

ATTACHMENT TO AGENDA ITEM

Ordinary Meeting

17 December 2013

**Agenda Item 9.4 Draft Waste & Resource Recovery Management
Strategy 2013 - 2023**

Attachment 1 Waste Management Strategy Draft 2013-2023 v2 PDF 493



EXECUTIVE SUMMARY

Greater Shepparton City Council has undertaken a review of its Waste and Resource Management Strategy 2005 – 2015 to produce this current Waste and Resource Recovery Management Strategy 2013 – 2023 to guide how it deals with waste into the future.

Over the life of the current Strategy Council has delivered a range of achievements that include but are not limited to:

- A shift towards smaller waste bin options – option of either 80L, 120L or 240L with the 80 L being the preferred option.
- Having an excellent diversion rate of 52% in relation to its municipal solid waste, outperforming other member councils of the Goulburn Valley Regional Waste Management Group due to the implementation of its Strategies.
- Introduction of greater diversion at transfer stations with a number of initiatives that include:
 - Provision of Detox your Home services
 - Recycling of mattresses
 - Introduction of drumMuster collection program
 - Recycling of oil
 - Setting up of second hand shop
 - Diversion of computer components
- Work with Goulburn Valley Food Processors Group and other construction and industrial waste generators to develop detailed initiatives to achieve process targets by 2011.
- Collected green organics transported to Western Composting Green Organics in vessel composting facility at 165 Daldy Road, Shepparton.
- Council acquired land for Cosgrove 3 landfill to allow for planning and development of a new cell prior to the closure of Cosgrove 2.
- Closure of Murchison Landfill and replaced with a transfer station.
- Arrangements with Company LMS to collect and flare gas at the Cosgrove Landfill.

This Strategy was developed as a result of community consultation in an effort to address existing and emerging waste management issues faced by the Greater Shepparton region community. Focusing mainly on the waste we generate in the home the Strategy also acknowledges the role the Council plays in the provision of the delivery of waste services to businesses and the industry sector on a commercial basis by operating the landfill at Cosgrove.

The directions in this Draft Waste and Resource Recovery Management Strategy will support the adoption of a more sustainable approach to the way waste is managed resulting in more waste being recovered as a resource and less waste going to landfill.

It is acknowledged that landfills are fast running out of tipping space and there is a growing community concern that councils need to take a more sustainable approach to the way waste is managed. In recognising this need for change the development of this Waste and Resource Recovery Management Strategy (W&RRMS) has focused on the following objectives:

- Reduce waste, increase resource recovery;
- Focus on diverting organic waste from landfill to minimise current and future financial and environmental liabilities
- Provide an efficient, convenient and safe resource management system for residents;
- Develop partnerships to develop and deliver sustainable services

- Minimise the costs and risks to ratepayers;
- Support innovation in resource management and look for opportunities to maximise sector development in the Greater Shepparton region
- Reduce the incidence of illegal dumping and littering

This Strategy was developed as a result of community consultation in an effort to address existing and emerging waste management issues faced by the Greater Shepparton regional community. In developing this Strategy communication and engagement activities included:

- Media Release
- Council website
- Social media
- Public forum
- Internal Council networks

From the Options Paper that was developed by Council significant and comprehensive submissions were received. Council's traditional waste services to the community were tested and actions identified to achieve the right balance between accessibility, affordability and sustainability.

This Strategy identifies and responds to the submissions received. While there is still significant investigation required to provide the successful implementation of the strategies outlined in this document the main issues raised could be summarised by the following:

- Should work towards the downsizing of the garbage bin to 80L becoming the standard size with the gradual phasing out of the 240L bin except in exceptional circumstances;
- Provision of special collection arrangements for a number of our community with legitimate mobility, health or transport issues;
- Acceptance of the placing of food-waste into the green waste collection service;
- The need for increasing education to promote waste minimisation, resource recovery and litter management;
- The need to increase awareness and strategies to curb littering and illegal dumping of waste
- Working together with local service providers and volunteer groups that could work in partnership with Council to address concerns of illegal dumping of waste and implementation of strategies;
- The need to maintain and investigate and encourage Best Practice at Council's three resource recovery centres;
- Continue to identify opportunities at Council's waste facilities for the improved recovery of hard waste with particular emphasis on commercial and industrial waste that takes up a large proportion of the overall waste stream;
- Undertake the necessary planning and licencing stages for the future development of the Cosgrove 3 landfill site well before the closure of the current Cosgrove 2 site.

To further improve on its performance, Greater Shepparton City Council will continue to develop and facilitate beneficial partnerships, and meet its obligations within the framework of current and emerging waste management policy and directives, both within Victoria and nationally. This 2013 – 2023 Strategy provides Council and the community with a range of opportunities that seek to capitalise on Shepparton's waste minimisation achievements, and offer a path forward that is both challenging and achievable.

It is important that this document is read in conjunction with the new Draft Statewide Waste and Resource Recovery Infrastructure Plan 2013-2014 Victoria (SWRRIP); issued in September 2013 by Sustainability Victoria. Links are made throughout this document to the new statutory Draft Plan which makes this document reliant on the outcomes of the Final SWRRIP when it does become available.

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List of Acronyms used

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

1 INTRODUCTION

1.1 PURPOSE

The *Waste and Resource Recovery Management Strategy (WRRMS)* has been developed as part of the commitment the Greater Shepparton City Council has made to provide sustainable solutions for the collection, disposal and resource recovery from waste generated within our community. The *WRRMS* describes strategies and measurable actions to be undertaken by Council over the next ten years (2013 – 2023) and its key aims are to guide the development and improvement of current waste management practices. This document now supersedes the former Waste Management Strategy 2005 to 2015. Sustainable approaches to waste management need to be integrated into all future policies, strategies and planning decisions made by Council.

The future directions of waste management within this municipality need to be consistent and work towards those of the region and Victoria as a whole. As such, the key drivers for this strategy are:

- Government policies relating to 'Getting Full Value' 2013 (State Policy), setting out the Government's new 30-year plan to better deal with waste management within the state and with the aim of ensuring Victoria becomes a national leader in waste management and resource recovery;
- The need to deal with the projected population increases and economic growth of the region, in terms of sustainability outcomes for waste and materials recovery;
- The need to manage and reduce greenhouse gas emissions and energy and water consumption in response to climate change risk;
- Government policies and strategies seeking to increase energy generation from renewable sources; and
- The need to plan and further develop Council's landfill site at Cosgrove as a landfill of regional significance.

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

Waste Management has a very high profile in the community and accounts for 6.4% of the Council's budgeted expenditure. Municipal waste accounts for 37% of the Greater Shepparton region's overall waste stream, however Council also has a role to play in the management of the remaining amount of waste generated by the community.

1.2 OVERVIEW OF MUNICIPALITY

1.2.1 Local residential properties (households) and population characteristics

Greater Shepparton has a population of 62,000 people over 2,421 square kilometres. Centrally located along the Goulburn and Broken Rivers the Greater Shepparton Region is the fourth largest regional centre in Victoria and one of the fastest growing regions in Victoria.

Greater Shepparton is well located in terms of accessibility to metropolitan Melbourne and major regional centres having regard for the Goulburn Valley Highway and the Midland Highway in particular, each of which passes through Shepparton. Surrounding municipalities comprise Moira Shire to the north, Strathbogie to the south, Campaspe Shire to the west and

Benalla Rural City to the East. The main centres in the broader region include Echuca, Benalla and Wangaratta.

Greater Shepparton's population is almost evenly split between the main urban centres of Shepparton and Mooroopna (53%) and the surrounding rural areas, including the smaller townships of Congupna, Dookie, Katandra, Kialla West, Merrigum, Murchison, Tallygaroopna, Tatura, Toolamba, Undera and surrounding rural areas (47%). This split reflects the range of lifestyle choices available across the Municipality, from small urban blocks close to high quality amenities, through to lifestyle properties as well as large working orchards and farms.

- An estimated 3.5% of residents have an indigenous heritage and the region boasts a strong history of indigenous advocacy and leadership locally, nationally and internationally.
- More than 14% of people are born overseas and the region is home to more than 50 cultural groups.
- The largest numbers are from Italy, Turkey, Greece, Albania, Netherlands, United Kingdom, Germany, India, New Zealand, Philippines, the Pacific and Iraq.
- Greater Shepparton has supported Australia's intake of humanitarian entrants and refugees from Africa, the Middle East and Afghanistan and is now the leading Victorian site for new arrival community settlement outside of metropolitan Melbourne.
- Approximately 4.3 % of people in the municipality have been identified as requiring assistance with self-care, body movements or communication.

Table 1 Population and Households – Current and Projected

	2006 (last census)		2016 (Projected)		2021 (Projected)	
	Residents	Households	Residents	Households	Residents	Households
Number	59,430		65,300	26,395	68,770	28,300
Growth Rate			+1.2%	+1.6%	+1.0%	+1.4%

Overall, nearly 14,000 new dwellings will need to be provided in Greater Shepparton over the next 20 year period. At present, Shepparton has the highest average household size at 2.55 persons of any of other benchmarked similar municipalities. Other benchmarked cities include Ballarat, Greater Bendigo, Latrobe, Mildura and Warrnambool. The average for other cities (in 2011) is 2.46 persons per household.

The following are Socio-Economic Composition observations comparing Shepparton with other benchmarked municipalities:

- **Income:** Shepparton's annual median individual income increased by approximately 20%, , from \$22,240 in 2006 to \$26,620 in 2011. However, incomes increased at a higher rate in all other municipalities except Mildura which increased by 18%.
- **Age Structure:** Shepparton has experienced an increase in the proportions of young children, similar to Ballarat, Bendigo and Latrobe. This has been accompanied by declining shares for the 5-14 and 25-65 year age groups. The 65+ age group increased across all municipalities.

- **Country of Birth:** the proportion of population in Shepparton who were born in non English speaking countries increased from 8.2% to 10.6% in 2011. This is almost double the increase in other municipalities. Shepparton also has the highest proportion of indigenous persons.
- **Dwelling Structure:** the share of detached dwellings increased by 1.6% in Shepparton, and this trend was also observed in Bendigo, Mildura and Warrnambool. The Ballarat and Latrobe municipalities saw an increase in townhouses and units at the expense of detached dwellings. The average household size continued to decrease across all of the municipalities. Shepparton continues to have the largest average household size at 2.55 persons per dwelling.
- **Tenure Type:** Shepparton's share of fully owned dwellings declined marginally between 2006 and 2011. The share of dwellings being rented in Shepparton increased from 27.3% to 29.4%.

Overall, in comparison with other benchmarked cities, Greater Shepparton has experienced slower income growth; has a higher proportion of persons who have not completed Year 10; has a higher incidence of ethnicity; and has lower home ownership rates. These factors reflect Greater Shepparton's reliance on agriculture and manufacturing activities. They also indicate that State Government programs to support local communities need to focus on this part of the State such as education and community services.

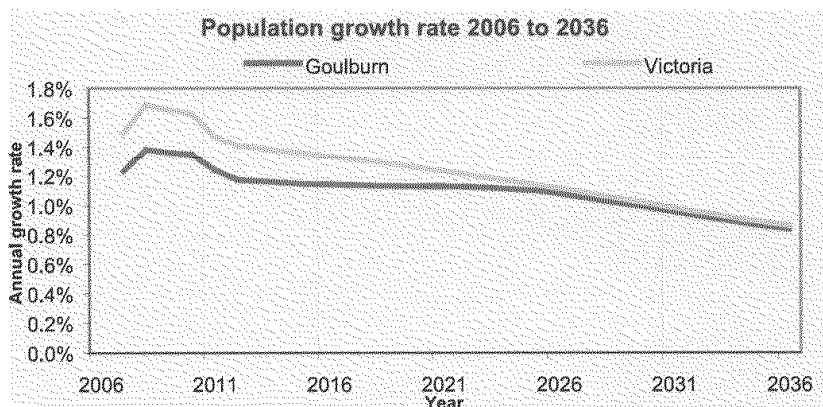
Business Environment: Sustained business and economic growth experienced in recent years has directly contributed to Greater Shepparton's population growth. While agriculture remains the primary driver for Greater Shepparton's economic development, other growth industries have emerged in food processing, manufacturing, transport, retail community services, hospitality, education, construction building, banking and financial services. However, the level of success of the agricultural sector has implications on retailing and businesses in general. In recent years drought has adversely affected the region's agricultural industry and this has had a flow on effect to businesses in Shepparton.

Agricultural Economy: The Goulburn Valley is often referred to as the Food Bowl of Australia with around 25% of the total value of Victoria's agricultural production generated in this area. Dairying and fruit growing are the major primary industries, with substantial growth occurring in the viticulture and tomato industries. The area has a strong export focus and substantial growth projection. Major secondary industries in Greater Shepparton are related to food processing, manufacturing and transport.

Key Issues: Shepparton and other key locations in the municipality (such as Mooroopna and Tatura) have for many decades been underpinned by strong industrial sectors including agriculture, manufacturing and food processing; however these activities are increasingly coming under threat for a range of reasons, including low-cost offshore competition, a sustained high exchange rate, and potential consequences of the proposed Murray Darling Plan (ie, impacting on water-dependent industries). This vulnerability is highlighted by significant recent job losses at SPC Ardmona in Mooroopna and the Heinz tomato processing plant at Girgarre, and increasing pressure on the region's apple growers due in part due to imported New Zealand products. In recent times SPC Ardmona has reduced contracts by 50% for fruit growers located in the Goulburn Valley, principally due to competitive pressures from the high currency, and this has put further pressure on Greater Shepparton's job market and business community.

The factors outlined above highlight the increased role Greater Shepparton will be expected to play in terms of providing future employment, health, education, aged care, migrant, training and retail services as the regional population expands and demand for a range of services accelerates through demographic change factors. However, at the same time the Shepparton economy is vulnerable to external pressures and will need to transition a range of sectors to more productive, higher-value or niche activities in the coming years in order to remain competitive. As noted, Greater Shepparton has an existing high unemployment rate of 8%, one of the highest regional centres and well above the regional Victoria average of 5.7%. This leads to social pressures often associated with lack of employment opportunities and low incomes.

The Goulburn Valley Region is projected to grow at a slightly slower rate than Victoria over the period 2011-2036, increasing its population by almost 79,000 persons. More than two-thirds of the growth is expected in the age group 60 years and over who will comprise more than one third of the population in 2036.



Significant aspects relating to the community profile include the fact that the Average household size is predicted to fall from 2.58 people in 2001 to 2.25 in 2031..

1.2.2 Residential and Non-residential properties including public sector organisations operating in the municipality

The distribution of major users of the kerbside waste service is as follows:

User Category	No. Services	Participation Level (%)
Residential	22,683	98
Rural (Primary Production)	1,230	74
Commercial	906	51
Industrial	444	48
Total No. Services:	25,263	

From the above table it can be seen that 98% of residential customers, 74% of rural customers and approximately 50% of commercial and industrial assessments receive a kerbside waste collection service.

The two residential land uses that have significant premises not having a kerbside waste collection service are retirement village units and rural lifestyle properties up to 20 ha. These property types would have access to alternative waste collection arrangements and consequently do not require Council's collection service, or may be located in relatively isolated areas where the kerbside service is unavailable.

Under the current arrangements all properties in urban areas and households abutting the sealed road network in rural areas receive a kerbside waste service. In rural areas residents on the unsealed road network may also bring their bins to the nearest sealed road for collection. As these households are generally engaged with a farm enterprise a suitable collection vehicle is usually available to transport the bin to the nearest sealed road for this purpose.

In reference to commercial and industrial properties these businesses often have special needs requiring a private waste arrangement and consequently do not need to join the Council service.

In summary almost all residential customers, three quarters of rural residents and half of commercial and industrial tenements currently have access to Council's kerbside waste collection service.

Key Issues for the Greater Shepparton City Council

- For Council to extend the collection area to include the unsealed road network of the Municipality a further 1200km or nearly double the existing travel distance would be required every week per service. The estimated cost to service the rural unsealed network excluding unmade or earth roads would be approximately an additional \$525,000 annually for the 441 households not currently receiving a service. This equates to approximately \$1,190 per household. This cost does not include waste disposal.
- As indicated in the above data, given that almost all households in Greater Shepparton currently receive a kerbside service it would be difficult to justify the additional cost. It is more convenient however for those customers who desire to have a rural collection service to transport their bin to the nearest sealed road for collection.
- The Council's three transfer stations accept household waste for a fee and recyclables for no charge. Residents not having a kerbside collection service are able to access these facilities. The average weight of waste generated by households in Greater Shepparton is 496 kg per year. For a rural resident to dispose of household waste say every fortnight (19kg) at the nearest transfer station the cost would be \$260 per year based on minimum charge of \$10 at 26 times per year. This is slightly more expensive than a 120L bin garbage charge of \$214. It is therefore recommended that no change be made to the existing service.
- The waste collection services are compulsory in urban areas and optional in rural areas. Other farming enterprises and commercial businesses who have different waste needs, in type and volume, usually elect not to use the Council service and instead make other private arrangements.
- Council's ageing population does provide Council with some challenges in regard to the provision of kerbside collection services. The aged and frail do need to be considered with such issues as some not being able to physically place their bins out onto the kerbside. There are members of the community with mobility, health or transport restrictions that result in them not being able to access some of Council's services. Council is considering using it's Aged Care Team's assistance in providing eligible residents to have their bins collected at their front door.
- Similarly consideration needs to be given to the aged and frail in the proposed introduction of a hard waste service. A variety of methods are available to manage hard waste using either the services of private industry or Council. Whilst these options are discussed further in this Strategy Council's Aged Care Team again could provide assistance to eligible residents by the provision of an at call hard waste collection service.
- For residents who have English as a second language consideration should be given for special communication and education practices particularly for changes made to waste management practices.

