courtyard	36%
Problems – rats, flies, smell	12%
Other – worm farm, Bokashi bin	4%

## “Do you use a drop-off point to dispose of your electrical waste?”

Yes	79%
No	14%
Unsure	7%

There were four themes for why this is:-

Not convenient: no car, too heavy, too far	40%
Other service / drop off: inc hard waste	28%
Unaware	20%
No need	16%

### Outcomes of the Survey

Generally the survey results show high satisfaction with Council's current waste service. However, given the significant percentage of respondents who are unaware of the variety of services offered and who do not make use of the service, Council will need to communicate and promote its services better to residents particularly the at call services. The survey also provided a number of initiatives for Council's consideration however, only 25% of the respondents were willing to pay for extra waste services.

### Opportunities for Improvement

*The Action plan addresses a number of the themes arising from the community survey.*

*These include:-*

- Communication Improvements*
- The Recycle Right at Home program;*
- The Face-to-Face education programs;*
- Working with local supermarkets;*
- Communal composting;*
- Expanding the drop-off site and*
- The purchase of a domestic, mobile mulching unit for use by ratepayers/residents for home mulching.*

# 4. CURRENT WASTE MANAGEMENT

## 4.1. MUNICIPALITY

### 4.1.1. Overview

The City of Yarra currently provides **kerbside garbage collection** to 32,970 residential properties, 760 non-residential properties and **kerbside recycling collection** to 30,500 residential properties and 800 non-residential properties.

There are approximately 800 Multi Unit Developments (MUDs), in the City, made up of approximately 9120 units/tenements, ranging from groups of 3 to over 180.

There are no operating, licensed landfills or Transfer Stations within the City of Yarra and services are delivered via a mixture of contract and direct labour.

The City of Yarra offers a wide variety of collection services to the community and diversion rates have positive increasing trends, while the collection of hard and green wastes are decreasing. Similarly, litter bin waste is also showing positive signs of decreasing.

In accordance with the Metropolitan Waste Resource Recovery Strategic Plan for inner city municipalities, the City of Yarra provides a 2-bin kerbside waste service (garbage and recycling), each collected weekly.

There is no third bin offered (for green/organic waste), generally due to the high density of development, restricted vehicle access and limited space to both store bins and place them at the kerbside.

In addition, gardens tend to be smaller and residential lawns fewer, again due to the high density of development, so there is less green waste generated.

Any small amounts of green waste generated are accommodated by Council providing either an on-call service for green waste.

In 2007/08 the City of Yarra collected 9604 tonnes of recyclable material through its kerbside collection service, of which 270 tonnes were plastic containers and 2607 tonnes were non-plastic containers (i.e. glass, aluminium and steel cans etc.), with the balance being paper/cardboard.

Bin type and collection feasibility also vary, depending upon access restriction and limitations on home storage areas, as experienced by most inner-city municipalities.

The City of Yarra has also begun to report quantities of waste, from self generated projects and maintenance works (e.g. asphalt and spoil material), which has been sent to landfill and intends to recycle these materials, wherever practicable.

## ***Opportunities for Improvement***

- *This Plan proposes to enhance current City of Yarra, capital works specifications for projects, to include reports of waste materials sent to landfill and recycled materials (i.e. waste diverted from landfill).*

### **4.1.2. Current Kerbside Collection Services**

#### **Domestic (Residential) Garbage Collection**

Domestic refuse is collected from the kerbside of residential properties on a weekly frequency.

Bins are provided by the Council, at a one off fee to new residential developments. Replacements for lost or stolen bins are supplied at no charge.

The standard bin size is an 80 litre Mobile Garbage Bin (MGB).

#### **Domestic Recyclables Collection**

Domestic recyclable materials are collected from the kerbside of residential properties on a weekly frequency.

A 120 litre MGB is provided to single residences for storage and presentation of co-mingled containers (plastic, glass, aluminium, steel etc.), paper and cardboard.

Multi-tenement properties such as, flats and apartments, are provided with multiple 240 litre MGBs, based on an assessment of needs at the property.

The collection encompasses a standard range of glass, plastic (codes 1 to 7) aluminium, milk and juice cartons, and metal products that are viable as re-use materials.

#### **Commercial (Non- Residential) Refuse Collection**

Council provides each commercial tenement, on request, with up to a 240 litre MGB for weekly clearance of domestic-type wastes from lunchrooms.

This service is used by many *businesses* but it is not practical for many others where waste generation is well in excess of the 240 litres per week.

The City of Yarra does not undertake the collection of refuse from commercial properties where the waste was generated from the actual business operations.

The significant variation in type and quantity of refuse generated from the variety of businesses operations requires specialist, flexible and more frequent services which are best provided by the many private waste collection companies.

## **Commercial Recyclable Collection**

The Council provides each commercial tenement, on request, with a 240 litre MGB for a weekly recycling service, as an extension to the residential kerbside collection service. The service is for domestic-type recyclable materials but does not accommodate materials generated from core business activities.

## **Ministry of Housing Hi-Rise Buildings Refuse Collection**

Council provides a regular clearance of domestic refuse from the twelve, Office of Housing, hi-rise developments in the City.

The developments have a unique waste disposal chute and hopper system and the hopper is cleared from the ground level, by use of an open truck.

Recycling services are available at the Collingwood and Fitzroy and Richmond estates.

Council supports community service providers to conduct education programs for residents at the estates, with an aim to increase recovery rates and reduce contamination in the general waste stream.

Collingwood and Fitzroy with Brotherhood of St Laurence support are currently recovering more recyclables than Richmond.

## **Hard and Bundled Green Waste Collections**

The Council recently moved to an “at-call” booking system for hard and bundled green waste collection to all residential properties throughout the City.

The system allows for unlimited collections of green waste and two hard waste collections annually.

Green waste will be transported to an Organic Recycling Plant as the service grows and quantities increase, with the balance of hard wastes transported to and disposed of at landfill.

The combined collection and disposal service currently costs \$566,650 per annum.

Waste Type	Collection System			Collection Frequency		
	Residential	MUD	C&I	Residential	MUD	C&I
Garbage	80 L bin	80 L to 660 L bin	240 L Bin	weekly	weekly	weekly
Recyclables	120 L bin	80 L to 660 L bin	240 L Bin	weekly	weekly	weekly
Green waste	bundled	bundled	No Service	At-call	At-call	No Service
Hard waste	stacked	bundled	No Service	At-call	At-call	No Service

**Table 8.5 - Summary of Kerbside Collection Services**

**Note:** MUD = Multi Unit Dwellings, C & I = Commercial and Industrial (including SMEs where appropriate)

### Public Litter Bin Provision and Clearance

The City of Yarra provides and services, public litter bins, in local shopping centres, streets, parks and other locations where people gather and litter generation is a problem.

There are 430 litter bins and a further 300 in parks, across the City.

The bins are usually emptied on a daily basis or more often, when the need arises.

The bins are mainly the cabinet type, which houses an MGB of 120 or 240 litre capacities.

The capacity of each litter bin is based on aesthetic considerations, volume requirements and occupational safety considerations.

	Collection System	Collection Frequency
Street cleaning, litter and dumped rubbish collection	In-house crews Rapid Response Unit	As Required
Public place recycling	Litter Bin Service & Drop Off Facility	Daily
Hazardous waste	Transfer Stations - Detox Home Collection Program	Sustainability Victoria Program at Scheduled Sites
E-waste	Hard Waste & Drop Off Facility	At-call
Council Festivals and events	Mobile Garbage Bins (for recycling and garbage) and Skips	As Required

**Table 8.6 - Summary of Other Council Collection Systems**

#### 4.1.3. Waste Composition and Quantities

##### Kerbside Collection – Bin Numbers (Domestic)

Bin Numbers						
Domestic garbage						
	80LT	120LT	240LT	660LT	1100LT	Total Bin Numbers
Jul-07	19476	6178	2082	0	0	27736
Jul-08	19560	6149	2197	0	0	27906
Jul-09	19724	6153	2773	15	6	28671
Domestic Recycling						
	80LT	120LT	240LT	660LT	1100LT	Total Bin Numbers
Jul-07	0	21578	2016	0	0	23594
Jul-08	0	21698	2150	0	0	23848
Jul-09	0	22056	3025	14	0	25095

**Table 8.7 - Kerbside Collection - Bin Numbers**

**Note:** All commercial and non-domestic garbage and recycling bins provided are 240 litre (LT).

##### Kerbside Waste Collection – Quantities (Tonnes)

Year	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09
Garbage	12976	13160	13006	13230	13526	12990	12567	12152	12441	11498
Recyclable	5982	6312	6696	7098	7432	8504	8643	9000	9604	9313
<b>Total</b>	18959	19472	19702	20328	20958	21494	21210	21152	22046	20811
Diversion *	32%	32%	34%	35%	35%	40%	41%	43%	44%	45%

**Table 8.8 - Kerbside Collection - Quantities**

\*Diversion is the percentage of recycling, expressed as a total waste collected i.e. Recycled/Total x 100.

### Breakdown of Household Municipal Solid Waste

Domestic waste audits, also known as domestic waste composition surveys, for the City of Yarra give the following snapshot of the City's Waste Stream, 2008.



Waste Type (%age)	1994 (*)	1996 (*)	2005 (**)	2008 (***)
Potentially Recyclable Material	25.1	18.5	12.5	26.4
Green (Garden) Waste	4.8	3.3	7.6	2.2
Food Waste	37.5	49.9	49.5	38.6
Residual (i.e. not food, green or recyclable)	32.6	28.3	30.4	32.8
<b>Total (%age)</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 8.9 - Breakdown of household Municipal Solid Waste composition**

\* LRRRA (V) Recycling Audit and Garbage Analysis Report 1994, 1996.

\*\* Yarra City Council 2005 Domestic Garbage and Recycling Report – Undertaken by Wastemin P/L (300 households, 50 MUD's)

\*\*\* Sustainability 2008 Garbage Audit = Undertaken by Wastemin Pty. Ltd. (150bins)

**Note:** Recycling bags were used until October 1996; crates were introduced for bottles and paper from October 1996 to November 2004 and Mobile Recycling bins (MRB's) were implemented from November 2004 and are the current receptacle.

Residual includes

- Animal droppings
- Disposable nappies
- Foam (polystyrene)
- Soft plastic cereal box inserts
- Kitty litter
- Halogen light globes
- Matchboxes
- Plastic bags
- Pyrex and crockery
- Shoes
- Sporting goods
- Vinyl
- Window glass & mirrors

	kg / pp / yr** (2008/09)	kg / hh / yr* (2008/09)	Inner Metropolitan Average kg / pp / yr** (2006/07)	Metropolitan Target kg / pp / yr** (2008/09)	Metropolitan Target kg / pp / yr** (2013/14)
Garbage	161	341	455		
Recyclables	130	295	244		
Green Waste	3	6	84		
<b>Diversion Rate (%)</b>	45%	45%	41%	45%	65%

**Table 8.10 - Municipal Solid Waste, Kerbside Collection Quantities**

\* Kilograms per household per year: \*\* Kilograms per person per year  
Source- annual, actual disposal tonnages, 2008/09.

**Comparison of Diversion Rates of Kerbside Waste in the 2 bin Councils and some Outer Metropolitan Melbourne Councils, 2006/07**

COUNCIL	TOTAL WASTE Kg/Household/Year	TOTAL WASTE /RECYCLING Tonnes/Year	DIVERSION RATE NET OF CONTAMINATION * (%age)
<b>2 bins Councils</b>			
Melbourne	504	21,199	20%
Port Phillip	550	32,030	29%
<b>Yarra</b>	<b>677</b>	<b>21,346</b>	<b>39%</b>
<b>Outer Metro. - (3 bins)</b>			
Casey	1,009	81,901	51%
Manningham	1,078	46,392	51%
Nillumbik	984	19,562	67%
Melton	856	25,667	41%
<b>Metro 30 councils</b>	<b>900</b>	<b>1,315,119</b>	<b>43%</b>

**Table 8.11 - Comparative Diversion Rates**

\* The Diversion Rate net of Contamination is calculated by dividing the tonnes of uncontaminated recyclables by the tonnes of recyclables and garbage collected

Yarra's diversion rate (2006/2007) compared well against other Council's results particularly against the other 2 bin Council's. By 2008/2009 the diversion rate had improved to 45% displaying that Yarra's waste services are currently achieving best practice as it is providing results that are virtually equivalent to 3 bin systems.

### Various Waste Collection Streams (Tonnes)

Year	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	
Litter Bins	750	750	700	650	620	600	580	556	
High Rise	2000	2000	2000	1900	1900	1900	1800	1800	
Dumped Rubbish	620	620	620	620	620	620	620	638	
Hard Waste**	1920	1280	1665	1340	1470	1250	428	2005	
Green Waste	438	219	266	192	198	188	89	209	
Pit Residue*	142	145	150	150	200	250	300	314	
Street Sweeping:-									
Shopping Strips & Main Roads*									720
Residential Streets & Lanes*									685

**Table 8.12 - Tonnage Collected - Various Waste Streams**

\* There is no disposal charge for these materials, at the landfill site, as the collected waste is dewatered, mixed with a sand product and then used as a cover material at landfill.

\*\* There was only one residential hard waste collection in 07/08 and three in 08/09

**Note:** Street Sweeping tonnages are a new initiative in 08/09

### Litter Bins in Parks - Waste collection (Tonnes)

Year	2008						2009						Total
Month	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Tonnes	10	9	10	15	17	15	16	14	17	11	8	7	149

**Table 8.13 - Waste Tonnage Collected - Litter Bins**

### Road Maintenance Asphalt Recycling (Tonnes)

Year	2008						2009						Total
Month	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Tonnes	143	156	182	247	169	169	117	208	195	195	208	234	2223
Bins (23m <sup>3</sup> )	11	12	14	19	13	13	9	16	15	15	16	18	171

**Table 8.14 - Tonnage Recycled - Maintenance Asphalt**

## Road Construction Asphalt Waste 2008/09

In 2008/2009 waste material produced from road construction and asphalt activities was recycled or used as cover material at landfill, deposited at no charge, as detailed:

- Recycled: 1,435 tonnes
- Roadwork spoil to landfill, as cover material: – 1,150 tonnes

## Summary

The domestic waste stream contains a very low percentage of hazardous/toxic contamination of less than 0.5 per cent.

In considering diversion rates from kerbside services, the City of Yarra is currently achieving 45% which is an excellent result from two bins.

Councils using three bins will only achieve diversion rates of around 50% based on industry experience. Accordingly the target of 65% diversion by 2014 could only be achieved if an ARRT is available.

The Metropolitan Waste Strategy determines that the cities of Melbourne, Port Phillip and Yarra should remain as two-bin cities complemented with at call green and hard waste collections, due to smaller properties and the restricted space in the road reserves to accommodate additional bins. This is exactly the model that is currently provided at Yarra.

Accordingly, in analysing the content of the City of Yarra garbage bins, it is evident that the quantity of green waste in the bins (2%) would not warrant the addition of a green waste bin.

However, food waste (38%) and potential recyclables (26%) being disposed of in the garbage bin gives a strong indication that Council needs to take action to increase the incidence of home composting as well as increasing educational activities to inform residents on the proper way to dispose of recyclables.

These actions form the foundation of this Waste Management Plan, at least until the advent of the ARRTs.

## ***Opportunities for Improvement***

- *The opportunity is to effectively remove materials that can be used for compost or recycled from household garbage bins.*
- *By continued and reinforced education, it is expected that the amount of recyclable materials and the quantities of home generated compost will increase, currently 26% and 38%, respectively present in the mobile garbage bins.*

#### 4.1.4. Overview of current Council contracts

The City of Yarra has a number of contracts and in-house service providers in place, for the provision of its waste services. These contracts provide a variety of collection and disposal options.

Service	Service Type	Number of Services	Annual Cost	Contract Expiration (plus extensions)
Domestic Garbage Collection (Household; High Rise; Events)	Contract	28,680 Domestic 12 High Rise (3x per week)	\$1,935,000	30 June 2016
Street Litter Bin Collection	Contract	430 per day	\$380,000	30 June 2016
Domestic Recycling Collection	Contract	25,200	\$1,680,000	30 June 2016
Domestic Recycling Receiving	Contract	25,200	(\$360,000)	30 June 2016
Hard waste Collection	In-house	9,000 pa	\$316,650	Ongoing
Green Waste Collection	Mixed (In-house and Contract)	4,500 pa	\$250,000	Ongoing
Landfill Disposal (Western Region)	Metropolitan Waste Management Group (Wyndham Landfill and Boral Landfill)	See Table 4.1.3	\$700,000	30 June 2010
Street Sweeping:				
• Shopping Centres (Daily)	Contract	NA	\$1,223,000	30 June 2013
• Residential Streets	Contract		\$825,000	30 June 2013

**Table 8.15 - Overview of Waste Contracts**

- Domestic garbage, street litter bin and recycling collection costs will experience Consumer Price Index (CPI) rises only, until 2016, when the contracts expire.
- Recycling bins have relatively low levels and the current contract includes material rebates for recyclables until 2016, when the contract expires. Contamination levels need to be monitored and continually improved as this improves recycling capability at the Materials Recovery Facility (MRF).
- Two new green organic facilities are expected to be operational in approximately twelve months and are expected to have higher charges than currently experienced.

However, as the City of Yarra currently disposes of approximately 200 tonnes per annum, total cost increases are expected to be low.

- It is not expected that a fully operational ARRT will be available, within the life of this Waste Management Plan, i.e. by 2014.
- It is expected that landfill disposal costs will remain competitive but increase by approximately \$160,000 per annum, at the time of disposal contract renewal in June 2010, after annual CPI adjustments are applied.
- With additional focus upon removing recyclables and food from garbage bins to reduce landfill costs i.e. by greater diversion from the garbage bin, increasing home composting and consuming less, the predicted improved diversion rate (10% extra by 2014) should offset the predicted \$160,000 increase by approximately \$45,000.