1.3 WASTE MANAGEMENT OVERVIEW

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

1.3.1 Local Waste Management

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

- Collection of waste and recyclables at the kerbside in MGBs (wheelie bins), including:

- Co-mingled recyclables;



- Green organics;



- Garbage (residual waste); and



- Waste and recyclables from a diverse range of residential, mixed use properties (such as schools, care facilities, council run facilities and small commercial properties);
- Street litter collection (including street litter bins);
- Street sweeping;
- Public Place Recycling (PPR);
- Collection of illegally dumped waste, usually hard rubbish;
- Collection of waste and recyclables generated at local Festivals and Events;
- Management and operation of three resource recovery centres;

- Solid inert and organic (green waste and timber) waste and recyclables from residential properties disposed of at the Shepparton Resource Recovery Centre;
- Provision of 'drumMuster' and collection of 'E-waste', as a drop-off service at the Shepparton Resource Recovery facility;
- Provision of 'Detox your Home', collection and management service for drop-off of household hazardous/toxic waste at the Shepparton Resource Recovery Centre (e.g. household chemicals, motor oils, paint, car batteries, gas bottles etc)

The cost of providing these services for the 2013/2014 year is expected to be in excess of \$7.9 (2010/11) million dollars. This cost is expected to grow in time to meet the challenges of an increasingly carbon constrained world.

1.3.2 Previous Waste and Resource Management Strategy

The previous 10 year Waste and Resource Management Strategy was for the period 2005 to 2015. This strategy provided a vision and direction for its waste management services for this period. The Strategy strengthened Council's commitment to minimising environmental impacts associated with its waste management activities, and also supported the provision of best practice waste services and facilities. The Strategy is in accordance with the Council Plan 2004/2008 and Best Value principles.

The Strategy proposed through a series of actions revolving around reduction, recovery, reuse and recycling to approach zero waste production as a long term goal. Putting planned measures in place and new systems by the Council in 2006 was to see a 52% diversion of municipal waste from landfill based on 2010 figures. The impact of the Strategy was depicted through the following Figure 1, which shows the timelines involved in implementing the proposed actions.

The following tables provide a summary of the Goulburn Valley Regional Waste Management Group's performance in relation to municipal solid waste. The Greater Shepparton City Council is a member council of this Group and it is interesting to note that its diversion rate of 52% in 2010 is better than any of the other member Councils diversion rates for 2010. It can be said that this performance is related to the implementation of its Waste Management Strategy.

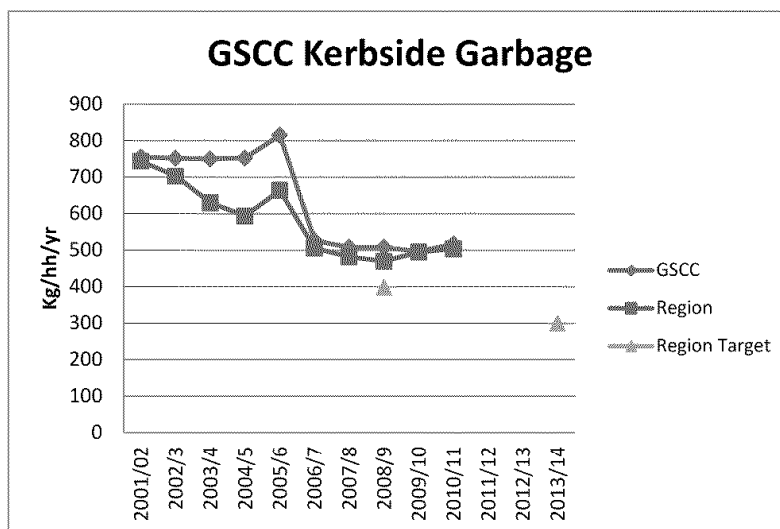
Waste Type	Goulburn Valley	Councils					
	Total tonnes 2010-2011	Campaspe Shire Council	Greater Shepp City Council	Mitchell Shire Council	Moir Shire Council	Murrindi Shire Council	Strathbogie Shire Council
A=Garbage	36,913	9107	12929	5768	5088	2232	1789
B=Recyclables collected	21,672	4371	7890	3638	3485	1395	893
C=Recyclables recycled	21,152	3876	7890	3638	3485	1370	893
D=Garden organics collected	7,383	1196	6187	n/a	n/a	n/a	n/a
E=Garden organics processed	7310	1196	6114	n/a	n/a	n/a	n/a
Total kerbside collected (A+B+D)	65968	14674	27,006	9,406	8,573	3,627	2,682

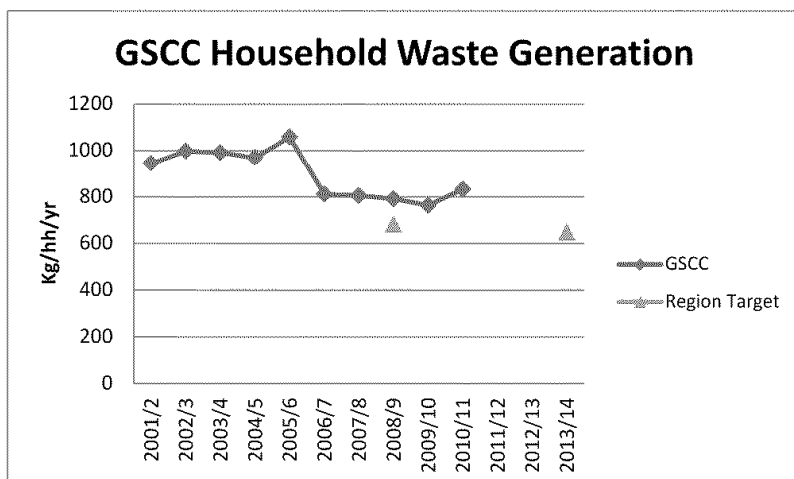
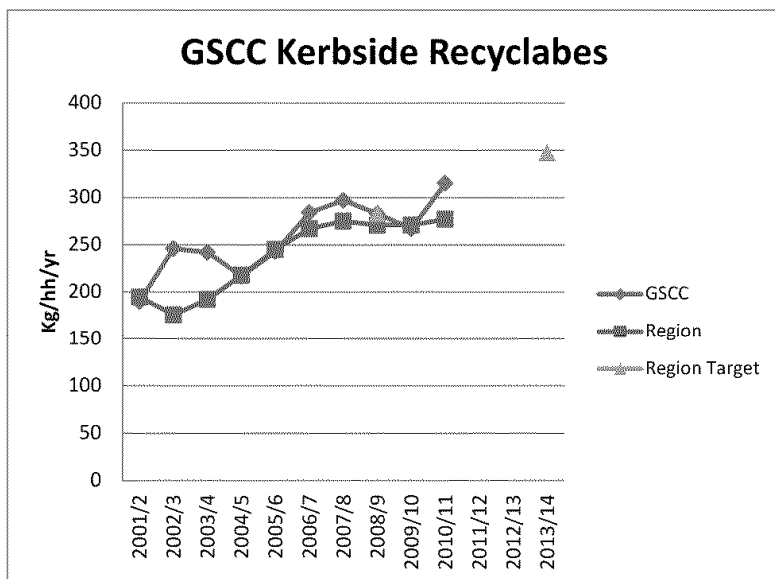
Diversion Rate ¹	Latest Available Data	Historical forecast	3 yr rolling plan forecasts			2014 - 2015 Target	
	2010-11	2010-11	2011-12	2012-13	2013-14	Region	State
Region	43% (50%)	53%	55%	58%	61%	65%	65%
Campaspe Shire Council	35% (36%)	Individual Council targets currently not set. Figures in brackets show inclusion of drop off recyclables.					
Greater Shepparton City Council	52% (55%)						
Mitchell Shire Council	39% (57%)						
Moir Shire Council	41% (51%)						
Murrindindi Shire Council	38% (43%)						
Strathbogie Shire Council	33% (50%)						

$$\text{Diversion rate} = \frac{(C + E)}{(A+B+D)}$$

It should be noted that the current diversion rate is 43% which is down from 52% in 2010/11. A new strategy has been developed to improve on the current level of the diversion rate.

The following graphs provide an outline of how the kerbside collection services of the Greater Shepparton City Council have been performing in comparison with the average of the member Councils of the Goulburn Valley Regional Waste Management Group.





The Recommended Actions of the previous Waste and Resource Management Strategy, its progress to date and achievements, are summarised by the table shown in Section 5 of this document.

2 STRATEGIC CONTEXT

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

- Environment Protection Act (EP Act) 1970, with Amendment in 2006;
- Federal Government's *National Waste Policy*, recently launched in late 2009;
- Victorian State Government's *Our Environment Our Future: Victoria's Sustainability Framework* released in 2005
- Victorian Waste and Resource Recovery Policy; released in 2013
- Draft Statewide Waste and Resource Recovery Infrastructure Plan 2013-2043 Victoria.

Figure 1 below illustrates how the legislation, policies and strategic plans by various agencies of government are considered and integrated with the Waste and Resource Recovery Management Strategy of Greater Shepparton City Council

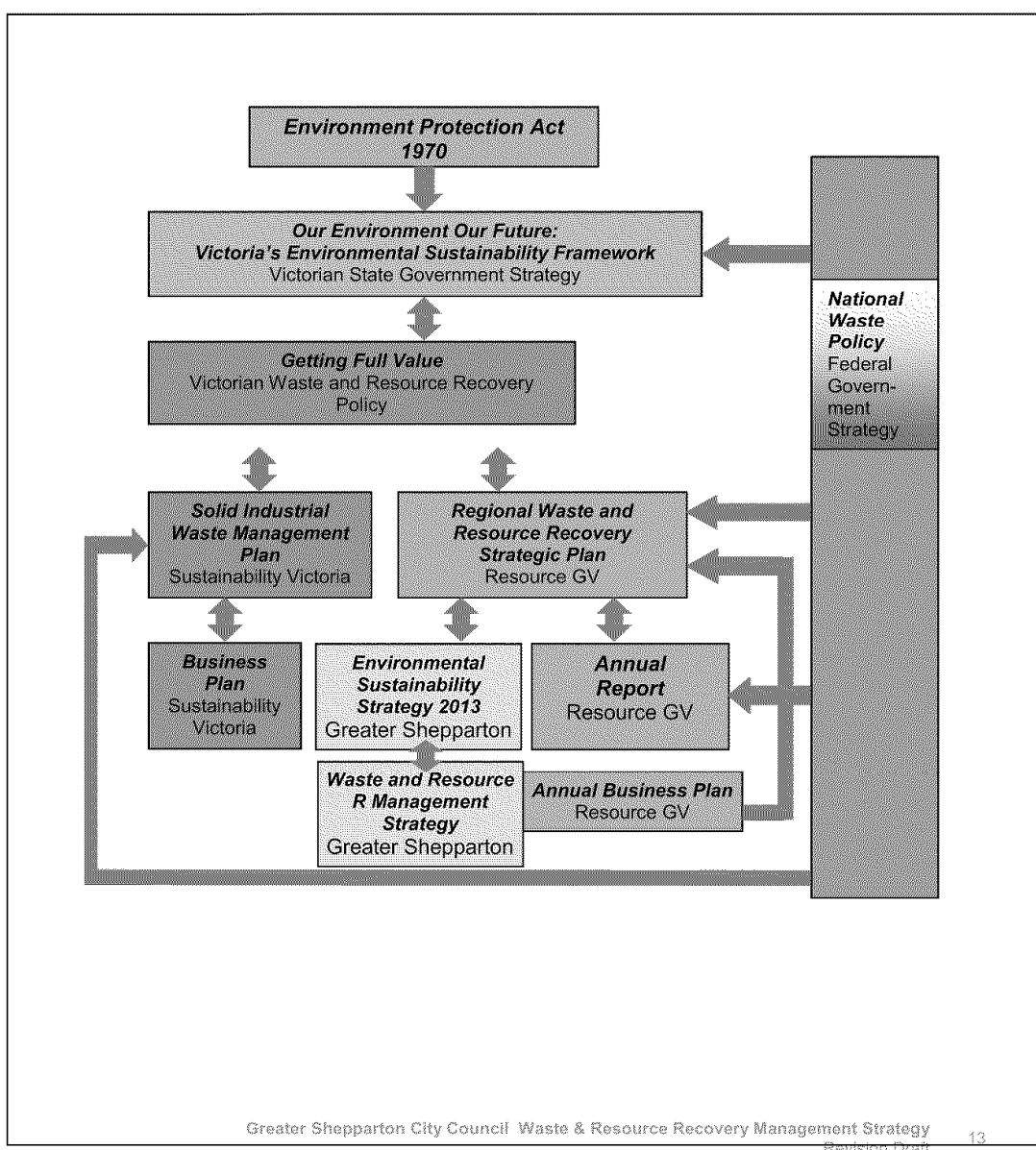
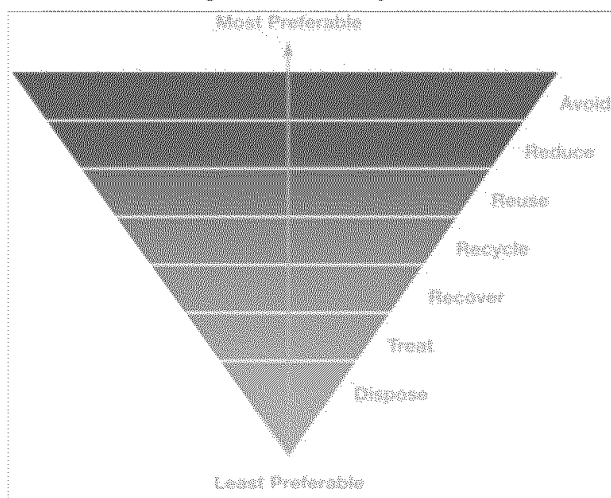


Figure 1 Interlinking of Legislation, Policies and Plans

The objectives and targets developed in these overlying policies and strategies have been utilised to form the *Solid Industrial Waste Management Plan* (SIWP) and the *Metropolitan Waste and Resource Recovery Strategic Plan* (the Strategic Plan). Finally, Council's Waste and Resource Recovery Management Strategy has been developed to ensure that the objectives and targets of the Federal and State Government policies will influence waste management activities in the community and can be implemented at a local level.

The key principle underpinning the Waste and Resource Recovery Management Strategy is the waste management hierarchy, which was disseminated under the Environmental Protection Act. The waste management hierarchy places waste avoidance as the most preferred option and waste disposal the least preferred. All the policies developed by all levels of government are based on this principle.

Figure 2 Waste Management Hierarchy



2.1 SIGNIFICANT FEDERAL AND STATE LEGISLATION AND POLICIES

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

2.1.1 Federal government

- **National Waste Policy: Less Waste, More Resources** – the recently launched policy sets the outcomes, directions and strategies for action for the next ten years with regard to waste management in Australia.
- **Carbon Pricing Mechanism (CPM)** – framework for reducing carbon pollution in Australia. The CPM is the successor to the Carbon Pricing Mechanism (CPRS) and has now been passed into law as part of the Clean Energy Futures Package (CEF). The related National Greenhouse Energy Reporting scheme requires councils and a number of large commercial organisations to assess and report on their direct and indirect emissions.
- **Food and Garden Organics** – Best Practice Collection manual. A new strategy issued in 2012 by Dept. Sustainability and Environment, Water, Population and Communities.

2.1.2 State of Victoria

On 16 April 2013, the Victorian Minister for Environment and Climate Change released the **Victorian Waste and Resource Recovery Policy 'Getting Full Value' 2013 (State Policy)**, setting out the Government's new 30-year plan to better deal with waste management within the state and with the aim of ensuring Victoria becomes a national leader in waste management and resource recovery.

The Policy was released during the final stages of the Report preparation. An assessment of the State Policy with reference to those Policy Objectives, Vision and Goals and proposed strategies and initiatives with the potential to impact on Council waste management facilities and service provision was undertaken, to facilitate Council to maintain the ability to adjust to changes within the industry and 'future-proof', so far as reasonable practicable, the facilities and services.

The four Policy Objects headings are listed as follows:

- Economic Prosperity;
- Integrated and Efficient Waste and Resource Recovery System;
- Public Health and Wellbeing; and
- Environmental Protection.

The key findings are summarized as follows:

- Government will minimize the long-term effects of closed landfills by requiring landfill owners to incorporate the cost of post-closure management into the operational phase of the landfill and by requiring owners to pay for any post-closure impacts that may occur;
- EPA Victoria will continue to work with the landfill operators to ensure the closed landfills are managed to the required standards and will also work with the operators of active landfills to ensure they are planning appropriately to manage their sites beyond the landfills' operational lives;
- Government is signaling its intent that in future landfills will only receive treated, residual waste, materials that have been through a process to extract all materials with economic value;
- When identifying and recommending waste and resource recovery management options, the best available data, information and evidence should be used. Triple bottom line (environmental, economic and social) factors are to be analyzed;
- Target food waste as a key area of focus. Future levy adjustments to target strategic materials, for example untreated organic materials. Work with local government and industry to adopt cost-effective ways of diverting untreated organic material from landfill. Develop and implement an organics strategy that prioritizes action to reduce impacts of food and garden waste;
- Seeking to continually improve the performance of waste and resource recovery facilities and operations; Ensuring clear performance standards for waste management and resource recovery facilities;
- Landfill levy will continue post July 2014 at 2014 rates for a further 10 years; The Landfill industry has experienced major developments in the compliance requirements for the environmental management of landfill facilities, with the release of the revised Landfill BPEM (2010) and the Landfill Licensing Guidelines (2011). The State Policy indicates that the 'Environment Portfolio' - Department of Environment and Primary Industries (DEPI), Environment Protection Authority Victoria (EPA), Sustainability Victoria (SV), Metropolitan Waste Management Group (MWMG) and Regional Waste Management Groups (RWMGs) - should turn their attention to efficiency of operations (airspace management) and financial management of both closed landfills and the provision for the post closure phase of landfills during the active (waste disposal) phase.

Appendix A to this document summarises the potential impacts and identifies the compliance requirements and key risks to Council under the State Policy, primarily related to this Strategy document and the Asset Management Strategy.

An extract from the State Policy '*Vision, objectives and goals – the policy on a page*' is shown in the Figure below:

VISION	Victoria has an integrated, statewide waste management and resource recovery system that provides an essential community service by protecting the environment and public health, maximising the productive value of resources, and minimising long term costs to households, industry and government			
OBJECTIVES	ECONOMIC PROSPERITY <ul style="list-style-type: none"> > facilitate investment in Victoria > improve productivity and increase employment > increase efficiency through the economical use of resources 	INTEGRATED AND EFFICIENT SYSTEM <ul style="list-style-type: none"> > provide cost effective waste and resource recovery services > integrate with land use planning, transport and development > manage information better for decision making 	PUBLIC HEALTH AND WELLBEING <ul style="list-style-type: none"> > preserve local amenity > improve facility performance > minimise risk to people 	ENVIRONMENTAL PROTECTION <ul style="list-style-type: none"> > minimise environmental harm > improve environmental performance of facilities
GOALS AND STRATEGIC DIRECTIONS	Assist Victorians to reduce waste generation and achieve financial savings through efficient resource use: <ul style="list-style-type: none"> > support commercial, not-for-profit and Victorian public sector organisations to achieve financial savings through waste reduction > provide households with the information and support they need to reduce waste by using household goods more efficiently > continue to work in partnership with the Commonwealth Government through the <i>National Waste Policy: Less Waste, More Resources</i>, and take a lead role in national strategies that harness Victoria's strengths and capabilities 		Facilitate strong markets for recovered resources: <ul style="list-style-type: none"> > develop the right conditions for resource recovery markets to grow and mature in Victoria > the landfill levy will continue to send a market signal that provides incentives to resource recovery industries and provides certainty to Victorian industries and businesses 	Facilitate a Victorian waste and resource recovery system that maximises the economic value of waste: <ul style="list-style-type: none"> > undertake planning that promotes a cost effective, statewide network of infrastructure capable of moving waste materials to where the highest economic value can be achieved > align waste and resource recovery planning and delivery with land use and transport requirements under the <i>Planning and Environment Act 1987</i> and <i>Transport Integration Act 2010</i> > foster investment in a diversified portfolio of infrastructure that can manage the projected mix and volumes of waste materials
	Reduce the environmental and public health risks of waste: <ul style="list-style-type: none"> > minimise the environmental and public health impacts of waste and resource recovery facilities > prioritise actions that minimise the short and long term environmental impacts of organic waste > facilitate the long term purpose of landfills to be for receiving and treating residual waste, and ensure a range of support mechanisms for closed landfills 	Reduce illegal dumping and littering: <ul style="list-style-type: none"> > curb illegal dumping to protect environmental and human health > reduce litter to provide safer communities and healthier environments 	Reform and strengthen the way institutions work and are governed to effectively implement waste policy.	

On 27th September 2013 Sustainability Victoria released the **Draft Statewide Waste and Resource Recovery Infrastructure Plan 2013-2043 Victoria (SWRRIP)**. This document in conjunction with the recently released Victorian and Resource Policy 'Getting Full Value' 2013 (State Policy) sets out the vision, planning and investment needed for Victoria as a national leader in resource recovery.

'Getting Full Value' established the vision, the Victorian Government's response to the Ministerial Advisory Committee on Waste and Resource Governance Reform putting in place the institutional and governance framework. The SWRRIP now provides the background and evidence to support planning, at a statewide level to create the environment in which the industry can invest with certainty.

The Draft SWRRIP identifies major opportunities to increase the recovery of valuable materials from the waste stream. These include:

- Increased recovery of garden and food organics
- Improved source separation to increase recovery rates of paper, cardboard and timber
- Increased recovery of glass (to reduce glass fines) and tyres
- Smaller scale recovery of construction and demolition waste in regional areas
- Increased recovery of shredder flock (which accounts for some 10% of residual waste sent to landfill from the commercial and industrial (C&I) sector) and plastics (particularly film plastics).

The Draft SWRRIP Goals and Priority Actions are:

1. Facilitate efficient markets by consolidating material streams to establish economies of scale that attract industry investment
2. Maximise the recovery of valuable resources from waste streams
3. Support the getting Full Value action to facilitate the long term purpose of landfills to only receive treated residual waste
4. Provide industry, local government, metropolitan and regional WMGs and other government agencies with information and guidance to inform planning at the state, regional and local levels

Other relevant Victorian Government initiatives and strategies are as follows:

- **Victorian Litter Strategy 2012-14** A new Strategy representing the next step in the prevention and management of litter in Victoria and is underpinned by three critical elements for success – education, infrastructure and enforcement.
- **Waste Flows in the Victorian Commercial and Industrial Sector**; a report released on the 18th June 2013 by Sustainability Victoria which is committed to improving commercial and industrial (C&I) waste management outcomes. This will involve significantly increasing the sector's waste recovery rate of 66% in 2010-11, as well as improving its material efficiency and the broader environmental, social and economic outcomes.
- **Landfill Licensing Guidelines**
- **Guide to Best Practice for Organics Recovery**; a resource by Sustainability Victoria to promote best practice in the management of recovered garden, food and other organics.

- **Guide to Best Practice at Resource Recovery Centres;** a resource by Sustainability Victoria to promote best practice in the establishment and operation of resource recovery centres.
- **Victorian Freight and Logistics Plan.** This Plan examines long term freight forecasts up to 2050 and uses these to model freight network scenarios that can inform decision making about future projects. The Plan will address transport logistics for waste and resource recovery, and particularly how improved networks can lower the cost of waste transport.
- **Conserve, Invest and Save.** This Victorian Government's package aims to conserve our valuable resources, invest in the State's environmental future.

2.2 REGIONAL WASTE MANAGEMENT GROUP

2.2.1 Legislative Functions and Business Planning

2.2.2 Functions

Regional waste management groups (RWMGs) were variously established in 1997 and 1998 following amendments made in 1996 to the *Environment Protection Act 1970*. Their functions are set out in Section 50H of the *Environment Protection Act* as follows:

- a) to plan for the management of municipal waste in its region, working in partnership with the councils in the region; and
- b) to co-ordinate the activities of its members in its region to give effect in its region to State policies, strategies and programs relating to waste; and
- c) to facilitate and foster best practices in waste management.

2.2.3 Getting full value: the Victorian Waste and Resource Recovery Policy

The Victorian Government has released a new policy to improve management of the environmental and public health impacts of waste and to capture the opportunities that the sector provides the Victorian economy. This replaces the previous *Towards Zero Waste Strategy*.

Getting full value: the Victorian Waste and Resource Recovery Policy, will help the State get the best value it can from waste resources. This policy sets a 30-year vision for waste and resource recovery in Victoria and policy priorities for the next 10 years.

Getting full value is guided by four main objectives:

- Economic prosperity
- Integrated and efficient waste and resource recovery system
- Public health and wellbeing
- Environmental protection

Following the release of the policy, the government will consider which existing indicators remain relevant and develop more reliable and valid indicators once data and information management systems are in place to support them. A suite of indicators will be developed alongside the development of the policy's implementation plan, which is currently progressing.

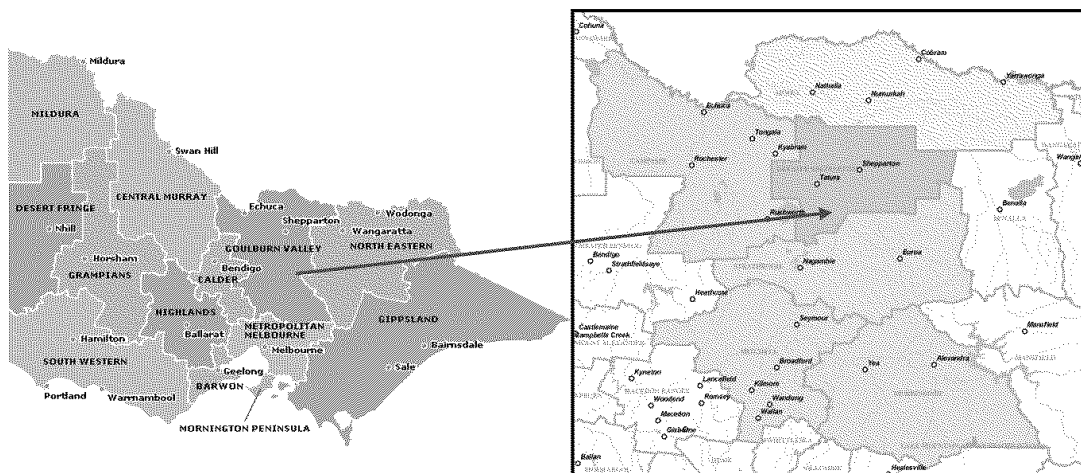
In the interim, previous performance measures created for waste management and resource recovery will provide an appropriate approach to reporting on *Getting full value* during this transition period.

2.2.4 The Goulburn Valley Regional Waste management Group

The Goulburn Valley Regional Waste management Group (trading as Resource GV) is one of Victoria's 12 Regional Waste Management Groups (RWMG).

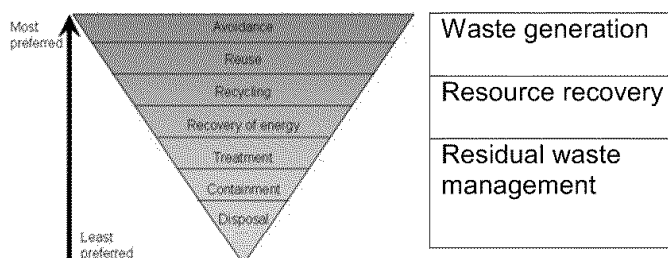
Resource GV member Councils are:

- Greater Shepparton City council
- Campaspe Shire
- Mitchell Shire
- Strathbogie Shire
- Murrindindi Shire



2.2.5 Summary of Objectives

The waste management hierarchy provides an ordered sequence of approaches for dealing with waste management issues. In the development of this business plan, the Group looked to base our priority issues and hence our objectives on a simplified version of the hierarchy.



The objectives then of Resource GV are as follows:

- A. Reduced waste generation
- B. Increased resource recovery
- C. Reducing the harmful effects of residual waste
- D. Supporting Greenhouse Alliance Activity
- E. High quality governance and planning for the Group

2.2.6 Priorities

The following table shows the highest priority strategies for implementation over the life of Resource GV's Business Plan 2013-14 to 2015-16.

Area	Priority Strategies 2013-14
<i>Waste Generation</i>	<ul style="list-style-type: none"> Comprehensive regional market research in householder attitudes and behaviours
<i>Resource Recovery</i>	<ul style="list-style-type: none"> Kerbside organics recovery program Get it Right on Bin night campaign
<i>Residual Waste Management</i>	<ul style="list-style-type: none"> Support better networking and professional development for landfill operators
<i>Governance and Planning</i>	<ul style="list-style-type: none"> Implementation of structural and governance reforms

Area	Priority Strategies 2013-14 & 2014-15
<i>Waste Generation</i>	<ul style="list-style-type: none"> Engagement with commercial and industrial waste generators to assess diversion potential and partnerships
<i>Resource Recovery</i>	<ul style="list-style-type: none"> Planning for landfill pre-sort and other infrastructure gaps
<i>Residual Waste Management</i>	<ul style="list-style-type: none"> Domestic asbestos disposal infrastructure and education program
<i>Governance and Planning</i>	<ul style="list-style-type: none"> Development of regional implementation plan Establishment of new organisational relationships and functions

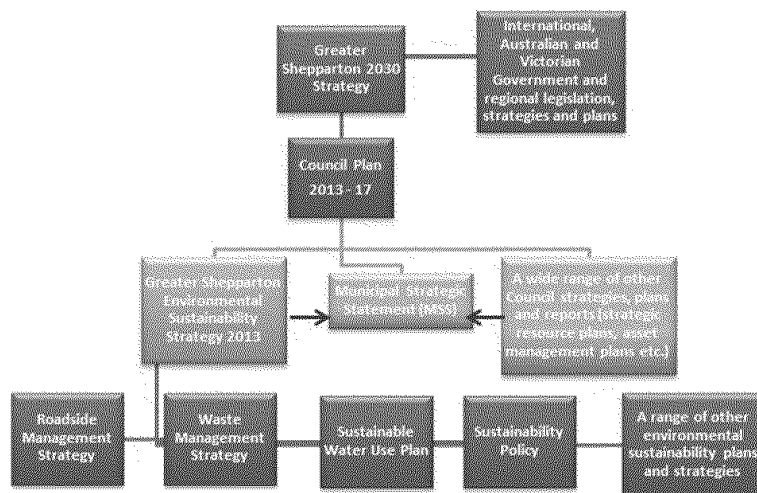
It should be noted that the new Draft Statewide Waste and Resource Recovery Infrastructure Plan 2013-2043 Victoria (SWRRIP) recently issued by Sustainability Victoria does have as one of its key recommendations that the twelve current regional waste management groups (RWMGs) will be amalgamated into six RWMGs and one Metropolitan WMG and will be established as statutory bodies under the *Environment Protection Act 1970*. Early indications reveal as shown in Section 9 – Appendices of the Plan that the current boundaries of the Goulburn Valley Regional Waste Management Group will remain mostly unchanged.

2.3 GREATER SHEPPARTON CITY COUNCIL PLANS, POLICIES AND STRATEGIES

Council has many environmental sustainability management roles and responsibilities and must comply with over 30 Australian and Victorian Government environmental Legislative Acts. Council's current environmental sustainability activities are divided into four key environmental categories: waste management, land and biodiversity management, water management and energy management.

Council has outlined its commitment to environmental sustainability management in all of Council's high level strategic documents, the Greater Shepparton City Council 2030 Strategy, the Council Plan 2013-2017 and the Greater Shepparton Planning Scheme.

The following chart shows the hierarchy of the Greater Shepparton's environmental sustainability strategy plans:



2.3.1 Council Plan/Corporate Plan

The Greater Shepparton City Council Plan 2013-2017 is the key document that drives the strategic direction of Council for the next four years and beyond, and is a requirement under the Local Government Act 1989. The themes outlined in the Plan have been identified following extensive consultation with the Greater Shepparton community. A Council Plan is developed every four years and updated annually.

The following strategic directions have been set out within this document pertaining to waste management.

- Incorporate any increases in waste management charges into the overall rates and charges increase; and
- Adopt the Greater Shepparton City Council Waste and Resource Recovery Management Strategy following community consultation.

2.3.2 Environment Strategy

The following table provides a summary of the key directions, Objectives and Environmental outcomes of the Draft Greater Shepparton Environmental Sustainability Strategy 2014 – 2030 pertaining to waste management.

Theme	Key Direction	Objective	Environmental Outcome
Using our resources wisely – Waste and resource efficiency	Leading by Example	Minimise Council's consumption of resources	Reduce the volume of Council generated waste going to landfill. Increase Council's purchasing of recognised recycled and/or environmentally preferable products.
		Review then implement the actions outlined in Council's Waste and Resource Recovery Management Strategy	Achieve State Government municipal waste targets. Reduce the volume of waste going to landfill.
		Lead by example to demonstrate that our local environment is valued by actively cleaning up our local environment	Improve the environmental value of a reach of the Goulburn River (as part of the RiverConnect Adopt a –Reach Project).
	Planning and regulation powers	Reduce instances of littering and rubbish dumping by utilising Council's planning and regulation powers.	Reduce occurrences of rubbish dumping. Improve littering behaviours in the community.
	Enable and empower our community	Increase the recovery of resources and minimise the quantity of waste going to landfill.	Achieve State Government municipal waste targets. Reduce the volume of industry generated waste going to landfill.
		Our community discards their waste responsibly by utilising Council's waste management services and facilities.	Reduce occurrences of rubbish dumping. Improve littering behaviours in the community.
	Advocate and collaborate with key stakeholders	Collaborate with Government agencies, stakeholders and other Local Governments to maximise opportunities to improve waste management activities.	Increase the number of partnership programs implemented. Increase the number of successful funding applications.

2.3.3 Local laws

Local Law No 1, forming the Greater Shepparton City Council 'Community Living' document has a chapter, Part 7 on 'Waste'. This section of the document sets out penalties associated with:

- Public Litter bins – Incorrect type of waste being placed in receptacles for litter
- Security of Mobile Waste Bins – responsibilities of the occupier of properties
- Use of Mobile Waste Bins

2.3.4 Planning Strategies

The Greater Shepparton Planning Scheme has most of Council's policy on waste management set out in clause 19.03-5, *Waste and Resource Recovery*. This clause includes the main objective as being:

“to avoid, minimise and generate less waste to reduce damage to the environment caused by waste, pollution, land degradation and unsustainable waste practices”.