#### 4.1.5. Community Satisfaction with Waste Collection Services

In the Local Government Community Satisfaction Survey, sponsored by the Department of Planning and Community Development and local governments, the Community satisfaction rating, for overall performance in Waste Management, for 2009, was 65 (indexed mean) which was a statistically unchanged result from 2008.

For the purpose of the survey, waste included kerbside garbage and recyclables collection.

Fifty two percent (52%) of those surveyed in 2009, placed the waste service as good to excellent, with a further 22% rating the service as adequate, i.e. 74% were satisfied or better with the service.

The largest demand for improvement (49%) was for a more frequent hard waste collection and the City of Yarra compared lower against other Councils within its group.

#### Performance over time

	2003	2004	2005	2006	2007	2008	2009
Excellent/Good/Adequate	78	76	82	77	77	76	74
Adequate	20	17	18	16	17	17	22

**Table 8.16 - Customer Satisfaction - Performance over time**

Local community survey results, specific to the Waste Management Plan, are contained within Section 3, Consultation and Engagement.

#### **4.1.6. Disposal**

##### **Disposal of Waste Materials to Landfill**

The City of Yarra has been a party to a fifteen-year agreement with the City of Wyndham for use of its landfill in West's Road, Werribee.

The entire Wyndham landfill has a predicted future-life until 2056, based upon current disposal rates.

There is one other commercial landfill approved for receipt of municipal refuse operating within the Western Region and this facility have a potential combined future-life until 2050.

Consequently, there is no shortage of landfill capacity in the Western Region, which is economically accessible by the City of Yarra.

However, it is likely that alternate waste disposal technology will be implemented, prior to any shortage of landfill capacity being experienced.

The current landfill agreement with the City of Wyndham will expire 30 June 2010 and the City of Yarra should consider its long-term future needs, with respect to the Melbourne Metropolitan Waste Management Plan.

Any future agreement will acknowledge the emergence of new waste disposal technology, including waste to energy processes and will enable the Council to move to new technologies as an alternative to landfill, where this proves viable.

ARRT facilities will become more economically viable as landfill costs, including levies, transportation costs (fuel and travel time) increase.

##### **Recovery of Recyclables**


Kerbside collected recyclable materials are not transported to landfill but are sorted and recovered at Visy's recycling facility where they are packaged for processing into new products. Residual waste from this facility is then transported to landfill for disposal.

##### **Household Chemicals Disposal**

Many households accumulate paint and a range of chemicals that becomes surplus to requirements and require disposal.

These chemicals can include pesticides, medicines, herbicides, pool chemicals, oils, brake fluids and batteries, which can cause damage to the environment if discarded into storm-water drains or sewers or if, placed in the garbage bin for a landfill destination.

Further, the Council does not collect and store these materials, due to the difficulties in providing a safe, approved location and system of storage and due to the potential risk to Council employees in receiving, handling and working in proximity to the chemicals without first receiving professional training.



Sustainability Victoria acknowledges the difficulties Council experiences in dealing with these materials and provides a State-wide collection opportunity for households at no charge.

Sustainability Victoria nominates a site in Melbourne metropolitan area, each month, where householders can dispose of these household chemicals.

The deposit calendar is available from Sustainability Victoria and Council.

### ***Opportunities for Improvement***

- *This collection system could be improved by increasing the convenience to many members of the local community by providing local arrangements within the City of Yarra.*
- *The issue continues, with respect to manufacturers making provision in their sale price for the responsible disposal of unused materials and/or containers.*
- *Council will lobby state and federal government for increased responsibility for those who create future-waste.*

### **E -Waste**

The City of Yarra operates a public e-waste drop-off service and an at-call service.

All e-waste products collected by Council are deposited at an accredited facility to ISO14001:2004 Standard and all material delivered receives a Certificate of Recycling.

The certificate states that the e-waste is processed in an environmentally responsible manner, in accordance with the relevant local, state and federal laws.

### ***Opportunities for Improvement***


- *Council will advocate for greater manufacturer responsibility in the amount of hazardous material contained in the e-products and increased responsibility for those who create future-waste.*

### **Waste Transfer Stations and Resource Recovery Centres**

The City of Yarra has no licensed Transfer Stations or Resource Recovery Centres operating within its' boundaries. This has proven to be of no disadvantage to Council or its residents

Suitable facilities are within 10 kilometres of the City of Yarra and Council does not have to manage any environmental impacts from potential storm-water runoff and the various EPA requirements in operating such facilities.

Council operates a drop-off centre at the Collingwood Works Depot, which is available to the community five days a week, for a range of hours.



Recyclable materials including bottles, cans, paper, steel, corks, electronic goods and cardboard, in reasonable quantities can be deposited at no charge.

The City of Yarra is also working with a local company, “Beyond Waste Recycling” to divert the following materials from landfill:-

- All computer associated parts (including CPUs, keyboards, cables and software);
- Computer monitors;
- Laptop computers;
- Printers;
- Scanners;
- Fax machines;
- Mobile phones;
- Fluorescent tubes and light bulbs;
- Paper and cardboard;
- Engine Oil;
- Car batteries;
- Small batteries;
- Showerheads and
- Corks

To date, results are encouraging and yields continue to increase. The cost of running the service has proven to be cost neutral, which may change if larger quantities are deposited.

Increased public access to a working depot due to an increase of the service, where the current drop site is located, is a potential future safety concern for the public and those working in the facility. This Waste Management Plan addresses the issue by recommending the establishment of a fenced off area with a separate entrance. This will mean that the public will not have to enter the depot compound.

The project will continue to be monitored and improved, over the term of the Plan.

### ***Opportunities for Improvement***

- *This Plan will further develop the Drop-Off Centre, to allow items to be deposited outside of working hours and will investigate the feasibility of Collingwood or Fitzroy Depot becoming a “Detox Your Home” site, which will encompass chemical identification; transport and disposal options.*

*This action is considered to be the most urgent of the actions as it will both increase resource recovery and reduce potential operational risks.*

- *Further, linkages will be established with the Salvation Army, where Council will arrange to have re-useable items which are deposited, collected by the Salvation Army.*

#### 4.1.7. Waste Projections

The table below forecasts the anticipated average waste generation for households in the City of Yarra if all Actions in the Plan are completed.

	2008/09 (Actual)	2014	2021
<b>Waste Generation kg/pp/year</b>			
Garbage	161	140	60
Recyclables	130	170	175
Green Waste	0	3	60
<b>Diversion Rate (%age)</b>	45%	55%*	80%**

**Table 8.17 - Yarra City - Waste Generation Forecast**

- \* If all Action Plan initiatives are successfully introduces
- \*\* If the City of Yarra has access to an ARRT

**## Note:** The 2014 increase in recycling is based on diversion of material out of the waste stream (garbage bin) into the recycling stream. Also, it is anticipated that this plan will increase participation and increase yields from commercial properties and multi unit developments. The 2021 figures anticipate further diversion of organics out of the waste stream (garbage bin) into the green waste/ organics waste stream and greater avoidance of waste generation.

#### 4.1.8. Waste Service Costs

Cost of waste services provide to residents and businesses of the City of Yarra.

	2007/08 (actual)	2008/09 (actual)	2009/10 (budget)
FEVE - Festivals & Events	\$154,417	\$171,000	\$202,800
SCML - Manual Litter Reactive Etc	\$829,789	\$800,811	\$671,926
HIRI - High Rise Collection	\$242,193	\$259,000	\$280,000
CONT - Services Contracts	\$820,513	\$818,804	\$712,572
GARB - Waste Management	\$1,781,737	\$1,835,074	\$1,975,000
GREE - Green Waste	\$150,747	\$144,090	\$250,000
HARD - Hard Rubbish Collections	\$337,816	\$316,900	\$363,062
LBIN - Litter Bins	\$425,710	\$389,072	\$475,000
RECA - Recycling - Acceptance	-\$177,939	-\$190,000	-\$125,000
RECC - Recycling - Collection	\$2,375,787	\$2,115,000	\$1,680,000
SWRB - Street Sweeping Residential Block	\$756,721	\$771,704	\$825,000
SWSS - Street Sweeping Shopping Centre	\$1,096,359	\$1,150,000	\$1,223,000
<b>Total</b>	<b>\$8,793,850</b>	<b>\$8,581,455</b>	<b>\$8,533,360</b>

**Table 8.18 - Council Expenditure on Waste Services**

As can be seen, the cost to provide waste services will remain reasonably static over this three year period. Waste costs are not expected to rise above CPI whilst the current contracts are in place until 30 June 2016.

Influences which will impact on the costs in future years include:

- The renegotiation of the waste disposal contract. This is expected to cause a rise in cost for Yarra of around \$160,000 pa above current costs due to the fact that the site owner may seek a higher return on investment to fund future closure and aftercare needs and the likely introduction of the Federal Government's carbon reduction scheme;
- Any growth in service provision; and
- Any changes to service levels which Council may introduce.
- Increases in landfill levies which at present could not be predicted.