This main objective is generally representative of Council's approach across the Planning Scheme. Clause 19.03-5 also includes a list of strategies designed to achieve this objective. These strategies are set out as follows:

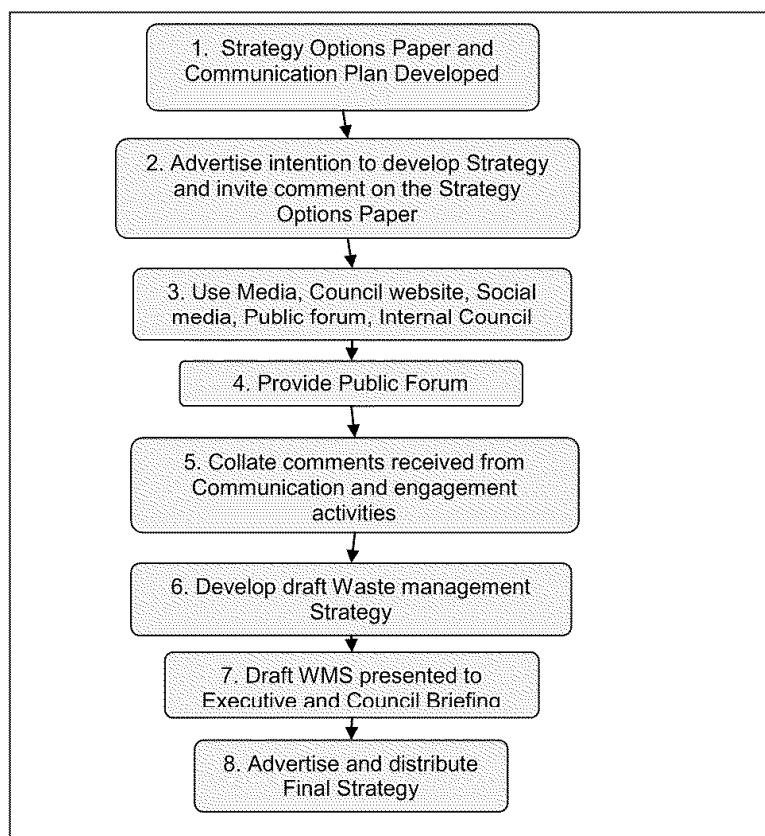
- Establish new sites and facilities to safely and sustainably manage all waste and maximise opportunities for resource recovery.
- Encourage facilities for resource recovery to maximise the amount of resources recovered.
- Provide sufficient waste management and resource recovery facilities to promote re-use, recycling, reprocessing and resource recovery and enable technologies that increase recovery and treatment of resources to produce energy and marketable end products.
- Encourage waste generators and resource generators and resource recovery businesses to locate in close proximity to enhance sustainability and economies of scale.
- Ensure buffers for waste and resource recovery facilities are defined, protected and maintained.
- Site and manage waste disposal and resource recovery facilities in accordance with the Waste Management Policy (*Siting, Design and Management of Landfills*) EPA, 2004.

3 CONSULTATION AND ENGAGEMENT

3.1 STAKEHOLDER IDENTIFICATION AND ENGAGEMENT

Figure 4 below displays the process followed by Greater Shepparton City Council in developing the Waste and Resource Recovery Management Strategy. This involved the identification and engagement of stakeholders to get their input into the strategy. A major component of the consultation was the development of an Options paper that was advertised inviting all households to provide feedback on the importance of the current waste and recycling services provided by Council and how they rated the performance of Council in delivering these services.

Figure 3 *Waste and Resource Recovery Management Strategy Development*



The following table provides a summary of the review process and timelines of Council's waste services and Waste and Resource Recovery Management Strategy.

May 2013	Waste and Resource Recovery Management Strategy Options Paper developed for Consultation
June 2013	Waste and Resource Recovery Management Strategy Options Paper presented to; <ul style="list-style-type: none"> Executive 17/6/2013 Council Briefing 25/6/2013
July 2013	Waste and Resource Recovery Management Strategy Options paper to Council Meeting 16/7/2013 Commence Community Consultation
August 2013	Public discussion meeting Community Consultation complete 16/8/2013 Advertise kerbside contracts Prepare draft Waste and Resource Recovery Management Strategy
Sept 2013	Prepare draft Waste and Resource Recovery Management Strategy Close tenders for kerbside contracts
October 2013	Draft Waste and Resource Recovery Management Strategy presented to Executive.
Nov 2013	Waste and Resource Recovery Strategy presented to : <ul style="list-style-type: none"> Executive Council briefing
Nov 2013 to Feb 2014	Prepare kerbside contracts
Dec 2013	Waste and Resource Recovery Strategy presented to Council 17/12/2013 for adoption
April 2014	Assess tenders for kerbside contracts
July 2014	Council Meeting 1/7/2014. Kerbside contracts presented for award to successful tenderers. Service to commence 7 Jan 2015
Jan 2015	Successful contractor orders equipment and prepares for kerbside contract commencement 7 Jan 2015.

Table 2 provides information on the actions undertaken in developing the Waste and Resource Recovery Management Strategy.

Table 2 Notes on WRRMS Development

Step	Action Undertaken	Strategy Version
1. Identify key stakeholders	Refer to Table 4 below for stakeholders identified.	Draft Revision 1 Sept. 2013
2. Advertised	During July and August 2013	
3. Collated and analysed responses	August and Sept 2013	
4. Incorporated feedback in Strategy	Feedback was used to inform the Strategy review and a detailed overall report on the results and findings of the survey is available	

Table 3 displays potential stakeholders that could be engaged in the development process.

Table 3 Table of Identified Stakeholders

Internal stakeholders	External stakeholders
Waste Reference Group	Local Community/residents
Sustainability Working Group	Regional Waste Management Group
Councillors	
Local Laws	
Communications	

3.2 STAKEHOLDER CONSULTATION AND FEEDBACK

3.2.1 Options Paper

A major component of the Waste and Resource Recovery Management Strategy development was the provision of an Options paper giving an outline of the services currently available and options to those services providing further improvement to the current service that Council staff have identified. Although Council's surveys advise that waste services are important and generally well regarded by the residents the options paper does seek further feedback from the community. This will assist in the development of the Waste and Resource Recovery Management Strategy.

In summary the Options paper provided the following outline with respective options provided.

2.2.1.1 Collection Area

Issue 1: The collection area could be expanded to also service properties on the unsealed road network in rural areas. This would mean that collection vehicles would need to travel an extra 1200 km or nearly double the existing travel distance every week per service. It is estimated that 440 rural households do not currently receive kerbside services either because they do not need or want a service. The total number of waste services currently collected is 26,500.

Options	Cost implications	Council preferred position
1. Maintain existing service – The collection area will continue as described above.	No cost implications	✓
2. Expand existing service to all roads in Greater Shepparton.	Estimated additional transport cost for the waste service only is \$525,000 annually. Does not include waste disposal charges. This equates to a 0.9% rate rise or \$19.80 per household per year spread over all customers.	✗

2.2.1.2 Red Bin (Waste)

Issue 2: Should we change the size of the bin offered for normal waste?

Residents currently have three bin sizes available with the weekly kerbside waste service. These are an 80L, 120L and 240L size. The cost of the service is proportional to the bin size. The large 240L waste bin is no longer Industry best practice and statistics indicate that smaller bins result in less waste to landfill. This is desirable from an environmental and sustainability perspective.

Options	Cost implications	Council preferred position
1. Maintain existing bin options	No change to current service costs \$2,600,000 annually	✗
2. Withdraw existing 240L waste bin and replace with either a 120L or 80L bin.	Estimated additional annual cost of \$1,100,000 including bin supply, yield savings and reduction in garbage charges. This equates to a 1.8% rate rise or \$41.50 per household per year.	✗
3. Phase out existing 240L waste bins. All new bins would be small size.	As above but spread over 7 years.	✗
4. Retain existing waste bins but increase cost of 240L service to discourage use.	Additional \$720,000 income initially. This amount will decrease to \$1,100,000 cost should all customers downsize their 240L waste bin. This cost would equate to a 1.8% rate rise or \$41.50 per household per year.	✓
5. Do not provide a kerbside waste service	No service costs	✗

2.2.1.3 Yellow Bin (Recycling)

Issue 3: Should we collect your recycling bin more often?

The recycling system as a whole has sufficient capacity when comparing the total volume collected to the total volume available. Some residents however may find that they are routinely exceeding their fortnightly recycling bin capacity. Excess recycling product can be disposed of for free at the Council's transfer stations, or a larger bin may be available. Alternatively a weekly recyclables collection service could be an option.

Options	Cost implications	Council preferred position
1. Maintain existing service level	No change to current service cost. \$945,000	✓
2. Upgrade recyclables collection to a weekly service	The cost to provide a weekly service would be approximately an additional \$700,000 annually. This equates to a 1.2% rate rise or \$26.40 per household per year	✗
3. Do not provide a recycling collection service.	No service costs however waste disposal costs would increase by approximately \$525,000. Current waste bin volumes may be inadequate. Also an indirect cost to the environment.	✗

2.2.1.4 Green Bin (Green Waste)

Issue 4: Should we collect your green waste bin more often?

Council is considering introducing food waste into the household green waste collection service. As food can become smelly, particularly during hot weather, a weekly service may be more appropriate.

Options	Cost implications	Council preferred position
1. Maintain existing service level	No change to current service cost. \$1,310,000 annually	✓
2. Upgrade the green waste service to a weekly collection	The cost to provide a weekly green waste collection service would be an additional \$375,000 annually plus \$250,000 processing costs. This equates to a 1% rate increase or \$37.80 per household per year	✗
3. Do not provide a green waste collection service	No service costs however waste disposal costs would increase by approximately \$420,000. Also an indirect environmental cost as greenhouse gases produced.	✗

Issue 5: Should we allow food waste to be collected with the green waste service?

An audit of the weekly waste service bins has indicated that approximately 21% of the contents is food waste. This food waste breaks down in landfill creating greenhouse gases which should be avoided. Alternatively the food waste could be composted to minimise the production of greenhouse gases and also make a usable product.

Options	Cost implications	Council preferred position
1. Maintain existing service level	No change to current service cost. \$1,310,000 annually	✗
2. Introduce the collection of food waste to the service	Unknown but minor impact on cost as proportion of food waste is small compared to garden organics.	✓

Issue 6: Should we make the green waste service compulsory in township areas?

Currently the green waste service is optional in township areas. Surveys have indicated that optional service costs per tonne collected are 22% more expensive when compared to a compulsory service. Properly processing green waste is desirable as less greenhouse gasses are produced. There is also a useful product at the end.

Options	Cost implications	Council preferred position
1. Maintain existing service level	No change to current service cost. \$1,310,000 annually	✗
2. Make the green waste service compulsory in residential areas excluding commercial properties.	The cost of expanding the service would be proportional to the number of new services. The current cost per service is \$71 annually.	✓

2.2.1.5 Hard Waste

Issue 7: How should we manage hard waste?

A variety of methods are available to manage hard waste using either the services of private industry or Council. A number of Council options are listed below with the likely costs identified. Preferably recyclable material should be removed during the collection process with only the residual waste being directed to landfill.

Options	Cost implications	Council preferred position
1. Maintain existing service level – No Council service provided.	No cost implications.	✗
2. Provide a Council hard waste at call service	With 60% of households using the service the cost would be approximately \$1,076,000 annually This equates to 1.8% rate rise or \$40.60 per household per year spread over the entire rate base.	✗
3. Provide a Council kerbside hard waste collection service.	With 60% of households using the service the cost would be approximately \$900,000 annually. This equates to a 1.5% rate rise or \$33.90 per household per year.	✗
4. Communal skip bins for residents to use	Uncontrolled tipping is not recommended by the EPA	✗
5. Provide tipping days at transfer station (1 cubic metre per load)	With 10% of households visiting the transfer station the cost would be approximately \$88,000 per day. This equates to a 0.15% rate increase per day opened or \$3.30 per household per day opened.	✗
6. Provide tipping vouchers (2 number 60L bags)	With 60% uptake-approx. cost \$143,000 Equates to 0.24% rate increase or \$5.40 per household per year	✓

Issue 8: Should we provide a hard waste collection service to residents with disabilities?

There are members of our community with mobility, health or transport restrictions that result in them not being able to access some Council services. Subject to an assessment by the Council's Aged Care Team assistance could be provided to these residents to dispose of their hard waste

Options	Cost implications	Council preferred position
1. Maintain existing service level – No service provided	No cost implications	✗
2. Provide at call hard waste collection service to eligible residents.	Assuming 50% participation estimated cost after customer contribution would be \$28,000 This equates to a \$1 per household per year.	✓

2.2.1.6 Special Collection Arrangements

There are members of our community with mobility, health or transport restrictions that result in them not being able to access some Council services. Subject to an assessment by the Council's Aged Care Team assistance could be provided to these residents to have their bins collected at their front door.

Issue 9 – Should we assist residents with mobility restrictions put out their bins?

Eligible residents with mobility restrictions would have their kerbside service bins collected and returned to their front door by the collection vehicle operator.

Options	Cost implications	Council preferred position
1. Maintain existing service level – No service provided	No cost implications	✗
2. At door waste collection service be provided to eligible residents.	Estimated 50 customers so would be absorbed within the main collection contract.	✓

2.2.1.7 Transfer Stations

Issue 10 – Should transfer stations operate on a full cost recovery principle?

All the Council's transfer stations currently operate at a significant cash loss. This loss is mainly associated with weekend operation and the actual cost of transport and disposal of waste. The cash shortfall is currently funded through the garbage charge that most residents pay for their kerbside services. The alternative may be to increase the transfer station waste disposal charges and reduce the garbage charge.

Options	Cost implications	Council preferred position
1. Maintain existing service level – Continue with the current cash loss funded through the garbage charge.	No cost implications	✓
2. Operate on a full cost recovery principle.	To offset the cash loss only the waste disposal charge at the transfer stations would need to increase from \$34 to \$100 per cubic metre of waste deposited. The garbage charge could be reduced by \$15 per household per year.	✗

2.2.1.8 Landfill

The Council operates an Environment Protection Authority (EPA) licensed landfill at Cosgrove. The landfill is now nearing completion and at current fill rates its capacity is expected to be exhausted during 2016. A new landfill site has recently been purchased that will extend operations for at least another 25 years.

Issue 11 – Should the Council continue with landfill operations?

Operating a landfill is now complex and exposes the Council to significant environmental risk. An alternative may be to cease Council landfill operations and transport local waste to another EPA licensed landfill.

Options	Cost implications	Council preferred position
1. Maintain existing service level – Continue with the current landfill operation.	No cost implications	✓
2. Close the Cosgrove landfill and transport waste to an alternative licensed site.	Additional \$35 tonne transport plus cost of transfer facility. Equates to an additional \$532,000 for domestic and transfer station waste disposal. Cost per household \$20 or 0.9% rate increase.	✗

3.2.2 Community Feedback

Communication and engagement activities for the development of the Draft Waste and Resource Recovery Management Strategy included the following:

- Media Release
- Council website
- Social media
- Public forum
- Internal Council networks

Three comprehensive submissions were received. Each of the submissions provide responses from significant and diverse sections of the community.

Despite there being three submissions made, each of the submissions were very comprehensive with a broad spectrum of Council's waste management being commented on. Each of the Respondents A,B and C provide a total of 72 comments with 48 of those comments being responses to the Options Paper Council provided on its website. The Options Paper, that was well advertised and described previously in this chapter, provides an outline of the services currently available and options to those services providing further improvement to the current service that Council staff have identified.

In summary, the responses to the Options Paper is summarised in the following table:

Option	Number of Comments	Main Theme of Comments
Should we expand our collection area?	3	<ul style="list-style-type: none"> • Agree on maintaining existing service
Should we change the size of bin for normal waste?	7	<ul style="list-style-type: none"> • Standard waste bin size should be 80L • Further diversion rates expected as 240L bins phased out
Should we collect your recycling bin more often?	4	<ul style="list-style-type: none"> • Agree on maintaining existing service • Consider 360L bin for larger families
Should we collect your green waste bin more often?	4	<ul style="list-style-type: none"> • Agree on maintaining existing service
Should we allow food waste to be collected with the green waste collection?	6	<ul style="list-style-type: none"> • Support the proposal • Will require significant education campaign • Significant diversion of waste will result • Expects no extra costs to the community
Should we make the green waste service compulsory in township areas?	4	<ul style="list-style-type: none"> • Generally support this option • Should allow exemptions for those in flats/units • Will need matching education campaign
How should we manage Hard Waste?	11	<ul style="list-style-type: none"> • Not sure about Council's preference for tipping vouchers • Provide 'at call' collection on a 'user pays' basis • Provide HW collection sites on certain dates • Volunteers are offering to transport HW to transfer stations • Education campaign will be needed
Should we provide a hard waste collection service to residents with disabilities	1	<ul style="list-style-type: none"> • Support 'at call' service on a 'user pays' basis
Should we assist residents with mobility restrictions to put out their bins.	4	<ul style="list-style-type: none"> • Council's Aged Care team to play a major role • Agree for need of special arrangements
Should transfer stations	1	<ul style="list-style-type: none"> • Agree on Council's position to run on cash

operate on a full cost recovery principle?		loss basis funded through the garbage charge
Should Council continue with landfill operations?	3	<ul style="list-style-type: none"> • Agree on maintaining existing service levels • Agree with Council's development of Cosgrove 3 site for future tipping • Need to commit to additional capital investment

As well as the comments received for the Options Paper other useful comments were also made. The following table further summarises the issues raised including those for the Options Paper under general headings.

Waste Management Topics	Number of comments
Waste collection service	8
Greenwaste collection service	12
Recycling collection service	4
Hard waste	10
Transfer station / Resource recovery centre	4
Education programs	7
Funding opportunities	1
Developing partnerships	10
Guiding principles	1
Waste audits	1
Litter management	3
Litter and cleanliness of public facilities	1
Residents with special needs	4
Illegal dumping	2
Cleanliness of toilet blocks	1
Landfill	3

It should be noted from the above table that the high response associated with 'Developing partnerships' was mostly associated with litter management and illegal dumping of rubbish. It should also be noted that the high response to 'Education programs' is linked to various topics but mostly focuses on the issue of the placement of food waste in with the green waste collection service.

In summary, the overwhelming majority of feedback and comments received contained very constructive remarks relating to waste management within the Greater Shepparton region and how Council can achieve positive outcomes on these matters.

The main issues raised would include the following:

- Should work towards the downsizing of the garbage bin to 80L becoming the standard size with the gradual phasing out of the 240L bin except in exceptional circumstances;
- Provision of special collection arrangements for a number of our community with legitimate mobility, health or transport issues;
- Acceptance of placing food-waste into the green waste collection service;
- The need for increasing education to promote waste minimisation, resource recovery and litter management;
- The need to increase awareness and strategies to curb littering and illegal dumping;
- Working together with local service providers and volunteer groups that could work in partnership with Council to address concerns of illegal dumping of waste and implementation of strategies;
- The need to maintain and investigate and encourage Best Practice at Council's three resource recovery centres;

- Continue to identify opportunities at Council's waste facilities for the improved recovery of hard waste with particular emphasis on commercial and industrial waste that takes up a large proportion of the overall waste stream;
- Undertake the necessary planning and licencing stages for the future development of the Cosgrove 3 landfill site well before the closure of the current Cosgrove 2 site.

Many of the responses received formed many of the new strategies that are set out at the rear of this document. There are 25 new strategies linked to the number of comments received.

The detail of the responses received from Respondents A,B and C can be viewed on Council's website.

Environmental Sustainability Strategy Community Consultation

Council is currently in the process of developing an Environmental Sustainability Strategy that will sit above the Waste and Resource Recovery Strategy. Both documents contain links and commonalities. It should be noted from the development of the Environmental Sustainability Strategy that many waste management responses were received from its community consultation process.

Part of the discussion paper consultation process for the Environmental Sustainability Strategy indicated strongly that waste management was a hot campaign topic during the 2012 Councillor Election period. There were several key waste management issues at the time including rubbish dumping and littering. In a scoring process however, Council's waste management scored quite high for performance in achieving our waste management responsibilities. Council scored very high for providing waste management services that meets the needs of the municipality with an average performance score of 8.6 out of ten.

The community provided 143 waste management comments and 80% of these comments contained information about the opportunities section of the waste management chapter or provided other ideas for draft strategy actions. The transfer station was the most mentioned topic (24 comments). These comments ranged from positive comments that people were very pleased with the services provided by the transfer station to raising community awareness about why the fees are set at the current rate, to requests for more transfer stations to be set up around the municipality. Major challenges identified for waste management were rubbish dumping (21 comments) and littering (17). Increasing the community's awareness and education (18 comments) and hard waste collections (9 comments) were also suggested.

A summary of the number of waste management comments received for the Environmental Sustainability Strategy public consultation process is shown in the following table;

Waste management topics	Number of comments
Transfer station	24
Rubbish dumping	21
Community awareness and education	18
Hard waste collection	9
Urban litter	8
Household battery recycling initiatives	7
Recycling - general	7
Council programs - general	7
Organic waste	6
Litter - general	5
Procurement	5
Roadside litter	4

4 CURRENT WASTE MANAGEMENT

4.1 INTRODUCTION TO WASTE MANAGEMENT OPERATIONS

General

The following provides a summary of the waste management operations under management by the Waste Services Unit and the services currently provided to Council customers and waste management clients.

4.1.1 Residential Waste Collection Services

The Greater Shepparton City Council is serviced under contract for the current 3 bin collection service, being for garbage, co-mingled recyclables and Green Organics. The contract is for the collection only of the waste and resource streams, including disposal at the designated receipt facility.

A standard kerbside collection service under the current guidelines is as follows:

- A weekly waste collection service using either a 80L, 120L or a 240L bin;
- A fortnightly co-mingled recycling collection service using either 120L, 240L or 360L bin
- Optional service
- Green organics fortnightly collection service using either a 120L or a 240L bin.

Council currently services the following areas with its kerbside collection services:

- All urban areas and rural areas on the sealed road network receive a standard kerbside service. The service is compulsory in urban areas and optional in rural areas.
- The green organics service is available in urban areas only.

The standard service is provided to an estimated 98% of urban households in Greater Shepparton.

Land Use	Residential		Rural (Primary Production)		Commercial		Industrial	
Service	22,683	98%	1,230	74%	906	51%	444	48%
No service	572	2%	441	26%	858	49%	481	52%
Totals	23,255	100%	1,671	100%	1,764	100%	925	100%

As can be seen in the above table 98% of residential customers, 74% of rural customers and approximately 50% of commercial and industrial assessments receive a kerbside waste collection service. The 2% of residential households and 26% of rural households that do not receive a collection service would include circumstances of being in relatively isolated areas and consequently do not receive a collection service. Such households elect not to use the service as well as residential and rural properties without a dwelling. The current policy provides for kerbside services to urban areas and rural areas abutting the sealed road network.

Garbage is by direct disposal by our Contractor to Cosgrove 2 Landfill Facility. The garbage collection service is provided to a total of 25,263 tenements. This contract expires in 2014.



Co-mingled Recyclables are collected, transported and received by contractor arrangements. The collected material is processed and recyclable materials are separated from any contaminants. This service was introduced in 2000 and has proven to be very popular with residents because of its ease of use. Bin types are 120L and 240L MGB's collected on a fortnightly basis. The current contract expires 2015. It is worth noting that:

- Existing recycling collection system complies with Sustainability Victoria Preferred Standards and yields quantities better than the State average.
- The change to the current contract to take the collected material to the Visy MRF has brought with it a change in sorting facility which is now able to sort glass fines from the recycling stream that has significantly reduced the contamination rates in household recycling bins to under 8%.
- There is no recyclables rebate in the ten (10) year financial projection.

Action: With the review of the next contract (current contract expires 2015), Council should pursue the feasibility of contract amalgamation with neighbouring Councils within the Goulburn Valley Regional Waste Management Group (Resource GV).

Green Organics is collected fortnightly and transported to the contractor's premises. The existing kerbside organics collection service commenced during 2006 and is an optional service for urban residents only. The take up has been promising as the current service numbers are approximately 16,500 out of perhaps 20,000 eligible households and businesses. Currently the service accepts garden organics and vegetable scraps but not all food organics.

To process the collected organics Council facilitated the establishment of an in-vessel composting plant under a contract arrangement. This process sterilises weed seeds and plant pathogens and the product complies with the Australian Standards. Organics collection is now well established in Victoria and further development of the service can now be considered.

A number of opportunities exist in Greater Shepparton to expand the service. These include the inclusion of food waste in the service and the extension of the service to all households having a waste service.

Action: Further develop the existing organics collection service to include food wastes initially by the undertaking of trials and education.

Action: Extend the current organics collection service to include all households currently having a waste collection service, thus transforming the standard waste collection service to be a three bins service



Information on the kerbside collection services provided to residential properties by the Greater Shepparton City Council is included in Table 4:

Table 4 *Current council waste services to residential properties*

Waste type	Type of service	Type of container	Frequency	Type of waste materials and exclusions	Number of services in 2009/2010 & Participation rate in 2012/13
Garbage	Kerbside collection	Mostly 240L MGB, with options for 120L or 80L	Weekly	All household, not hazardous waste such as asbestos, chemicals etc.	e.g. 22,683 98%
Garbage	Multi-unit dwellings (MUD)	Front-lift bins	Weekly	All household, not hazardous waste	
Commingled Recyclables	Kerbside collection	Mostly 240L MGB, option for 120L or an extra service	Fortnightly	Dry paper and cardboard, Plastics 1-6, Glass containers, Metal containers etc.	e.g. 22,683 98%
Green Organics	Kerbside collection	Optional, mostly 240L MGB, option for 120L	Fortnightly	Organic garden/green waste only, no other contaminants etc.	e.g. 16,500 73%
Hard waste	Not currently available				

4.1.2 Non-residential waste collection services

Council provides waste collection services to 2,580 non-residential properties. These comprise of 1,230 rural (primary production) properties, 906 commercial properties and 444 industrial properties. In many instances, particularly with the commercial and industrial sectors many businesses make their own arrangements for their waste disposal based on their larger volumes needed for disposal and the types of waste which may not be suitable for disposal into bins. Participation rates in the commercial sector however is around 51% and 48% in the industrial sector.

Table 5 Current council waste services to Non-residential properties

Waste type	Type of service	Type of container	Frequency	Type of waste materials and exclusions	Number of services in 2012/2013 & Participation rate
Garbage	Kerbside collection	Mostly 240L MGB, with options for 120L or 80L	Weekly	All household, not hazardous waste such as asbestos, chemicals etc.	e.g. 1,350 50%
Commingled Recyclables	Kerbside collection	Mostly 240L MGB, with options for 120L or an extra service	Fortnightly	Dry paper and cardboard, Plastics 1-6, Glass containers, Metal containers etc.	e.g. 1,350 50%

4.1.3 Other waste collection services

Council also provides a range of other waste collection services within the municipality. Details of these services are provided in Table 7 below:

Table 6 Summary of Other waste collection services

Waste type	Type of service	Type of container	Frequency	Type of waste materials and exclusions	Number of services in 2013
Street sweeping	Collection		6 to 8 Weekly Cycles		Approx 500 km of path and roadway
Street cleaning and dumped rubbish	Collection		When necessary	Hard waste, mattresses, tyres, TVs etc.	
Litter bins					
Public place recycling	Kerbside collection	240L and 120L MGBs in fixed metal frames	Weekly	Bottles, cans etc	e.g 950
Events (festivals, local markets, cultural/community events etc.)	Collection	240L MGB	During and/or after event	All waste from event, which fits in a 240L MGB. Other waste collection arranged by event organiser	

Comments:

- **Street sweeping** is a major part of maintaining a clean and predominantly litter free City of Greater Shepparton. The sweepers are responsible for cleanliness of roughly 500 km of path and roadway which is swept in a six to eight week cycle depending on the time of year, workload and weather.
- Shepparton CBD is swept every morning while Tatura and Mooroopna are swept every second morning.
- During the autumn leaf drop, areas of high traffic are swept more frequently, in turn extending the length of the street sweeping cycle for that time of the year.
- Council provides a **litter bin service** to public areas of the municipality. There are currently approximately 950 public place litter bins around the municipality. More are added as areas with increasing litter are recognised.
- Council recognises that a large percentage of the litter created throughout the municipality is **cigarette butts**. Consequently there are numerous butt bins in outdoor areas of high use.
- The Greater Shepparton City Council recognises that **major outdoor events** create a significant amount of uncontrollable litter. Bin stations, with both waste and recycling, are supplied to all events that register an attempt to reduce the amount of litter that is left lying around at the conclusion of these events.
- Cleanliness of sporting grounds and facilities is left as the responsibility of the sporting club or ground user.

Opportunities for Improvement:

- Need to investigate the possibility of fitting Global Positioning Systems (GPS) onto Council owned sweepers. Attaching GPS trackers to the sweepers will allow Council to pinpoint the location of a sweeper at any one time for enhanced security on expensive equipment. GPS would aid in ensuring sweeping jobs were performed correctly showing where the sweeper had visited and if the broom was up or down at any one time.
- Council is attempting to reduce the amount of butts that become litter by increasing the number of butt bins around areas of high use, such as Maude St mall, grocery stores and fast food outlets.

4.1.4 Overview of current council waste contracts

Kerbside collection services for waste, co-mingled recyclables and greenwaste to residential and non-residential tenements are provided for Council on a contract basis. The contracts for these services are now up for renewal.

The receipt for co-mingled recyclables is currently being undertaken on a contract basis by our contractor at their modern sorting facility in Melbourne. This contract is also now up for renewal.

The receipt of green organic waste is also being currently provided to Council on a contract. This contract is now also up for renewal.

A Contractor also provides services for the collection of co-mingled recyclables from public place recycling bins strategically located in the urban centres. This also applies to litter bins located in urban centres and parks and other strategically located areas where their presence

will help stop illegal littering. Our contractor also provides a collection service under contract for Special events where bins for general waste and recycling are provided.

Street sweeping and disposal to landfill is undertaken by in-house staff.

The operation and management of Council's three transfer stations at Shepparton, Ardmona and Murchison is undertaken by in-house staff. The placement, removal and transport of skip bins at these transfer stations are undertaken on a contract basis by our contractors. This 5 year contract has now been extended and is now up for renewal in 2014.

Table 7 Overview of Waste Contracts

Service	Address of facility	Contract Expiration (plus extensions)
Kerbside Collection		
Garbage collection and disposal to landfill		e.g. June 2014
Green Organics collection		June 2014
Green Organics receipt		June 2014
Commingled recyclables collection		June 2014
Co-mingled recyclables receipt		
Hard waste	Disposal to landfill or taken to transfer station for sorting when introduced	
Non-residential collections		
Garbage collection and disposal to landfill		June 2014
Commingled recyclables collection		June 2014
Commingled recyclables receipt		June 2014
Other waste collections		
Street sweeping and disposal	To council transfer station for de-watering prior to transfer to landfill	
Street Cleaning and dumped rubbish collection and disposal	To landfill	No contract
Litter bins Collection and disposal	To landfill	June 2014
Public Place Recycling (PPR) bins Collection		June 2014
PPR receipt		June 2014
Events waste collection and disposal	To landfill	June 2014
Operation and Management of Waste transfer station and/or Resource Recovery Centre		June 2014 for removal of bins

Key Issues

- Contract renewals are currently being reviewed and undertaken for the above shown contracts
- The industry standard kerbside **bin size** is now small and if Council wishes to achieve its environmental objectives and set an example it is recommended that options toward implementing this standard be adopted.
- As part of the contract renewal of the collection service the **collection area** has been reviewed and it is determined as Council's preferred position to maintain the existing service routes.
- For the **receival of co-mingled recyclables** contract the change in the current contract to take collected material to the modern Visy facility in Springvale has led to significantly reduced contamination rates to less than 8%. This is due to the ability of being able to better sort the glass fines from the recycling stream.
- The introduction of a **hard waste collection service** is now an option for Council with all kerbside collection contracts now up for renewal. Whilst it is a common service for metro Melbourne councils it is less utilised in country and regional areas due to its high associated costs. New Worksafe guidelines discourage manual handling of such wastes and collectors would be exposed to other dangers while working from the roadway and possibly during the entry into private premises. Greater Shepparton City Council currently does not provide a hard waste collection service or free tipping vouchers. Council instead utilises a user pays system where residents are required to dispose of their material at one of the transfer stations around the municipality at their own cost which means that residents that do not utilise the service are not subsidising the ones that do. Council's preferred position on this option is the provision of tipping vouchers to residents with a kerbside collection service and the provision of an at call hard waste collection service to eligible residents with mobility, health or transport restrictions.
- Council is considering **introducing food wastes into the household green waste collection** service which is currently on a fortnightly basis. Given that food and other organic wastes take up approximately one third of the households waste bin there is a huge incentive for this portion of waste to now be diverted to composting providing an environmentally friendly solution and adhering to 'best practice'. Many trials have now been undertaken within this Region and elsewhere giving successful outcomes with participating residents. Council is in a fortunate position with its current receival contractor, for green organic waste having an in-vessel composting facility in Shepparton that has adhered to all EPA stringent regulations. Given that the next contract may well continue the service with the current contractor for the next 5 to 7 years Council is well placed to introduce food waste in to the green waste collection service. Council's preferred position is to maintain the current fortnightly collection service (thus saving potentially \$375,000 over a weekly collection) and provide adequate education to householders to use this service wisely given that food can become odorous, particularly during hot weather periods.

Opportunities for Improvement

- It is Council's preferred position to retain existing waste bins but increase the cost of 240L bins to discourage their use. The overall cost to downsize 240 L bins would equate to a 1.8% rate rise or \$41.50 per household per year.
- Pursue the development of a better education plan to more effectively provide residents with information on how to reduce the amount of contamination in kerbside collections and inform of the products available for recycling and to get best results of their food-waste going into the green waste bin.

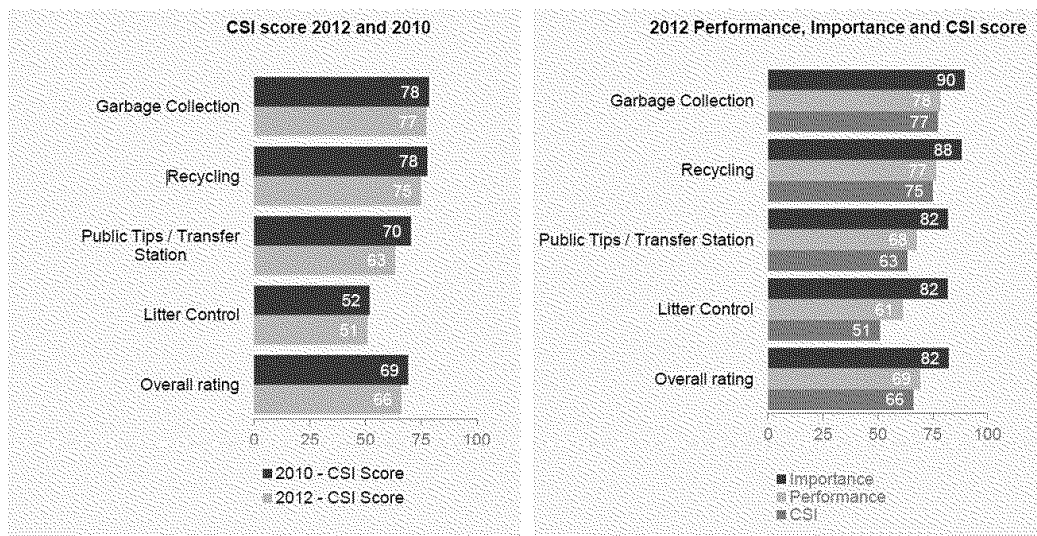
4.1.5 Community satisfaction with waste collection services

A Community Satisfaction Survey, including questions with regard to the Greater Shepparton City Council's waste services was undertaken between 5 April and 20 April 2012. A postal survey was sent out to 2,600 households randomly selected from Council's voters' roll. The results were weighted to be representative of the local population by age, gender and location.

Waste management was one of 14 service area of the Council that was surveyed separately. Along with Cultural and Community Services, Home Care Services and Sporting Services, Waste Management was an area that performed strongly in terms of achieving high satisfaction levels.

An analysis of the importance and performance scores given to each of the 14 service areas produced a quadrant which places each of the service areas into one of 4 categories. Waste Management was placed into the 'High Importance, High Performance Services' category. It was noted that:

- These are important services that the Council are doing well with and should be maintained
- Services in this category include Waste Management, Home Care and Parks



The overall score is slightly lower than the Victorian rural average of 68.