This Waste Management Plan recommends service enhancements which will increase the cost of service delivery. These cost increases are discussed in a later section of this report.

#### **4.1.9. Waste Issues.**

##### **Contamination of the Waste Stream**

While the City of Yarra experiences low contamination rates in the recycling stream, it needs to be constantly monitored and could be improved.

In 2007/08, 9604 tonnes of material was collected, via kerbside recycling, of which 455 tonnes was contaminated, ostensibly in the paper/cardboard elements.

Material delivered to Councils' Material Recovery Facility operator has consistently less than 5 per cent and usually not more than 3 per cent contamination levels, which is well below the industry standard.

Waste audits, carried out since 1994, show that residents are generally disposing waste in the garbage stream and recyclables in the recycling streams and diversion rates have steadily increased to 45 per cent in 2008/2009.

Constant community engagement and contemporary infrastructure is required to minimise the risk of contamination of waste products.

The current 2-bin system assists in the quality of recyclable product but the need to keep recyclables and solid waste (organic garbage) separate, requires constant educational reinforcement.

##### ***Opportunities for Improvement***

- *Continue to educate the community in correct disposal of recyclables and*
- *Support and develop ways to divert food organics from the waste stream, via expansion of the Compost Mates Program; investigating linked composting schemes and continuing support of the Food System Network.*
- *Conduct yearly waste audits to monitor contamination rates.*

##### **Waste Management Plans for Multi Unit Dwellings (MUD) Developments**

Applicants for a planning permit for MUDs are required to prepare a waste management plan that addresses:-

- The volume and type of waste to be generated;
- How the waste (including reusable and recyclable materials) are to be stored and treated on-site and
- How the residue is to be disposed of.

The waste management plan should include a site plan indicating where waste storage, recycling and compost areas are and location of waste collection points. If a private waste collection contractor is proposed for the development, a risk management plan is required to be completed by an OH&S specialist and included with the waste management plan.

## ***Opportunities for Improvement***

*Key opportunities to improving waste collection at MUDs:-*

- *Continue to introduce shared 240L co-mingled recycling and waste bins and*
- *Encouraging the communal use of the at-call system.*

### **4.1.10. Education**

As part of Council's commitment to supporting schools, in educating local children about the impact our daily lives have on the environment, Council has provided assistance, for the past six years, for schools to become "Resource Smart".

This support includes:-

- Providing recycling collection systems and compost bin or worm farm for schools;
- Facilitating the Resource Smart Program that, provides integrated education about all aspects of sustainability and engages the school community in environmental action and
- Giving financial support to schools to join the Resource Smart program.

Council's waste and recycling service provider, VISY, visits schools on behalf of Council and conducts activities to assist with their Resource Smart accreditation by providing:-

- Comprehensive in-class presentations and activities on the recycling sorting process and the benefits of recycling and reducing waste and
- Lunchtime staffroom discussions on how to become Resource Smart and providing assistance in the creation of a waste management plan for the school.

As part of the residential kerbside domestic recyclables collection, schools are also offered a recycling service, using standard MGBs for co-mingled containers, cardboard and wastepaper at no extra cost to the school.

## ***Opportunities for Improvement***

- *This Plan proposes to further advance the participation of local schools in the Resource Smart Program.*
- *Council will continue to run interactive educational programs and site visits for schools, throughout the year.*

## Composting/Worm Farms

Council is subsidising Compost bins and Worm Farms to encourage residents to divert organics from landfill.

In 2008, Council sold 35 compost bins and 122 worm farms. Each compost bin or worm farm equates to savings of approximately 2.5 kg per week or 130 kg per year of organic waste avoiding landfill.

### ***Opportunities for Improvement***

- *This Plan will investigate the possibility of combining community Worm Farming with Community Gardens*

## The Education About Sustainability in Yarra (EASY) Trailer

The *Education About Sustainability in Yarra (EASY)* trailer was developed in 2007 as an interactive education tool, with modules on waste reduction and sustainable purchasing, storm-water pollution and sustainable transport.

The trailer is available for use at schools, community centres and events free of charge.

### ***Opportunities for Improvement***

- *This Plan will ensure that the EASY trailer will be available for schools and community groups and will be present at all major events and festivals conducted within the City of Yarra.*

## Information kits and programs

Council is currently developing a range of resources and programs to assist different sectors of the community (residents, community organisations, businesses) in reducing their environmental footprint.

## Compost Mates

In 2008 Cultivating Community obtained a grant from Council to deliver the Compost Mates program.

The program aims to capture nutrients that would otherwise end up in landfill and includes components to:

- Raise awareness amongst cafe staff, patrons and local residents about how much food goes to landfill and about diverting this waste to gardens;
- Enable local gardeners/school gardens to reduce expensive inputs into gardens by converting organic waste to compost for use in gardens;
- Connect 3 cafes and approximately 8 households and the Fitzroy Primary School and
- Host compost workshops and operate a compost bay.

### **Opportunities for Improvement**

- *This Plan will develop a seminar around “How to Compost” and make it available to the City of Yarra community, twice per year.*
- *This Plan will purchase a domestic, mobile mulching unit for use by ratepayers/residents for home mulching.*
- *This Plan will investigate and trial a Precinct Composting program in a Multi Unit Development.*

### **The Food Systems Network**

In 2006, Cultivating Community obtained a grant from Council to establish a Food Systems network.

This Network enables people from across the community to work together to address food production and distribution at the local level.

Projects of the Network include:-

- The Growers and Eaters forum in 2008 - the aim was to bring growers into the discussions and look at ways to support small, environmentally sensitive growers as well as low income communities that face access issues to fresh food;
- The production of a Good Food Guide – a resource guide to sustainable food choices in the City of Yarra and
- The monthly Yarra Neighbourhood Orchard Swap – which also reduces food going to landfill

### **Waste Wise Events**

Over the past four years, Council has worked towards the major funded events being Waste Wise, this has occurred for 60% of events.


A Waste Wise Event is a public event that has good recycling and waste reduction systems and responsible waste management practices among traders, including:-

- Avoiding waste and litter where possible;
- Using reusable packaging in preference to disposable;
- Controlling packaging so that waste diversion from landfill is maximised;
- Giving preference to recyclable and recycled content packaging and
- Explaining the benefits of sustainable waste management to patrons

#### **4.1.11. Litter**

Local governments are the major players in controlling, cleaning up and prevention of litter.

The 2006 VLAA survey found 76% of local governments or Regional Waste Management Groups reported that they had run a litter prevention program, dropping from around 95% in 2005.



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, which are the elements that characterise Victoria's approach to litter prevention.

### **Lower Yarra Litter Strategy (LYLS)**

Council is involved in the LYLS, which is a collaborative program involving state and local government organisations, with the objective of preventing litter and improving waterways on a regional scale.

Projects delivered through the LYLS program are based on best practice principles of infrastructure, education and enforcement, aiming to integrate litter prevention across council functions in areas of high litter generation, such as commercial areas.

### **Victoria Street Litter Prevention Project**

In 2008, the City of Yarra completed the Victoria Street litter prevention project.

Evaluation of the Victoria Street project indicated scope to improve on successful outcomes through greater integration of litter prevention functions across Council.

It is evident that this integrated preventative approach is necessary, in order to address issues at all of the City of Yarra's litter hotspots.

This recognition led to the establishment of the City of Yarra's Litter Task Force.

### **The Litter Task Force**

The Litter Task Force will establish a united understanding of the issues leading to litter pollution; a commitment to addressing the issues and a framework to enable staff to take an integrated approach to litter prevention.

The Litter Task Force has identified the next priority site for a litter prevention project as the Collingwood/Fitzroy Arts Precinct (the area bounded by Smith, Johnston, Brunswick and Gertrude Streets), which will form part of this Plan, as litter hot-spots will be targeted in a strategic manner.

The project will also link up with any butt litter focused campaigns that are a part of the Lower Yarra Litter Strategy.

## **Gleadell Street Market**

Since 2005, the Gleadell Street market traders have worked in partnership with Council on an action plan to improve their waste management practices and change the behaviour of the market shoppers.

Some of the initiatives introduced included, standardising bin infrastructure and introducing coloured bins for separate waste streams so that, cans and bottles are separated from cardboard.

The separate bins for food and organic waste means, the organics can be easily used for animal feed or compost, currently by the Collingwood Children's Farm.

This has resulted in an 85% diversion of the waste from landfill.

A program of ongoing audits and improvements is required to improve on the success to date.

### ***Opportunities for Improvement***

- *Using the model developed through the LYLS, this Plan will work with traders on commercial strips, over the coming years, to improve their waste management and reduce their impact upon storm-water.*
- *This Plan ensures that the Gleadell Street Market will maintain its' Waste Wise accreditation and become plastic bag free.*

## **Private Building Development**

There is considerable private building development, both large and small, within the City of Yarra, where both the use of recycled materials and the disposal of waste material should be considered.

This Plan will:-

- Investigate the possibility of developers submitting quantities of recycled materials and waste materials, as part of their planning or building permit process;
- Investigate the introduction of an at-call service to collect small quantities of remnant building materials;
- Investigate and publicise local suppliers of recovered building products e.g. sink restorations, door handles, second hand bricks, roof tiles etc.
- Investigate the linkage between Council and a second hand building material dealer for acceptance of used timber and
- Work with the MWMG to outlaw the current practice of not separating recyclables and reusable materials, when deposited in a contractors skip.
- Investigate methods of minimising construction and demolition waste generated from Council construction activities.

## 4.2. COUNCIL INTERNAL WASTE MANAGEMENT

### 4.2.1. Waste Reduction Policies and Activities

#### Eco-Buy Program

Responsible purchasing is an ideal way for councils to demonstrate leadership, by choosing to buy products that are less damaging to the environment and human health, thereby, working at a local level for a more sustainable future.

The growing range of environmentally preferable products on the market provides opportunities for all areas of Council to green their supply chain.

The annual reporting requirement of the Eco-Buy program requires Council to track its expenditure, each year, on recycled and other environmentally responsible products.

Council's expenditure has increased from \$2,451,000 in 06-07 to \$2,627,745 in 07-08 (7%)

#### Waste Wise (Resource Smart)

Waste Wise is a practical, step-by-step program, developed by Sustainability Victoria to inspire Victorians to minimise waste and maximise the efficient use of valuable resources.

Waste Wise helps integrate sustainable principles into everyday operations, as well as how an organisation can benefit from the tangible results that flow from commitment to responsible waste management practices.


At the end of 2007 City of Yarra started the process of becoming re-accredited Waste Wise.

While Council already has in place a number of initiatives aimed at waste reduction and recycling, through involvement in the Waste Wise Program it aims to build on these initiatives and further involve staff, suppliers and others associated with the organisation.

#### Council Office Waste Assessment

	2007	Following Trial
Potential for recycling (i.e. recyclables in general waste)	65%	10%
Contamination - paper	5%	0%
Contamination - recyclables	25%	10%

**Table 8.19 - Waste Assessment - Council Offices**



To reduce the resources going to landfill several actions were taken, with Fitzroy Town Hall as a trial site. These included:-

- Building two waste stations in the kitchens areas to house three bins for co-mingled recycling, organics and waste;
- Removing individual bins and replacing them with paper recycling bins and
- Reducing the number of printers

#### ***Opportunities for Improvement***

- To fully implement the program in the Collingwood or Richmond Town Halls and Child Care Centres.

#### **Council Office Operations**

As part of its ongoing commitment to the Waste Wise program, the City of Yarra operates several waste management services, at various sites:-

- Paper and cardboard recycling
- Cork recycling
- Mobile phone recycling
- Printer Cartridge recycling
- Centralised waste disposal stations (no personal waste bins) at Collingwood and Fitzroy Town Halls
- Extensive paper recycling facilities
- Fully co-mingled recycling and organic recycling facilities in all staff kitchens

#### **Green Organics Processing**

Future development and increased production in green organics processing facilities will offer opportunities for the City of Yarra to use quality and consistent product in its parks and gardens areas e.g. mulch, compost etc.

#### ***Opportunities for Improvement***

- *This Plan commits Council to a buyback program of mulch from the processing facility, provided the quality and cost meets Council requirements.*

## 5. REVIEW OF EXISTING SERVICES

There are a number of issues and improvement strategies which need to be canvassed.

### 5.1. GREEN WASTE COLLECTION SERVICE

Council currently provides its residents with a free unlimited “at call” collection service for green waste. That is, if a resident has green waste to dispose, all they need to do is ring the Council and a time will be proposed to have the green waste collected from their premises.

The resident must tie and bundle the green waste and place it on the nature strip for collection before the Council arrives.

Council collected 209 tonnes of green waste from residents in 2008/09 which averaged 6.3 kg per year per household.

The domestic rubbish bin audits found, on average, 2.2% of green waste in the bins. With an average weight of 414 kg this equates to a further 9 kg per household per year.

This gives total estimated need for green waste disposal of 15.3 kg per household per year.

This does not warrant a general green waste bin collection service.

In fact, with such low volumes, household composting becomes a viable alternative.

The “at call” service should be retained for those few households which may generate a larger volume of green waste from time to time.


### 5.2. WASTE DIVERSION FROM LANDFILL

The composition of the domestic solid waste stream contains 26.4% of potentially recyclable material.

As there is currently no Alternative Resource Recovery Treatment facility operating in metropolitan Melbourne, the only way this material can be diverted from landfill is to separate it out at source. This means at the household.

Council already successfully achieves a good diversion rate and to increase this more innovative education and communication programs will need to be undertaken with the community.

The Action Plan in Section 6 of this Waste Management Plan identifies a number of initiatives which are targeted to achieve a greater diversion rate.



It is estimated that with the enhanced education program, diversion rates can be increased from 45% to 55% over the next 4 years.

To achieve greater diversion, putrescibles and organics need to be removed from the household waste bin. This is not viable until an Alternative Resource Recovery Treatment Facility is operating in Melbourne.

Until such a facility is operational, practical constraints exist on how much waste diversion from land fill can be achieved.

### **5.3. WASTE COLLECTION CONTRACTS**

The waste collection contracts are due to expire in June 2016. Until that time, collection services can continue to operate as they do currently.

Council needs to strategically plan for their renewal so it is recommended that in 2014 Council review its Waste Management Plan to ascertain if service changes are required for the new contracts.

One external influence which could have a significant impact on these contracts is if the Alternative Resource Recovery Treatment Facility has been established by 2014. Should this occur putrescibles and organics will be able to be taken out of the domestic waste stream which could then necessitate a different waste collection and disposal contract arrangement.

### **5.4. ALTERNATIVE RESOURCE RECOVERY TREATMENT**

To improve sustainability and reduce green house gas emissions, Council's will need to reduce their dependence on landfills to dispose of their waste. The State Government is sponsoring alternative disposal options through the development of Alternative Resource Recovery Treatment facilities across metropolitan Melbourne.

To date not one has been successfully developed.

The success of such a facility will be dependent upon the support of the member Council's of the Metropolitan Waste Management Group.

Yarra is a member and has been supportive of its development. This support should continue.

### **5.5. WASTE MANAGEMENT SERVICE ENHANCEMENTS**

Throughout this report opportunities for improvement to the waste service have been identified. These have been transposed into an Action Plan which is included as Section 7.

This Action Plan also includes other improvement opportunities which will further enhance the waste services the City of Yarra provides to its community and improves the community's environmental sustainability.

The Action Plan comes forward with a significant number of recommendations and some associated costs. Where possible, each action has an allocated cost and an identified benefit to help judge its merit.

A cost summary which shows the estimated additional cost required each year to implement the actions from the Action Plan is shown below.

Year	Ongoing Cost	Once Off Cost
2010	\$80,500	\$32,000
2011	\$88,750	\$72,000
2012	\$0	\$5,000
2013	\$100,000	\$0
Total	\$269,250	\$109,000


**Table 8.20 - Action Plan cost summary**

There are a number of options which Council can consider in regards to the Action Plan.

Option	Description	Cost Increase	Outcome
Status Quo	No change from current practice	Nil	Maintain diversion at 45% Community awareness retained
Partial Implementation	Focus on waste reduction strategies, community engagement and improved kerbside collection (high rise waste diversion)	\$2,000 once off costs and \$68,000 ongoing (costs incurred in year 1)	Kerbside collected waste diversion rate increased to 48% Non kerbside collected waste taken to landfill reduced by 12.5%
Full implementation	Full implementation of all actions	\$109,000 once off costs and \$269,250 ongoing (phased in over four years)	Kerbside collected waste diversion rate increased to 55% Non kerbside collected waste taken to landfill reduced by 12.5% Greater increased community awareness in regards to recycling and sustainability Well positioned when Alternative Resource Recovery Treatment Facility operational.

**Table 8.21 - Action Plan option analysis**

Council has a total waste budget of over \$8.5 million and a rate base of \$68.0 million. The full implementation of the recommendations within the Action Plan represents an



increase of 4.4% in the waste budget and a 0.55% rate increase over the life of the plan. This would be phased in over a period of four years.

It is recommended that the Council endorse the Action Plan contained within the Waste Management Plan

## 6. CONCLUSION

Council's waste management services are well established and performing well. The kerb side collection system is attuned to best practice and contamination levels are very low.

Collection contracts are in place until 2016 so major changes should not be contemplated unless waste services need to be substantially altered.

Investigations undertaken in the development of this report clearly indicate that the waste system at Yarra is performing well and no major service changes are needed at this time. Therefore no changes to the current specifications of the service contracts are recommended.

The domestic waste bin currently contains some items which are recyclable and could be diverted from the waste stream. Increased communication and education of residents will assist them understand the importance of separation of the waste stream to divert waste from landfill.

The promotion of home composting could provide an alternative for some residents.