4.2 WASTE COMPOSITION AND QUANTITIES

4.2.1 Waste and recyclables collected at the kerbside in the municipality

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

Table 8 *Quantities of waste and recyclable materials collected from residential properties in 2012/2013*

	Recycled	Disposed to landfill	kg / Hh / yr (generated)	kg / pP / yr (generated)
	Tonnes	Tonnes	Kgs	Kgs
Residential collections				
Garbage		15,699	621	253
Commingled Recyclables	6,582		260	106
Green Organics	5,417		214	87
Bundled green waste				
Total of waste and recyclables generated	11,999	15,699		
Diversion Rate (%)	43%			

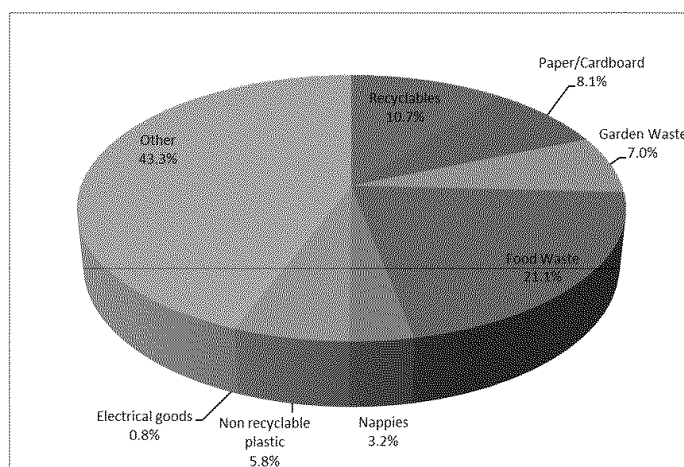
4.2.2 Composition of kerbside collected Garbage

In February 2010, Resource GV appointed Wastemin Pty Ltd to undertake an analysis of household Garbage across the region. This was a follow up garbage audit to a previous audit undertaken in 2007. The main difference of this audit was a detailed analysis of food and garden organics that was undertaken in lieu of the detailed recyclables analysis undertaken in 2007.

There were 120 households in the sample taken from Shepparton. The breakup of Garbage categories by weight were as follows:

Category	2010	2007
Other	43.3%	30.2%
Food organics	21.1%	31.8%
Recyclables	10.7%	12.4%
Disposable	9.8%	11.5%
Paper / Newspaper / Cardboard	8.1%	8.5%
Garden organics	7.0%	5.6%

Composition of the 2010 Shepparton Garbage waste stream (% by weight) is shown diagrammatically by the following:



The average weight per household was 11.1kg overall.

The most significant items remaining in the garbage stream are: Food organics (21.1% by weight), 11.7% by volume, Recyclables (10.7% by weight, 15.3% by volume), Garden organics (7% by weight, 7.5% by volume), Paper/Newspaper/Cardboard (8.1% by weight, 13.1% by volume).

In comparison with the 2007 audit, the results reveal:

- A significant reduction in food organics from 31.8% to 21.1%
- Slight decrease in recyclables from 12.4% to 10.7%.
- Slight increase in garden organics from 5.6% to 7%
- Paper/cardboard, nappies and non-recyclable plastic was quite similar.

Overall composition of food organics by weight and volume was also undertaken. The sub categories of food organics were as follows:

Sub –category Food organics	% of garbage stream by weight	% of garbage stream by volume
Unavoidable food waste	6.9%	4.1%
Whole fruit / vegetables	1.4%	0.3%
Soiled packaged food	4.9%	3.4%
Avoidable food waste	5.2%	2.5%
Other food	2.8%	1.4%
Total food organics	21.1%	11.7%

It was identified that there is significant scope in reducing food organics, in particular soiled packaged food, but also the whole fruit/vegetables and avoidable food waste sub categories; (11.4% by weight and 6.1% by volume) of the total garbage stream.

Table 9 Composition of kerbside collected Recyclables 2010

Waste Type	% Composition
Paper & Cardboard)	61.0
Liquid Paperboard	0.5
Glass	26.0
Aluminium	1.0
Steel	2.0
HDPE	2.0
PET	3.0
Mixed Plastics	4.5
Total	100.0

Sourced from processor of Co-mingled recyclables contractor

Table 10 Composition of kerbside collected Green Organics

Waste Type	% Composition
Green organic material recovered	
Green organic material processed	91%
Contaminants/waste	9%
Total	100%

Sourced from processor of Green organics contractor

4.2.3 Waste quantities from Other waste collection and disposal services provided by Council

Table 11 Quantities of waste and recyclable materials from Other waste collection services in 2012/2013

	Recycled	Disposed to landfill	Measurement (as appropriate)
	Tonnes	Tonnes	Kgs
Other			
Street Sweeping	1,518	1,518	
Street Cleaning and dumped rubbish			
Litter	287	287	
Public Place Recycling	94	0	
Events	7	0	
Total of waste and recyclables generated	A	B	
Diversion Rate (%)	$\% = A / (A + B)$		

4.2.4 Waste Transfer Station, Resource Recovery Centres and Drop-off facilities

Table 12 *Materials received and recycled at Council Waste Transfer Stations, Resource Recovery Centres and Drop-off facilities for 2012/13*

Facility	Wastes received	Quantity received (m3)	Quantity recovered (m3)	Quantity disposed to landfill (m3)
Shepparton RRC	General mixed waste	4,156	0	4,156
Shepparton RRC	Commercial & Industrial	1068	801	267
Shepparton RRC	Greenwaste	2015	2015	0
Shepparton RRC	Cardboard	64	64	0
Shepparton RRC	Polystyrene	53	53	0
Shepparton RRC	Concrete	5260	3,945	1,315
Shepparton RRC	Plasterboard	212	159	53
Shepparton RRC	E Waste	395	395	0
Shepparton RRC	Tyres	69	69	0
Shepparton RRC	Mattresses	500	500	0
Ardmona RRC	General mixed waste	2705	0	2705
Ardmona RRC	C&I	324	0	324
Ardmona RRC	Greenwaste	160	160	0
Ardmona RRC	E Waste	45	45	0
Ardmona RRC	Tyres	4	4	0
Murchison RRC	General mixed waste	1500	0	1,500
Murchison RRC	Greenwaste	100	100	0
Total	All	18,631	8,311	10,320
Diversion rates			45%	

Key Issues

- A major redevelopment of the Shepparton Resource Recovery Centre has been committed to by Council. A design has been developed based on Best Practice aimed at maximising material recovery and customer and operator safety and ease of use. A final design and costing is yet to be finalised. Major features of the redesign will be:
 - A walking platform that will promote resource recovery and operator safety and efficiency.
 - A compactor bin that will compress the final unwanted waste prior to it being transported to landfill.
 - Provision of a roof over the off-loading and recovery areas providing users and operators of the facility protection from the wind and adverse weather conditions.

- The site can get congested especially during weekends and when the site is undermanned. Typically there are three operators at the site but often this is reduced to two.
- Operator and delay issues often occur when customers for the adjacent Dog Pound need assistance when the Pound is not manned, thus requiring a resource recovery operator to assist.

Opportunities for Improvement

- A redevelopment and provision of more open roof area for the recycling shop is needed to allow for more efficient spacing and use of existing floor space available.
- Consider a volunteer group partnership arrangement with Council for the operation and provision of labour for the running of the recycling shop operation.
- Open up the unloading area more to allow for better manoeuvring around vehicles that are reversing into the unloading area
- Provide for clearer more improved signage to the site generally.

Total Waste and Recyclables Managed by Greater Shepparton City Council

Table 13 *Summary of waste and recyclables generated and recycled in the municipality for 2012/2013*

	Total (tonnes)	kg / Hh / yr	kg / pp / yr
Residential – waste to landfill	16,187	622	261
Residential – materials recycled	11,511	442	185
Non-residential – waste to landfill	24,777	952	400
Non-residential – materials recycled	-		
Other – waste to landfill	3857	148	62
Other – materials recycled	-		
Facilities – waste to landfill	10,320	396	166
Facilities – materials recycled	8,310	319	134
Total	74,962		
Diversion Rate (%)	26%		

The above table is derived from annual waste quantities as shown on Council's documents in appendix.

Key Issues

Much of the proportional waste to landfill is contributed from the Building and Demolition and Commercial and Industrial sectors.

Opportunities for Improvement

Commercial and Industrial Waste accounts for a high percentage of the overall waste produced and disposed of in Shepparton. The Shepparton Resource Recovery Facility accepts industrial waste in the forms of concrete, bricks and green waste, while a high portion of the loads entering the Cosgrove landfill are of commercial/industrial origin. It is recognised that commercial and industrial waste represents a waste type with potential to heavily reduce the amount of material going to landfill through diversion, recovery and recycling. A potential way of reducing our commercial and industrial waste and working towards waste minimising incentives and targets is through the development of a sorting facility.

Action: That Council continue to improve procedures in place to dispose of commercial and industrial waste and increase, where possible, the amount of material being recycled.

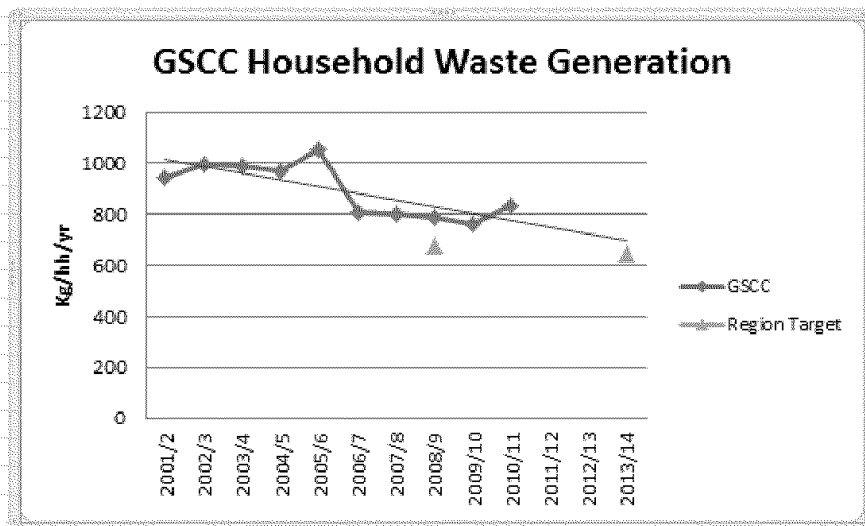
Action: That Council investigate the possibility of developing a site for a sorting facility for commercial and industrial waste.

4.2.5 Waste Projections

Table 14 Projections for waste and recyclables in the municipality

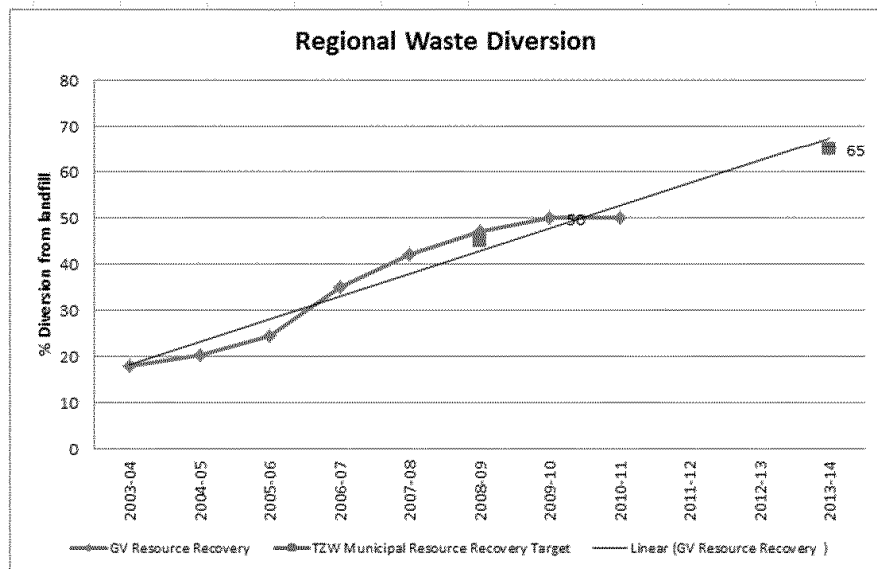
	2013 (Current) Kg / pP/ yr	2016 (Projected) Kg / pP/ yr	2020 (Projected) Kg / pP/ yr
Residential – waste to landfill	261	249	235
Residential – materials recycled	185	177	167
Non-residential – waste to landfill	400	381	360
Non-residential – materials recycled			
Other – waste to landfill	62	59	56
Other – materials recycled			
Facilities – waste to landfill	166	158	150
Facilities – materials recycled	134	127	120
Total			

The above table is based on projected population growth rates. It is interesting to note from the table below that the projected household waste generation for the Greater Shepparton City Council households is showing a decline overall. It is considered important that a greater emphasis on education will have a more significant impact on the diversion of waste from the household. This will become particularly apparent when Council introduces the diversion of food waste into its green waste collection service.



The table below shows the regional diversion projections for waste from landfill. The increasing diversion rate is a reflection of best practice operations that are now occurring at

landfills and resource recovery centres within the Goulburn Valley region. Given the high percentage of waste to landfill from the Commercial and Industrial sectors it is important for Council to focus its strategies on this important sector of the waste stream. The investigation into the future development of a site for a sorting facility for commercial and industrial waste would provide for a significant increase in diversion rates going to landfill.



4.3 WASTE DISPOSAL AND RESOURCE RECOVERY FACILITIES

4.3.1 Waste management facilities currently operating in or near the municipality

4.3.1.1 Resource Recovery Centres

Transfer stations play an important role in a communities waste management system by providing an effective means of congregating and managing recyclables and waste. They allow businesses and members of the public an easy way to dispose of general waste and to recycle bulky items that are impractical for kerbside recycling along with materials such as plasterboard and mattresses that would generally be dumped at landfill. The waste accepted at the transfer stations must be suitable for landfill and therefore not include any liquid waste, chemicals or hazardous wastes.

There are three resource recovery centres in the Greater Shepparton Region, these being:

- Shepparton Resource Recovery Centre, located on Wanganui Rd, Shepparton.
- Ardmona Resource Recovery Centre located on the corner of Midland Hwy and Turnbull Rd, Ardmona
- Murchison Resource Recovery Centre, located on the closed Murchison landfill site.

4.3.1.2 Shepparton Resource Recovery Centre



Shepparton Resource Recovery Centre is the largest in the Greater Shepparton region. The transfer station accepts domestic quantities of waste and recyclable material and is open seven days a week; Monday to Saturday 8.00 am – 4.30 pm, Sunday/Public Holidays 9.00 am – 4.00 pm

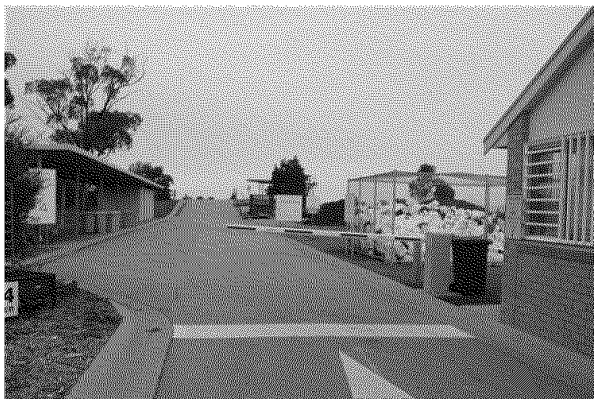
A major re-development is being proposed for the Shepparton Resource Recovery Centre with a design now completed but not yet finalised. Construction is imminent. The design will be aimed at maximising material recovery, customer and operator safety and ease of use. The re-development will encompass current transfer station best practice, with facilities in places that can maximise efficiency of resource recovery that best suits the Greater Shepparton region. This facility, unlike the two at Ardmona and Murchison, provides a 'detox your home' facility on site. Customers are directed to the Shepparton facility as required.

Action: That Council finalise design of the re-development proposed for the Shepparton Resource Recovery Centre in accordance with Best Practice and arrange to call tenders for construction.

There are already many operations and practices at the Shepparton Resource Recovery Centre that assists with resource recovery and minimising waste; these include:

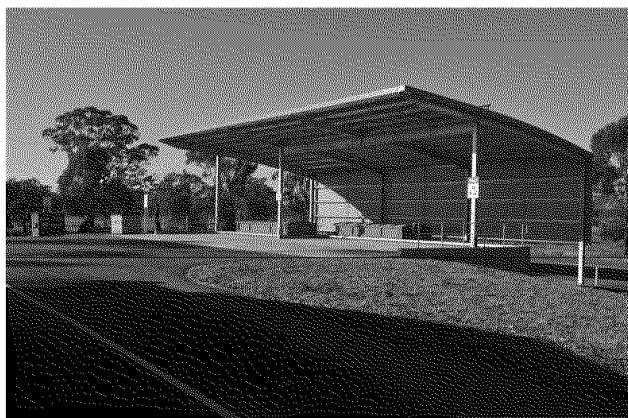
- The recent purchase of a **baler** that significantly decreases the amount of space and transport required in the disposal of various materials. These include materials such as plastics, polystyrene, cardboard, copper wire, copper pipe, aluminium cans, extruded aluminium and silage wrap.
- Provision of '**Detox your Home**' services to allow for the safe and convenient proper disposal of paint, motor oil, all types of batteries, gas cylinders and fluorescent tubes. This is a Government run program.
- Provision of '**drumMuster**' program. A nationwide program that provides an important service for the agricultural sector to allow for the safe and proper disposal of clean farm chemical drums.
- **Recycling of mattresses** is undertaken at Shepparton, Ardmona and Murchison transfer stations. Foam mattresses have the cover removed on site and the foam recycled, while spring mattresses are transported to Dreamsafe where they are recycled or reused. The recycling of the separate components include foam, metal and wood.
- **Recycling of oil.** A dedicated oil recycling facility is set up at the site for the safe disposal of old engine oils
- Setting up of '**second hand shop**'. Any incoming items of value are placed under a covered area for the further sale to the public. This area is managed by resource recovery centre operators. This initiative helps to divert a significant portion of material that would otherwise be taken to landfill.
- The recycling of computer components via a program called '**E-Waste**'. This includes the recycling of most electrical appliances and components used regularly around the home or office. Shepparton, Ardmona and Murchison resource recovery centres all accept and recycle electronic waste
- Provision of '**Plasback**' service; which is for the recycling of incoming agricultural plastics which includes film plastics and silage wrap.

4.3.1.3 Ardmona Resource Recovery Centre



Ardmona Resource Recovery Centre is located on the corner of Midland Hwy and Turnbull Rd, is open from 8.00 am – 4.30 pm on Tuesday and Thursday, 8.00 am – 4.30 Saturday and 9.00 am – 4.00 pm Sundays. It is closed Monday, Wednesday and Friday. Unlike the Shepparton facility the Ardmona transfer station does not offer the option to dispose of concrete, brick, plaster or polystyrene. Ardmona does not have a detox your home facility on site and customers may be directed to the Shepparton facility.

4.3.1.4 Murchison Resource Recovery Centre



The Murchison Resource Recovery Centre was set up to replace the now closed Murchison Landfill on the same site. The facility is open Wednesday and Sunday afternoons from 1.00 pm to 4.00 pm, and does not accept concrete, brick, plaster, polystyrene or vegetable based oils. Murchison transfer station is without a detox your home facility.

4.3.1.5 Landfill

Generally in Australia, landfilling is still the primary method of waste disposal. In Europe however many alternative technologies are used mainly due to scarcity of landfill space, high landfill levies and legislation restricting putrescible waste to landfill. Some of the alternative technologies used in Europe include fermentation, gasification and percolation. Such alternative methods offer a more sustainable solution compared to more traditional methods such as landfill and incineration as more resources can be recovered from the residual waste. These methods also minimise potential harm to the environment. In Australia however, landfill has significant cost advantages and it will probably be some time before new technology replaces landfill especially in rural areas. It should be noted that alternative technology has a percentage of residual waste that still must be disposed of at landfill or contained for future treatment.

Cosgrove 2 landfill is the only current landfill that services the Greater Shepparton region. This needs to be noted given the recent closure and replacement of the Murchison Landfill with a transfer station. At current tipping rates it is expected that Cosgrove 2 landfill will be full in four years. It is planned that **Cosgrove 3** will be completed and ready for use by that time.

The future of Cosgrove 3 is such that Council have now successfully acquired the land for this new landfill. Now that the site has been acquired it is still far from ready as there needs to be many processes undertaken before being deemed environmentally safe and ready for use.

Action: That Council undertake the necessary planning and licencing steps for the development of Cosgrove 3 site in accordance with Best Practice well before the closure of Cosgrove 2.



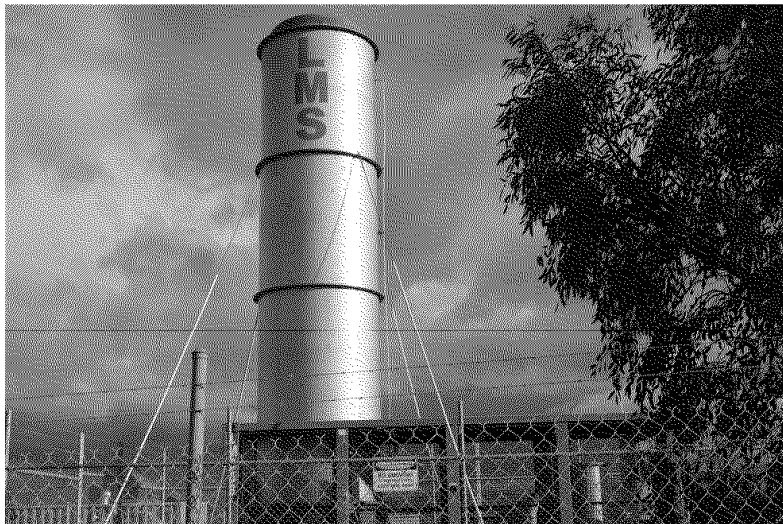
Table 15 *Waste Disposal and Resource recovery facilities within the Greater Shepparton Area*

Disposal facility	Wastes Accepted	Cost in 2012/13	Unit
Shepparton RRC	General waste	\$38/m3	Cubic metre
	Commercial & Industrial	\$56/m3	Cubic metre
	Clean concrete /tiles	\$23/m3	Cubic metre
	Greenwaste	\$18/m3	Cubic metre
	Mattresses	\$18	Per unit
	Tyres	\$3, \$14, \$80	Car, Truck, Tractor
	Clean timber	\$18/m3	Cubic metre
	Paint and Household chemicals	No charge	
	Oils	No charge	
Ardmona RRC	General waste	\$38/m3	Cubic metre
	Greenwaste	\$18/m3	Cubic metre
Murchison RRC	General waste	\$38/m3	Cubic metre
	Greenwaste	\$18/m3	Cubic metre

Key Issues

Gas Collection is currently undertaken at the Cosgrove 1 site by specialised company LMS. This is to curb the emissions of methane gas into the atmosphere which is considered to be a significant contributor to global warming. Untreated landfill gas can also cause local odour problems and can be explosive under certain circumstances. Council currently runs a gas collection system at Cosgrove landfill, which generates power that is then put back into the City's power grid. Running this system significantly reduces the landfill's gas emissions and the global warming potential.

Action: That Council continue to commit to the development of gas collection control at the Cosgrove landfill sites.



Whilst landfills are important to the waste and resource recovery system, the costs of design, building and ultimately closing them, has been steadily increasing. As a result there has been a shift away from smaller landfills to larger regional landfills.

Implications of the Draft Statewide Waste and Resource Recovery Infrastructure Plan 2013-2042 Victoria (SWRRIP)

The Draft Statewide Waste and Resource Recovery Infrastructure Plan 2013-2042 Victoria (SWRRIP) identifies that landfills with a shallow cell depth, accepting less than 25,000 tonnes of waste per year, and servicing only their local community, are likely to be more costly to operate in the long term. These are mainly owned by local government. Investigations into the future of these landfills may identify options that will improve the outcomes to the council and community. It is likely that these options would include transitioning the sites to transfer stations and resource recovery activities prior to the transport of the consolidated residual waste to a larger regional landfill.

There are no landfills in the Goulburn Valley Region that are scheduled for closure by the LGA in the short term. Reference: 2.6.7 Landfills.

The Cosgrove landfill (Reference 7.7.4.2) is recognised within the new Plan as being one of 'regional significance' serving a large population centre. The significance of a food processing industry in the Greater Shepparton region is also recognised.

The Plan further identifies that "while there is adequate airspace for the medium term, there is limited airspace associated with the current operation of the Cosgrove landfill. This landfill is sited adjacent to an operational quarry and there is potential for considerable new airspace in the quarried areas. It is recommended that the City of Greater Shepparton and Goulburn Valley RWMG develop a long term management plan for the Cosgrove landfill, as a priority."

Action: That Council, in conjunction with Resource GV, undertake the necessary planning and licencing steps for the development of Cosgrove 3 site in accordance with Best Practice, as a priority

Commercial and Industrial Waste accounts for a high percentage of the overall waste produced and disposed of in Shepparton. The Shepparton Resource Recovery Facility accepts industrial waste in the forms of concrete, bricks and green waste, while a high portion of the loads entering the Cosgrove landfill are of commercial/industrial origin. It is recognised that commercial and industrial waste represents a waste type with potential to heavily reduce the amount of material going to landfill through diversion, recovery and recycling. A potential way of reducing our commercial and industrial waste and working towards waste minimising incentives and targets is through the development of a sorting facility.

Action: That Council continue to improve procedures in place to dispose of commercial and industrial waste and increase, where possible, the amount of material being recycled.

Action: That Council investigate the possibility of developing a site for a sorting facility for commercial and industrial waste.

A recent community satisfaction survey has shown that a high percentage of residents would like **lower fees** for landfill and the **re-introduction of free tipping vouchers**. There are reasons why tipping fees should not decrease.

- Fees are influenced by the Environment Protection Agency (EPA) with landfill levies enforced which can increase with minimal warning;
- State Government influence tipping fees.
- The Landfill operates at a substantial cost, with the price of constructing one cell in excess of \$1.5M.
- Staff that operate the landfill and resource recovery centres are required to be on site full time.
- Encourages reduction in waste disposal by illustrating that at the end of a products life, there is substantial effort and cost involved with the end disposal of that product.

Free tipping vouchers are no longer allocated to residents as Council has opted for a 'user pays' system which is independent of the general rate. Funds raised through the garbage charge must cover the cost of providing all the waste services. Free tipping vouchers also send the wrong message about reducing waste to landfill. The illusion of free waste disposal discourages waste minimisation and recycling.

Opportunities for Improvement

Action: Council continues to broaden the service of E-Waste by improving the efficiency of E-Waste recycling products.

Action: Council continues to support the Plasback strategy by accepting silage wrap at Shepparton, Ardmona and Murchison Resource Recovery Centres.

Action: In conjunction with drumMuster and Resource GV, promote and where possible assist the local drumMuster collection program to improve drum recovery rates.

Action: That Council continues to support Sustainability Victoria in the household chemical collection program 'Detox your Home'.

Action; That Council continues to support MobileMuster with a permanent collection point located at the Greater Shepparton City Council offices and Tatura Library.

4.3.2 Old or closed waste management facilities within the municipality

The Kialla Landfill site was developed in the early 1970's as an above ground waste site for Shepparton which was then decommissioned 19 years later in 1989. Over time suburban

growth has brought the site within a few hundred metres of suburban development. In 2009 work commenced to rehabilitate the site where a lookout was created, along with a world class mountain bike track. The mound has been re-graded to reduce soil erosion and sealed with clay. A new layer of topsoil comprises a mix of local topsoil and treated bio-solid waste from the sewerage treatment plant and a layer of native grasses has been planted for aesthetic appeal and to minimise erosion. The adjacent borrow pit, from which the clay was extracted to seal the landfill, was in the process of being converted into a wetland for native flora and fauna. Different options for future plans of the site have been under Council and public consideration. Currently the site is being developed as Botanical gardens with significant local species being on display. Further ongoing development is needed to further develop planting and control erosion at the site.

Action: That Council commit to the further development of this significant site and in accordance with EPA PAN requirements and with 'Closed Landfill Guidelines'..

Murchison Landfill is now a closed landfill with rehabilitation still required which will include capping and shaping. The Murchison Resource Recovery Facility has been developed on the old landfill site to replace the now closed landfill.

Action: That Council commit to the continued rehabilitation including capping and shaping in accordance with EPA PAN requirements and with 'Closed Landfill Guidelines'..

Cosgrove 1 Landfill is now a closed landfill and requires ongoing aftercare management in accordance with EPA PAN requirements.

Action: That Council continue to provide ongoing after care for its closed landfills in accordance with EPA PAN requirements and in accordance with 'Closed Landfill Guidelines'.

4.3.3 Licenced Landfills in the Goulburn Valley RWMG Area

The following table is recognised within the recent Draft Statewide Waste and Resource Recovery Infrastructure Plan 2013-2043 Victoria (SWRRIP):

Landfill	Location	Owner	LGA Served by Landfill	Anticipated Close Date
Alexandra	Alexandra	Murrindindi Shire Council	Murrindindi Shire Council	2027
Cobram	Cobram	Moirra Shire Council	Moirra Shire Council	2040
Cosgrove	Shepparton	Greater Shepparton City Council	Greater Shepparton City Council	2037
Hildene	Seymour	Mitchell Shire Council	Mitchell Shire Council, Strathbogie Shire Council	2030
Patho	Patho	Ellwaste Echuca	Buloke Shire Council, Campaspe Shire Council, Central Goldfields Shire Council, City of Greater Bendigo	2050

4.4 EDUCATION STRATEGY

Council to date has not shown a leading commitment toward Education within its own region towards its waste management strategies. This is indicated by its lack of relevant strategies outlined within its previous Waste management Strategy 2005 – 2015. Council has nevertheless relied on the resource provided by the Regional Education Officer of Resource GV whose position is to provide Educational needs across the entire Goulburn Valley Region which includes five councils including the Greater Shepparton City Council.

Key Issues

The successful implementation of the many strategies outlined within this Waste and Resource Recovery Management Strategy document are dependent upon a focused approach toward public education. Many of the proposed initiatives that would be much reliant on public education would be

- The introduction of food waste into the green organics collection service
- Working closely with the commercial and industrial sectors in the development of waste minimisation programs
- Working closely with litter program organisations and volunteer groups to stem illegal dumping and littering practices

Opportunities for Improvement

- Having a dedicated officer to direct and drive focused strategies based on waste minimisation, resource recovery and litter management would be beneficial to Council to make delicate and more challenging strategies successful. The successful implementation of food into the green organics collection service is seen as being heavily dependent on a strong education platform.
- Council could seek appropriate funding to assist in supporting the appointment of an Education Sustainability Resource Recovery officer.
- The development of a new Resource Education Management Plan is needed to provide a planned approach.
- The appointment of an Education Sustainability Resource Recovery Officer would allow Council to become more involved with the Resource Smart Schools framework in conjunction with Sustainability Victoria and Resource GV with the aim of actively engaging with schools in the Shepparton region.
- The appointment of an Education Sustainability Resource Recovery Officer would allow Council to extend its community education role to focus on broader sustainability issues and businesses about waste minimisation and responsible waste disposal.
- The Education Sustainability Resource Recovery Officer's responsibility will include the consideration of triple bottom line (financial, economic and social) in determining actions to be taken in regard to waste and litter diversion.

4.5 LITTER MANAGEMENT

4.5.1 Previous Waste Minimisation and Litter Education Plan

The Greater Shepparton City Council in 2002 adopted a 'Waste Minimisation and Litter Education Plan – Waste Wise in Greater Shepparton' which took into account the Statewide Litter Strategy, the litter provisions of the Goulburn Valley Regional Waste Management Group

Waste Management Plan and initiatives that were developed through the Victorian Litter Action Alliance.

The Plan contains nine key strategic issues that are as follows:

- Increase reuse and recycling through the implementation of Best Practice at transfer station
- Support the GVRWMG regional education programs and projects
- Facilitate communication with the community
- Increase recycling at public events
- Provide effective recycling service delivery to the community
- Reduce industry and construction waste
- Provide litter reduction targets
- Reduce organic waste going to landfill
- Buy recycled alliance

Since the time the above Plan was developed Council has been involved with many key initiatives involving litter management and waste minimisation including:

- The introduction of recycling and waste management at public events;
- An improved litter bin collection service with increased performance and ensuring that relevant WorkSafe issues were satisfied;
- Improved litter bin regime now in accordance with introduced commissioned studies;
- Council working together with Resource GV, EPA, Parks Victoria and volunteer groups to tackle illegal dumping at hot spot areas;
- Providing gross pollutant litter traps at strategically located outfall drains.

It is felt now that there is a stronger emphasis needed on litter management and for this Council to become more committed to ensuring that litter does not affect and damage the natural beauty of the Greater Shepparton environment and the damaging consequences for its precious wildlife.

4.5.2 Proposed Litter and Illegal Dumping Management for Greater Shepparton

Local governments are the major players in controlling, cleaning up and trying to prevent litter. The 2006 VLAA survey found that 76% of local governments or RWMGs 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. These are the elements that characterise Victoria's approach to litter prevention.

The new Victorian Litter Strategy 'Love your Victoria', has been issued by the Victorian Litter Action Alliance and Sustainability Victoria for 2012 to 2014. This document sets out various strategies that are based on the following:

- Tackle the issue of illegal dumping;
- Improve data collection and conduct research into illegal dumping behaviours to inform monitoring, enforcement and prevention approaches;
- Increase public place recycling infrastructure to divert more materials for recycling;
- Improve resources and develop training programs for local governments, regional waste management groups and land managers to deliver local litter prevention and enforcement programs that focus on litter hot spots and important litter issues;
- Expand community partnering projects and programs to share knowledge across regions and local government boundaries
- Increase roadside litter prevention grants to prevent commonly littered items such as cigarette butts and beverage containers.

Key Issues

Many sections of the community want to take positive action with litter management and volunteer numbers are needed to increase to help prevent and assist in the management of litter across the State and within this region. A new litter strategy is now needed to represent the next step in the prevention and management of litter in the Greater Shepparton region. As stated within the new Victorian Litter Strategy 2012-14 new strategies within communities now should be underpinned by the three critical elements for success being – education, infrastructure and enforcement.

Opportunities for Improvement

A new litter strategy should now be written based on the recent new publication by the Victorian Litter Alliance and Sustainability Victoria.

To make a difference in litter management in the Greater Shepparton Region it is proposed that Council appoint an Education Sustainability Resource Recovery Officer to direct and drive focused strategies based on waste minimisation, resource recovery and litter management.

The appointment of this officer would be crucial to also play a vital key educational role in waste minimisation, particularly with the proposed introduction to the community of the new green organic waste collection service that will be including food waste. The success of this initiative will be much reliant on the effort that goes into the educational role.

Action: Develop measures and strategies outlined in a new Council's Litter Waste Management Plan based on the new Victorian Litter Strategy 2012-14 'Love your Victoria'.

Action: Appoint an Education Sustainability Resource Recovery Officer to direct and drive focused strategies based on waste minimisation, resource recovery and litter management.

4.6 COUNCIL INTERNAL WASTE MANAGEMENT

4.6.1 Waste composition and quantities

Currently Council has provisions in place to collect the following material internally for recycling:

- Co-mingled recyclables
- Garbage
- Food waste
- Batteries
- Mobile phones
- Fluorescent tubes

These services are provided at Councils offices in Welsford Street, Shepparton.