With the higher density living across the municipality, lower volumes of green waste are generated in Yarra so the implementation of a regular green waste bin service is not recommended. Continuation of the "at call" collection service should meet the majority of residents needs into the future.

Opportunities exist to promote Commercial and Industrial and Construction and Demolition recycling across the municipality. Council should further develop programs and recycling opportunities for owners and operators in these activities.

The Alternative Resource Recovery Treatment facility proposed by the State Government will assist the recycling effort and reduce the community's carbon footprint. Council should continue to work closely and cooperatively with the Metropolitan Waste Management Group, Environment Protection Authority, Sustainability Victoria and the State Government to help achieve the establishment of such a facility.

Section 7 contains an Action Plan which has been prepared to direct Council's resources to achieve the objectives contained within this Waste Management Plan.

# 7.FUTURE DIRECTIONS

## 7.1. OBJECTIVES AND PRIORITIES

Council has identified a number of opportunities to improve the current waste services, together with associated actions for their implementation; to maintain efficient and effective waste management, with a view to meeting the targets established in *Towards Zero Waste*

These are aimed at:-

- Reducing the quantity of waste generated – Planning; innovation; lobbying;
- Increasing resource recovery from waste - Processing green organics; source separation; industrial waste
- Improving service delivery – Systems integration; procurement
- Supporting and assisting the MWMG – ARRTs; local clustering; location of facilities; marketing and
- Community engagement and education

## 7.2. ACTION PLAN

*Table 8.22 - Action Plan*

	FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Reduction strategies</b>	<ul style="list-style-type: none"> <li>Expand waste reduction strategies by identifying; key items to be avoided; approaches for making sustainable purchasing choices and methodologies for optimising waste management.</li> </ul>	<ul style="list-style-type: none"> <li>Develop Waste Savers behavioural program. This will be an in home program provided to those residents volunteering for inclusion. It will target waste avoidance, sustainable purchases and best practice waste management techniques for up to 150 households.</li> </ul>	Nov 2011	\$60,000pa	1250 tonnes of waste can be redirected from landfill over 10 years <b>Pay back 6 years</b>
	<ul style="list-style-type: none"> <li>Run programs that target efficient use of food in the home and minimise waste by reducing spoilage.</li> </ul>	<ul style="list-style-type: none"> <li>Lobby state and federal government for increased responsibility for those who create future-waste, including greater manufacturer responsibility in the amount of hazardous material contained in their product.</li> </ul>	June 2010	Nil	Included in above
		<ul style="list-style-type: none"> <li>Participate in Recycle Right at home – MWMG project with 19 other metro Municipalities. Focused on improving the recovery of recyclable packaging from households with a consistent media message. (Joint funded by participating Councils and the National Packaging Covenant.)</li> </ul>	Sept 2010	\$5,000pa	Included in above



	FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Green Organics processing</b>	<ul style="list-style-type: none"> <li>• Future upgrades of existing organics processing facilities will comply with EPA works approval and licensing requirements; these upgrades will primarily entail enclosing composting operations to help improve overall performance and product quality where appropriate.</li> <li>• Expand and/or establish appropriate markets to match increased production.</li> </ul>	<ul style="list-style-type: none"> <li>• Council to commit to a buyback program of mulch from the processing facility provided the quality is as required.</li> <li>• Purchase domestic mobile mulching unit for hire by ratepayers/residents at no cost for at home mulching.</li> </ul>	<p>Nov 2013</p> <p>July 2010</p>	<p>Nil</p> <p>\$5,000 (one-off)</p>	<p>Residents access to free mulch – community benefit</p> <p>Minor reduction in landfill costs - community benefit and solution offered for tree material. 20 T pa diverted, payback 4 years</p>



	FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Food organics facilities</b>	<ul style="list-style-type: none"> <li>To maximise the recovery of food organics and avoid contaminants in the kerbside residuals bins.</li> <li>Establish new organics recovery infrastructure and/or significantly upgrade existing windrow compost facilities.</li> <li>Provide the appropriate bin configuration for collection of food organics - run targeted community education programs.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to support the Food Systems Network which promotes food production and distribution at the local level.</li> <li>Investigate the possibility of combining community Worm Farming with Community Gardens.</li> <li>Make worm farms and compost bins available for purchase at all Town Halls and Depots.</li> <li>Investigate the possibility of introducing tumbler composting facilities at selected Council buildings.</li> <li>Expand the Compost Mates program to capture nutrients that would end in landfill. Involves linking café staff, patrons, residents, school gardeners.</li> <li>Investigate composting scheme to link to the Community Gardens on the High Rise Estates (Environment Strategy Action)</li> </ul>	<ul style="list-style-type: none"> <li>Oct 2010</li> <li>Nov 2010</li> <li>Sept2010</li> <li>Sept2011</li> <li>Jan 2011</li> <li>July 2011</li> </ul>	<ul style="list-style-type: none"> <li>\$12,500pa</li> <li>\$10,000 (one-off)</li> <li>Nil</li> <li>\$10,000 (one-off)</li> <li>\$20,000pa</li> <li>\$7,000 (one-off)</li> </ul>	<ul style="list-style-type: none"> <li>Landfill cost reduced. 55 T pa diverted from landfill <b>Pay back</b> 10 years</li> <li>Included above</li> <li>20 T pa diverted, 5 year payback</li> <li>1860 tonnes diverted from landfill over 5 year period. <b>Pay back</b> 6 years</li> <li>55 T pa diverted from landfill. <b>Pay back</b> 4 years</li> </ul>



	FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Improved kerbside collection</b>	<ul style="list-style-type: none"> <li>Establish specialised collection services (such as the ReNew, the day-after collection) to increase the range of products and material being recovered from the kerbside.</li> </ul>	<ul style="list-style-type: none"> <li>Work with the Brotherhood of St. Laurence to improve the resource recovery at the Richmond High Rise complex.</li> </ul>	June 2010	\$2,000 (one off)	1000 T pa diverted from landfill due to recycling from high rise Saving \$40,000 pa Pay back 1 year
	<ul style="list-style-type: none"> <li>Encourage all metropolitan councils to arrange for the collection of all codes of rigid plastics.</li> </ul>	<ul style="list-style-type: none"> <li>Provide face to face education for all the City of Yarra residential and commercial sectors with respect to proper source separation. (To be funded through Visy's education budget)</li> </ul>	Jan 2010	Nil	
	<ul style="list-style-type: none"> <li>Continue to expand education and behavioural change programs in support of proper source separation of household waste and recyclables and the recycling ethic in general.</li> </ul>	<ul style="list-style-type: none"> <li>Provide regular communication to residents regarding services and waste reduction. (To be funded through Visy's education budget)</li> </ul>	Ongoing	Nil	
	<ul style="list-style-type: none"> <li>Further pilot projects and trials of collections from multi-unit dwellings will be needed.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to introduce shared commingled recycling and waste bins (e.g. within multi-unit developments).</li> </ul>	Ongoing	Nil	142 T pa diverted from landfill to recycling from multi-unit developments Savings \$6000 pa
		<ul style="list-style-type: none"> <li>Communal use of at-call waste services (e.g. at multi-unit developments).</li> </ul>	Ongoing	Nil	



FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Advanced Resource Recovery Technology (ARRT)</b>	<ul style="list-style-type: none"> <li>Thorough research into any new technology is critical to it being considered as a marketable option to reliably process available waste streams and produce viable end products.</li> <li>Ensure that any future decisions on the establishment of resource recovery 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.</li> </ul>	Ongoing	Nil	
<b>Integrating streams</b>	<ul style="list-style-type: none"> <li>When considering appropriate sites for integrated facilities, consideration should be given to the opportunities to integrate waste from Commercial &amp; Industrial (C&amp;I) and Construction &amp; Demolition (C&amp;D) in terms of the logistical benefits associated with access to material inputs and to markets for products.</li> </ul>	Jan 2010  Jan 2010	Nil  Nil	



	FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Council clusters</b>	<ul style="list-style-type: none"> <li>• Councils will need to agree to effective clustering, to enable the MWMG to proceed with procurement processes for appropriate technology solutions for metropolitan Melbourne and to ensure councils deliver effective services to their residents.</li> <li>• Opportunities to link services and infrastructure to adjacent municipalities and regions should also be considered.</li> </ul>	<ul style="list-style-type: none"> <li>• Work with MWMG to ensure that clustering does not compromise a competitive outcome for Council and that opportunity for choice is available.</li> </ul>	Ongoing	Nil	
<b>Community engagement and education</b>	<ul style="list-style-type: none"> <li>• An education and engagement implementation strategy will need to be developed so that key messages are identified and understood by all the stakeholders and brought to the community.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a seminar around “How to Compost” and make them available to The City of Yarra Community twice a year.</li> <li>• Investigate and trial a Precinct Composting program in a Multi Unit Developments.</li> <li>• Ensure the EASY Trailer is available for schools and community groups and is present at all major events and festivals.</li> <li>• Ensure Gleadell St Market maintains Waste Wise accreditation and becomes plastic bag free through ongoing enforcement and education (Environment Strategy Action)</li> </ul>	July 2010	\$3,000pa	5 T pa diverted from landfill, saving \$200 pa. No payback
			Jan 2010	Nil	
			Ongoing	Nil	
			Ongoing	Nil	



	FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Market Development</b>	<ul style="list-style-type: none"> <li>• Further market and industry development is required to promote the sale of higher value organics products into the urban amenity, horticultural and agricultural markets.</li> <li>• Community engagement and infrastructure is also required to reduce the risk of physical and chemical contamination or products.</li> <li>• Markets for timber will be developed by commercial timber recycling facility operators, which predominantly process materials from the C&amp;I and C&amp;D sectors.</li> <li>• Markets for materials recovered from C&amp;D waste from MSW/small vehicle loads will be developed as a sub-set of C&amp;D sector waste recyclers.</li> </ul>	<ul style="list-style-type: none"> <li>• Work with the MWMG to ensure that new facilities can process high quality mulch and compost to a predetermined specification to enable buy back by Council.</li> <li>• Investigate the introduction of an at call service to collect smaller quantities of remnant building materials from minor residential refurbishments. (Extra cost to be taken up in natural growth of at call service due to higher uptake of service in annual budget process.)</li> <li>• Investigate the establishment of a linkage between Council and a second hand building material dealer for acceptance of used timber.</li> <li>• Investigate local / metro business register or a web based community network for companies that can recover and recycle building products such as sinks and bricks.</li> </ul>	<p>Nov 2013</p> <p>Sept2010</p> <p>Jan 2011</p> <p>Jan 2011</p>	<p>Nil</p> <p>To be determined dependent upon the growth of the service.</p> <p>Nil</p> <p>Nil</p>	



	FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Procurement of waste services</b>	<ul style="list-style-type: none"> <li>The proposed procurement guidelines will be based on an MWMG led model but this does not preclude other procurement models being used if appropriate for local government and/or industry.</li> <li>Through the procurement process, clusters of councils and/or the MWMG may enter into contracts for the provision of infrastructure and services which are capable of meeting the objectives of TZW in a manner which is consistent with the Strategic Plan.</li> <li>Specific contract governance arrangements will be determined on a project-by-project basis and will be influenced by the type and scale of the project and consideration of local government needs as the responsible manager for MSW.</li> </ul>	<ul style="list-style-type: none"> <li>Work with the MWMG to establish an ARRT as the most appropriate current solution to enable the accomplishment of the TZW diversion goals.</li> <li>Work with MWMG to ensure that a new contract for waste disposal is in place prior to the expiry of the current contract at 30 June 2010. It will also be imperative that the contract provide for the ability for Council's to transfer to newly established ARRT's as soon as they are available.</li> </ul>	<p>Ongoing</p> <p>Jan 2010</p>	<p>Nil</p> <p>Nil</p>	



	FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Future resource recovery opportunities</b>	<ul style="list-style-type: none"> <li>The provision of new waste recovery technology needs to be explored to help ensure Melbourne meets its municipal TZW target, through the Victorian Advanced Resource Recovery Initiative.</li> <li>Initiatives to further minimise waste to landfill need to continue.</li> <li>There will be a need for further pilot projects and trials, such as collection from multi-unit dwellings and “day after” collections.</li> <li>MSW organics processing facilities should maximise opportunities to receive material from C&amp;I and C&amp;D sectors whenever possible.</li> </ul>	<ul style="list-style-type: none"> <li>Develop a highly visible mobile Public Place Recycling initiative to minimise waste to landfill. (To be funded through Visy’s’ education budget)</li> <li>Aim to increase resource recovery from public places by providing separate mobile bins for recycling where possible e.g. pavilions (Environment Strategy Action)</li> <li>Identify and implement the most effective means of ensuring festivals achieve Waste Wise (or equivalent) accreditation and ensure that traders and attendees comply with objectives through targeted engagement programs. (Environment Strategy Action)</li> <li>Further develop the recycling drop off centre at the Collingwood Depot to allow items to be deposited outside of working hours and to include any recommendations from the review of the use of Council’s depots.</li> <li>Investigate feasibility for Burnley, Collingwood or Fitzroy Depot becoming a ‘Detox your Home’ site. (Cost to address chemical identification, (paint, acids, household chemicals etc ) transport and disposal options only)</li> <li>Work with MWMG to make manufacturers responsible for disposal of unused materials/ containers and E-Waste.</li> <li>Make representation to the MWMG for a position paper to be prepared to consider all ramifications of the introduction of a Container Deposit Legislation (CDL) for Victoria.</li> </ul>	<ul style="list-style-type: none"> <li>Jan 2010</li> <li>Jan 2012</li> <li>Jan 2011</li> <li>Feb 2011</li> <li>Nov 2010</li> <li>Sept2010</li> <li>Sept2010</li> </ul>	<ul style="list-style-type: none"> <li>Nil</li> <li>\$5,000 (one-off)</li> <li>\$8,750pa monitor 45 events</li> <li>\$55,000 (one-off)</li> <li>\$15,000 (one-off)</li> <li>Nil</li> <li>Nil</li> </ul>	<ul style="list-style-type: none"> <li>40 T pa diverted from landfill, saving \$1600 pa. Payback 3 years</li> <li>20 T pa diverted from landfill. \$800 saving pa. No payback</li> <li>Saving of \$25,000 pa on collection cost foregone Saving \$20,000 pa on diversion from landfill (500 T pa) Payback 1.5 years</li> <li>Report only no cost benefit.</li> </ul>



	FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Source Separation</b>	<ul style="list-style-type: none"> <li>• Source separation of waste materials should be promoted wherever possible (space and access limitations for multiple bins and collections may reduce opportunities), in particular:</li> <li>• Organic materials, especially food waste from food manufacturers and food outlets.</li> <li>• Paper, glass and cardboard from offices and shopping centres and metals and timber from the manufacturing sector.</li> <li>• Work is needed with the waste transport industry to maximise waste separation and aggregation.</li> <li>• Source-separated collection services are needed for small C&amp;D sites.</li> </ul>	<ul style="list-style-type: none"> <li>• Advance the participation of all the City of Yarra schools in the Resource Smart Schools program.</li> <li>• Using the model developed through the Lower Yarra Litter Strategy, over the next 4 years work with traders on commercial strips to improve their Waste Management systems (resource recovery) and reduce impact to storm-water pollution.</li> <li>• Use the established Litter Task Force to integrate education, infrastructure, and enforcement, and target litter hot-spots in a strategic manner, within the framework of Lower Yarra Litter Strategy. (Environment Strategy Action)</li> <li>• Work with the MWMG to outlaw the current practice of skip hire where no separation is practiced, resulting in recyclable or reusable items being land filled</li> <li>• Conduct yearly audits of residential waste to determine composition of waste and further develop strategies to improve source separation.</li> </ul>	<p>Nov 2010</p> <p>Nov 2010</p> <p>March2010</p> <p>Nov 2011</p> <p>Each year</p>	<p>\$10,000pa</p> <p>\$50,000pa</p> <p>Nil</p> <p>Nil</p> <p>Nil</p>	<p>20 T pa diverted from landfill. Save \$1000 pa. No payback</p> <p>Saving of \$30,000 pa on litter collection and drain cleaning. Improved amenity No payback</p>



	FUTURE DIRECTIONS	CITY OF YARRA ACTIONS	BY WHEN	ADDITIONAL COST TO COUNCIL	COST/BENEFIT ANALYSIS (CBA)
<b>Solid Industrial Waste</b>	<ul style="list-style-type: none"> <li>Infrastructure to process increasing quantities of mixed C&amp;D waste streams is needed, particularly in the east and south-east areas of metropolitan Melbourne.</li> <li>Capacity for processing timber into mulch products and/or potential for energy recovery and priority products needs improving.</li> </ul>	<ul style="list-style-type: none"> <li>Expand the Kids off the Kerb program to incorporate the renovation of discarded furniture for either reuse or donation to charity.</li> </ul>	March 2013	\$100,000pa To create 3 EFT traineeships	1800 T pa diverted from landfill Social benefit from local employment and saving of approx. \$75,000 pa No payback
	<ul style="list-style-type: none"> <li>Markets that stimulate or encourage the recovery of materials not commonly recovered at present need further development.</li> <li>Greater capacity is required for the processing of priority materials and products.</li> <li>Capacity for drop-off by small and medium enterprises for recycling through resource recovery facilities and transfer stations needs expansion.</li> </ul>	<ul style="list-style-type: none"> <li>Establish a linkage with the Salvation Army, where Council can have reusable items it collects or are deposited at the Drop-off Centre promptly collected by the Salvation Army.</li> </ul>	July 2010	Nil	



### **7.3. KPI/TARGETS**

Council will continue to measure its effectiveness in waste management by the collection of data on its waste management systems, regular reporting and reviewing targets.

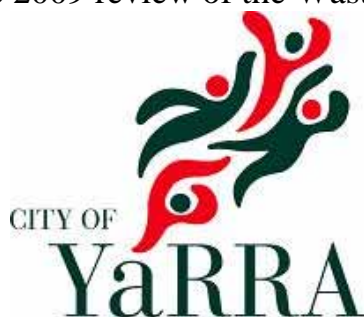
The major method of measuring progress will be through expected changes in the municipal solid waste stream, i.e. it is expected that green waste and recyclables will increase in their diversion rates from landfill.

Similarly, it is expected that kerbside garbage quantities collected per capita, will reduce.

## 8. ACRONYMS

<b>ARRT</b>	Advanced Resource Recovery Treatment Facility
<b>C&amp;D</b>	Construction and Demolition Waste
<b>C&amp;I</b>	Commercial and Industrial Waste
<b>CPRS</b>	Carbon Pollution Reduction Scheme
<b>MGB</b>	Mobile Garbage Bin
<b>MRF</b>	Materials Recovery Facility
<b>MSW</b>	Municipal Solid Waste
<b>MUD</b>	Multi Unit Development
<b>MWMG</b>	Metropolitan Waste Management Group
<b>NPC</b>	National Packaging Covenant
<b>PPR</b>	Public Place Recycling
<b>TZW</b>	Towards Zero Waste Strategy

## APPENDIX A EXAMPLE COMMUNITY SATISFACTION SURVEY



## **Overview**

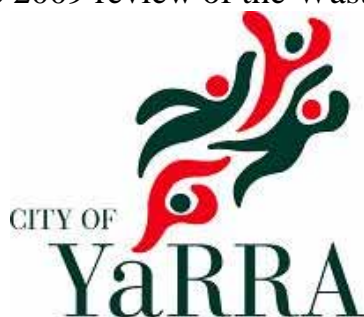
*Yarra City Council is reviewing its Waste Management Plan. Council is looking to improve its waste management services while working to reduce the negative environmental impacts from waste.*

*In particular Council will work to meet the targets set in the Victorian Government's Towards Zero Waste strategy and the Metropolitan Waste Management Plan.*

*Details about Council's waste service are available at [www.yarracity.vic.gov.au](http://www.yarracity.vic.gov.au) - go to the services heading and select waste collection heading. Council has also recently delivered a Waste and Recycling Guide to all households in Yarra. If you did not receive a copy of this Guide, please request one by contacting Council on 9205 5555.*

The following questions ask about your use of Yarra's waste services and for your opinion on possible changes to these services.

## Consultation for the 2009 review of the Waste Management Plan



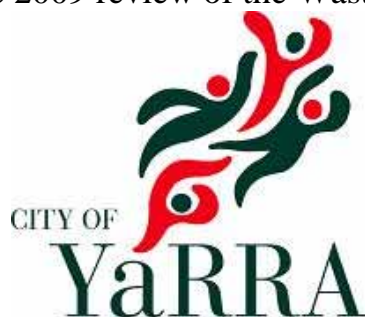
### S1 Services

*Council is working to reduce waste going to landfill and increase people's reuse and recycling of materials.*

**Q1a** How satisfied are you with the following existing services?

	Tick the appropriate box to show your satisfaction with each service	Very satisfied	Satisfied	Not very satisfied	Did not know about it	Don't use
1.	Weekly kerbside collections waste (garbage bin)					
2.	Weekly kerbside collections recycling (for paper, cans, etc)					
3.	At call Green Waste collections					
4.	At call Hard Waste collections (2 per annum)					
5.	Council's Drop Off Centre					
6.	The provision of reduced cost home compost bins and worm farms					
7.	Free Mulch when available					

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**Q1b** What would improve Council's waste service for you?

**Q1c** Would you be prepared to pay for extra waste services?

- Yes
- No
- Unsure

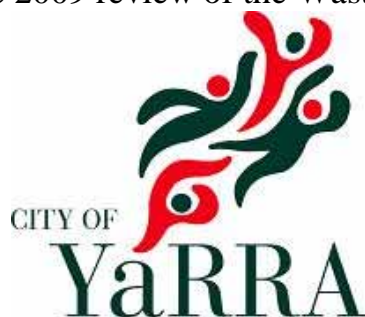
### **S2**                    **Hard & green waste services**

*Council provides up to 2 free, at-call hard rubbish collection each year and unlimited free, at-call green waste collections per year. Residents can book these services by simply calling Council on 9205 5555.*

**Q2a** Have you used Council's at call hard waste service in the last 12 months?

- Yes
- No
- Unsure

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**Q2b** If No, why not?

**Q2c** If not, how are you disposing of your hard waste?

*Choose One:*

- At local tip
- I put it in the general waste bin
- I employ a private contractor

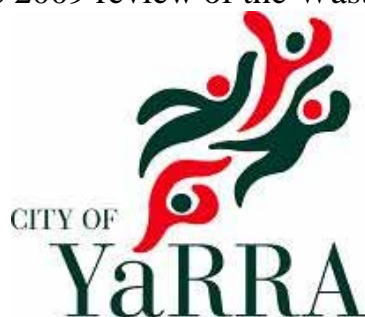
Other (please specify): \_\_\_\_\_

**Q2d** Have you used Council's at call green waste service in the last 12 months?

- Yes
- No
- Unsure

**Q2e** If No, why not?

## Consultation for the 2009 review of the Waste Management Plan



**Q2f** If not, how do you dispose of your green waste?

*Choose One:*

- At local tip
- I compost it
- I put it in the general waste bin
- I employ a private contractor

Other (please specify): \_\_\_\_\_

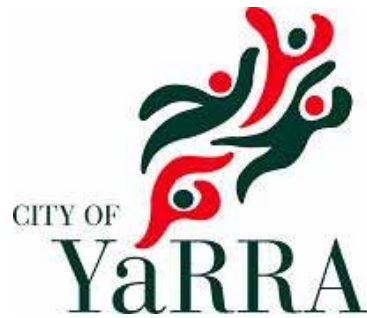
### **S3 Ways to reduce waste**

*Part of managing Yarra's waste is to minimise the amount of materials we bring in to homes that we then need to dispose of, and/or to maximise reuse these materials at home (such as through compost).*

**Q3a** Would you use a mulching unit if Council made it available to borrow?

- Yes
- No
- Unsure

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**Q3c** Does your household use a compost bin?

- Yes
- No
- Unsure

**Q3d** If not, what are the reasons why you don't use a compost bin?

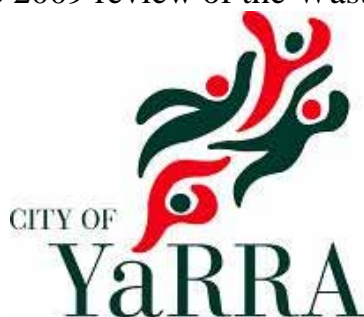
**Q3e** Are there any other ways Council could help you reduce your waste?

**S4 Other waste options**

**Q4a** Do you use a drop-off point to dispose of your chemical waste?

- Yes
- No

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Unsure

**Q4b** If not, why not?

**Q4c** Would you use the drop-off point (Yarra Works Depot, Clifton Hill) to dispose of your electronic waste?

- Yes
- No
- Unsure

**Q4d** If not, why not?

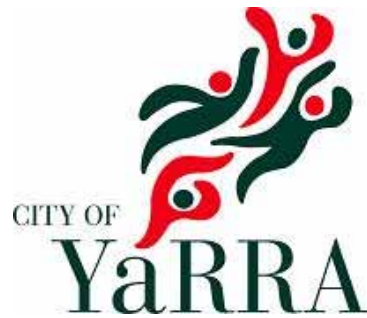
**S5 Waste information**

**Q5a** What are your top preferences for how to receive information on local waste services?

- The Melbourne Times
- Melbourne Leader
- Yarra News
- Council's website
- Fridge magnet
- Leaflet / booklet
- Other

**S6 Demographics**

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*Please provide some background information about yourself and your household*

**Q6a** Which suburb do you live in?

*Choose One:*

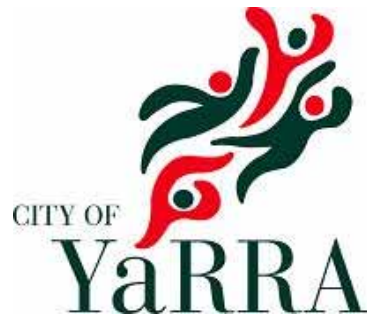
- Abbotsford
- Central Richmond
- Clifton Hill
- Collingwood
- Cremorne and Burnley (Richmond South)
- Fairfield and Alphington
- Fitzroy
- Fitzroy North
- Carlton North and Princes Hill
- North Richmond

**Q6b** What is your household composition?

*Choose One:*

- Single
  - Group household
  - Couple
  - Single / couple with children
  - Other
-

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**Q6c** What is your housing tenure?

*Choose One:*

- Own
- Purchasing
- Renting
- Other

Thanks for your valuable contribution. If you have any queries about the survey please contact the Sustainability Education Officer, Lisa Coffa, [lisa.coffa@yarracity.vic.gov.au](mailto:lisa.coffa@yarracity.vic.gov.au), or **Ph** 9205 5730.