A Two bins collection service comprising General waste and co-mingled recyclables are provided at a number of Council premises including:

- Libraries at Shepparton and Tatura
- Council's Depot at Doyles Road, Shepparton
- Business Centre at New Dookie Road, Shepparton
- Aquamoves and the Sports Stadium at Shepparton
- Community Hubs at Shepparton, Tatura and Mooroopna
- Child Care Centres at Shepparton, Tatura and Mooroopna

4.6.2 Council waste reduction policies and activities

Key Issues

Annual waste assessments need to be undertaken to monitor how staff and many users of the facilities utilise recycling options available to them and address any confusion staff may have with regards to which bin to use for various waste items and determine new opportunities and strategies for staff education.

Opportunities for Improvement

Opportunities for improving the current waste management within Council's own facilities and offices could include:

- Need to develop communication and feedback programs for improved source separating of recyclable materials
- In some cases, the triple bottom line (financial, economic and social) implications of identified opportunities need to be considered.
- Develop an ECO-Buy Action Plan
- Develop a Waste Wise Action Plan for Council's own facilities
- Develop Green Office initiatives

5 PROGRESS TO DATE AND ACHIEVEMENTS

5.1 PRIOR ACTION PLAN REVIEW

The Recommended actions of the previous Waste and Resource Recovery Management Strategy 2005 – 2015 can be summarised by the following table.

Action		Details	Actions Met
Community Engagement	3.4.1.1	The draft Waste and Resource Recovery Management Strategy and discussion paper will be released for public comment following adoption in principle at a Council meeting.	Yes
	3.4.1.2	Residents will be surveyed at the same time to provide feedback on proposals, and also to assess the performance of the Council with its service delivery.	Yes
	3.4.1.3	The Draft Waste and Resource Recovery Management Strategy will be placed on the Council's Web Site.	Yes
	3.4.1.4	Community groups such as Youth Council and Word and Mouth will be utilised to communicate the strategy and receive feedback.	Needs new Strategy
Kerbside Collection Services	4.3.2.1	That by 1 July 2006 a new kerbside waste collection service be established including the supply of new bins.	Yes
	4.3.2.2	That residents have the option of either a 80L, 120L or 240L waste bin, with the smaller bins being the preferred size.	Yes
	4.3.2.3	That the current waste collection route continues as existing, servicing urban areas and sealed roads in rural areas.	Yes
	4.3.2.4	That an audit of waste bins be performed periodically.	Yes
	4.3.3.1	The existing fortnightly 240L/120L commingled recyclables collection service is continued, and subject to satisfactory performance by the contractor, that the contract be extended for two years.	Yes
	4.3.3.2	Options to minimise contamination rates with the kerbside recyclables collection service be pursued with Cleanaway.	Yes
	4.3.4.1	In conjunction with the availability of a suitable processing facility, that a user pays green organics collection service be introduced to urban areas.	Yes
	4.3.4.2	That funding be pursued from Sustainability Victoria to assist with the implementation of a kerbside green organics collection service	Yes

Other Collections	4.3.4.3	That the Council facilitate the development of a green organics controlled environment composting facility by private enterprise.	Yes
	5.1.1.1	In conjunction with drumMuster and the Goulburn Valley Regional Waste Management Group, promote and where possible assist the local drumMuster collection program to improve drum recovery rates.	Yes
	5.2.1.1	The Council continues to support the Sustainability Victoria household chemical collection program and the establishment of permanent collection points for some chemicals	Yes
	5.3.1.1	The Council continue to support the collection and recycling of agricultural plastics.	Yes
Resource Recovery	6.2.1.1	Carry out a more detailed study into the practicalities of processing all municipal waste by 2012, report on the findings and adjust the Waste and Resource Recovery Management Strategy in accordance with the agreed outcomes of this study by no later than July 2008.	Needs new Strategy
	6.3.1.1	Where possible support implementation of Sustainability Victoria's Towards Zero Waste Strategy, and continue with resource recovery and environment protection initiatives currently in place.	Yes
	6.3.1.2	Work with the GV Food Processors Group and other C&I waste generators to develop detailed initiatives to achieve process targets by 2011.	Needs new Strategy
	6.3.1.3	That the Resource Recovery centre at the Shepparton Transfer Station be fully operational by June 2006.	Yes
Waste Minimisation / Litter	7.1.1.1	Continue with implementation of the measures outlined in the Council's <i>Waste Minimisation and Litter Education Plan</i> .	Yes
	7.2.1.1	Continue with the current program of upgrading litter bins to satisfy WorkSafe guidelines.	Yes
Waste Disposal	8.2.1.1	That the Council acquire another landfill prior to closure of the Cosgrove 2 landfill.	Yes
	8.3.1.1	Continue with closure of the Murchison landfill and replacement with a transfer station.	Yes
	8.4.1.1	The Council continues with its initiative to collect and flare gas at the Cosgrove landfill.	Yes

Many of the existing strategies shown in the above table will roll over and continue into this new Strategy document. A similar table to above is shown in the following Section 'Future Directions with new additional Strategies shown in blue.

6 .FUTURE DIRECTIONS

6.1 SUMMARY OF ACTIONS (NEW IN BLUE)

Guiding Principles
<p>Council will:</p> <ul style="list-style-type: none"> • Continue to provide waste services on a 'user pays' basis • Commit to the general objective of minimising waste to landfill • Maintain services to being competitive neutral • Commit to waste services being cost effective • Have consideration to residents with special needs
Community Engagement
<p>Council will:</p> <ul style="list-style-type: none"> • Present draft Waste and Resource Recovery Management Strategy to Executive and Council briefing for adoption • Place the draft Waste and Resource Recovery Management Strategy on the Council's Web Site • Engage Community Groups such as Youth Council and Word and Mouth to communicate the Strategy and receive feedback • Explore the need for a community engagement forum for the resource recovery centres.
Performance Measures
<p>Council will:</p> <ul style="list-style-type: none"> • Monitor its performance against State and Regional targets and report regularly to its Executive and to the community; • Improve the current waste diversion rate of 43% which is down from 52% in 2010/11. • Extend its community education role to assist in the implementation of its new initiatives and services and on the broader waste minimisation and sustainability issues • Investigate new opportunities to achieve reductions in the generation of waste • Continue to strive to be successful in obtaining State and Federal funding where appropriate for waste minimisation, recycling and disposal strategies
Regional Waste Management Group – Resource GV
<p>Council will:</p> <ul style="list-style-type: none"> • Monitor and evaluate Greater Shepparton's progress in meeting and seeking to exceed its waste management obligations under Resource GV's and the State's 'Getting Full Value' strategies • Continue to review the cost and service mix options to achieve a socially, environmentally and economically optimal service that also meets its obligations under Resource GV's and the State's 'Getting Full Value' strategies. • Address the range of opportunities to contract on a regional basis for the provision of certain services as they arise eg the receipt of co-mingled recyclables. • Address partnership opportunities as they arise with Resource GV for the provision of some

services, including education programs and for the trialling of food waste into the green organics collection service.

- Continue to actively support Resource GV, including directives which maximise environmental outcomes consistent with responsible financial management principles.
- Continue to participate in the review of alternative resource recovery technologies as a member of the Goulburn Valley Regional Waste Management Group

Kerbside Waste Collection Services

Council will:

- Provide residents the option of either an 80L, 120L or 240L waste bin with the smaller bins being the preferred size.
- Provide residents the option of either an 80L, 120L or 240L waste bin but increase the cost of the 120L bin and a further increase to the 240L bin as a garbage bin to discourage their use. Additionally, review the designation of the 80L bin as the default standard and the potential for issuing this bin except where residents specifically request retention of the larger 120L or 240L bin
- Investigate further incentive schemes to encourage further waste reduction and diversion into recycling
- Monitor the number of 240L bins for the garbage collection service left and the circumstances of the households with this level of service.
- Maintain the current collection route to continue as existing, servicing urban areas and sealed roads in rural areas
- Provide an audit of waste bins on a periodical basis
- Pursue options to minimise contamination rates within the kerbside recyclables collection service with the current collection contractor and that this strategy be written into any new contract.
- Pursue funding from Sustainability Victoria to assist with the implementation and collection of food waste into a new kerbside greenwaste collection service.
- Provide a special 'at door' kerbside waste collection service to eligible residents with mobility, health or transport restrictions that satisfy HAAC eligibility requirements at no cost to the resident.
- Investigate the potential of Council's Aged Care team to work with volunteers to assist residents in need of assistance in putting bins to kerbside

Kerbside Recycling Collection Services

Council will:

- Monitor the kerbside co-mingled recycling collection service to ensure that the higher collected yields translate into higher sorted and recycled material with minimal contamination, at diversion levels that are equal to or above the industry targets.
- Seek that the Materials Recovery Facility reports on sorting losses of recyclables, to ensure that the maximum recovery is occurring.
- Support community education focused on correct disposal of recyclables
- Maintain the existing service level.
- Consider the introduction of 360 litre bins for recycling.

Kerbside Green Waste and Food Collection Service

Council will:

- Maintain the existing service level to a fortnightly collection service
- Further develop the existing green organics collection service to include food wastes into the green waste bin by the initial undertaking of trials and education
- Continue to keep abreast of the outcomes of further trials and experiences of other Councils adding food waste to their green organics bin collection service, as deemed appropriate
- Extend the current green organics collection service to include all households currently having a waste collection service, thus transforming the standard waste collection service to be a three bin service
- Survey rural residents to determine their interest in joining the organics green waste collection service
- Investigate if there are any patterns / trends in non-participation in the kerbside green organics bin based collections, and if so determine suitable education and /or incentive based programs to seek improved participation and material diversion.
- Investigate the potential for subsidised provision of compost bins and worm farms through Council and its resource recovery centres and offices.
- Reinvigorate community education efforts focused on the recovery and diversion of the organics component of the waste stream into Council based recovery programs and / or through home based management options (ie composting, worm farms) and determine highly accessible venues for presentation of information to residents

Other Collection Services

Council will:

- In conjunction with drumMuster and Resource GV, investigate the introduction of drum collections via a mobile collection service.
- In conjunction with drumMuster and Resource GV, promote and where possible assist the local drumMuster collection program to improve drum recovery rates
- Continues to support the Sustainability Victoria's household chemical collection program 'Detox your Home' and the establishment of permanent collection points.
- Continues to support the collection and recycling of agricultural plastics
- Continue to seek to broaden the service of E Waste currently undertaken at the Shepparton Resource Recovery Centre by improving the efficiency of E Waste recycling products.
- Continues to support the 'Plasback' strategy by accepting silage wrap at Shepparton, Ardmona and Murchison Resource Recovery Centres.
- Continues to support 'MobileMuster' with a permanent collection point located at the Greater Shepparton City Council offices and Tatura Library
- Engage in new schemes and services that result in diversion from the waste stream

Resource Recovery

Council will:

- Where possible support implementation of the new State Waste Resource Recovery Policy 'Getting Full Value' strategies and continue with resource recovery and environment initiatives currently in place.
- Work with GV Food Processors Group and other Commercial and Industrial waste generators to develop detailed initiatives to achieve process targets.
- Identify waste reduction and resource recovery opportunities and provide further recommendations to capitalise on these opportunities

Commercial and Industrial Waste
<p>Council will:</p> <ul style="list-style-type: none"> • Where possible support the implementation of the new Best Practice report by Sustainability Victoria 'Waste flows in the Victorian commercial and industrial sector'. • Develop a program to identify the sources of commercial and industrial waste in the Greater Shepparton Region by better quantifying waste to landfill and diversion to recycling streams by targeting the various commercial and industry groups and by material composition • Determine the significant sources of waste generation by the commercial and industrial sectors and means of intervention for improved waste reduction and resource recovery • Provide benchmarking data for commercial and industrial sectors and other sectors • In conjunction with Resource GV develop information resources for Commercial and industrial businesses to support improvements in ordering and inventory control, to achieve waste avoidance outcomes, particularly with a focus on food organics. • In conjunction with Resource GV develop a program to increase diversion to composting, food rescue and other beneficial reuse applications
Waste Disposal
<p>Council will:</p> <ul style="list-style-type: none"> • Continue with its initiatives to collect and flare gas at the Gosgrove landfill • Implement the post closure Pollution Abatement Notice requirements for Cosgrove 1 • Undertake the necessary planning and licensing steps for the future development of the Cosgrove 3 landfill site in accordance with Best Practice well before the Closure of the Cosgrove 2 site. • Maintain the existing level of service at Council's current landfill operation at Cosgrove 2. • Continue to commit to the development of gas collection control at the Cosgrove landfill sites. • Continue to improve procedures to dispose of commercial and industrial waste and increase where possible, the amount of material being recycled. • Investigate the possibility of developing a site for a pre-sorting facility that allows for the pre-inspection of all wastes for recovery prior to disposal • Commit to the further development of the closed Kialla landfill site and in accordance with EPA PAN requirements • Commit to the further continued rehabilitation of the closed Murchison landfill site including capping and shaping in accordance with EPA PAN requirements.
Litter / Illegal Dumping
<p>Council will:</p> <ul style="list-style-type: none"> • Continue with implementation of the measures outlined in the Council's Waste Minimisation and Litter Education Plan. • Continue with the current program of upgrading litter bins to satisfy WorkSafe guidelines • Develop measures and strategies outlined in a new Council Litter Waste Management Plan • Strengthen partnerships with organisations working in the waste industry; and who are affected by illegal dumping of rubbish including GV Resource, Goulburn Valley Catchment Management Authority, EPA, Sustainability Victoria, Parks Victoria, local Landcare groups and Planet Ark

- Work with existing volunteer groups from organisations that would assist in the collection and removal of waste and litter from strategic areas in the Greater Shepparton area including Aquamoves
- Work with local service providers that could work in partnership with Council to address concerns of illegal dumping of waste and littering
- Continue to participate in and implement the recommendations of the Victorian Litter Strategy
- Continue to maintain, monitor and evaluate litter activity using CCAT (Clean Communities Assessment Tool)
- Extend the CCAT report learnings to other sites within the City where applicable
- If its joint funding application is successful, engage the Education Sustainability Resource Recovery Officer in the development of a coordinated litter program that meets the aims of this Strategy and the Victorian Litter Strategy

Hard Waste

Council will:

- Provide tipping vouchers to residents with a collection service to any of Council's three transfer station facilities
- Provide a special at call hard waste collection service to eligible residents with mobility, health or transport restrictions satisfying HACCC eligibility requirements at no cost to the resident.
- Investigate the potential of Council's Aged Care team to work with volunteers to assist eligible residents in the provision of at call hard waste collections
- Continue to identify opportunities at Council's three resource recovery facilities for the improved recovery of hard waste materials

Education Programs

Council will:

- Develop measures and strategies outlined in a new Resource Education Management Plan
- Will appoint an Education Sustainability Resource Recovery Officer to direct and drive focused strategies based on waste minimisation, resource recovery and litter management
- Seek appropriate funding to assist in supporting the appointment of an Education Sustainability Resource Recovery officer
- Seek that community education is strongly focused on diverting recyclable materials out of the waste stream and into the recycling services currently provided.
- Become more involved with the Resource Smart Schools framework in conjunction with Sustainability Victoria and Resource GV with the aim of actively engaging with schools in the Shepparton region
- Continue to extend its community education role to focus on broader sustainability issues and businesses about waste minimisation and responsible waste disposal
- Provide regular promotion and information to the community on the range of services offered by Council in relation to waste and recycling
- Ensure there is a strong focus on community behaviour change and link this to initiatives that set a strong community recycling target
- Continue to monitor and evaluate waste education programs within the broader environmental sustainability education portfolio
- Continue consulting with the community on its attitudes towards Council's waste minimisation

and recycling service delivery performance, and feed this information into future Strategy reviews

- Continue to engage in and encourage broader community and business participation in education programs facilitated by partner agencies such as Goulburn GV, Sustainability Victoria and the Victorian Litter Action Alliance
- Investigate opportunities to support or promote networks that connect the community and also businesses with each other that may support improved waste management outcomes (ie forums, business functions, swap meets etc)

Resource Recovery Centres

Council will:

- Maintain the existing level of service at Council's three resource recovery facilities and continue their operation on a current cash loss basis funded through the garbage charge.
- Finalise the design of the re-development proposed for the Shepparton Resource Recovery Centre in accordance with Best Practice and arrange to call tenders for construction.
- Continue to improve procedures to dispose of commercial and industrial waste and increase, where possible, the amount of material being recycled.
- Investigate the possibility of developing a site for a pre-sorting facility that allows for the pre-inspection of all wastes for recovery prior to disposal.
- Continue to investigate opportunities to improve material recovery at the resource recovery facilities and the landfill
- Seek to participate in networks that investigate and encourage Best Practice operations at resource recovery centres
- Investigate and improve the recovery and local market outlets for materials disposed at Council's three resource recovery centres including:
 - Tyres – through the national product stewardship program
 - Soil – through developing new products and outlets for soil conditioner where feasible
 - C&D materials – especially timber, concrete and bricks
 - Plastics – flexible plastics and PVC piping
 - Whitegoods – fridges / washing machines / tumble driers etc
- Continue to develop on-selling of recycled products at the Shepparton Resource Recovery Centre
- Continue to monitor the performance of Council's three resource recovery centres against the Guide to Best Practice at Resource Recovery Centres with a view of adopting new practices where appropriate and cost efficiency.

Commercial Waste and Recycling Program

Council will:

- Continue to maintain the existing kerbside waste collection services to commercial tenements where appropriate
- Promote the commercial sector to use Council's kerbside waste collection service where appropriate
- Consider the opportunities for food waste recovery from commercial premises if appropriate

Public Place Waste and Recycling Program

Council will:

- Continue to maintain, monitor and evaluate its existing infrastructure, including aspects of design, placement, collection frequency and associated disposal behaviour
- Place stronger focus on partnerships to support program enhancements, monitoring and evaluation, including stronger focus on venue and event systems
- Seek practical support including resourcing and funding for appropriate programs from Sustainability Victoria

Advocacy Roles for Council

Council will:

- Continue to actively participate in waste industry groups such as the Regional Transfer Station Network, Technical Advisory Reference Group and other relevant forums and activities
- Continue to actively participate in Municipal Association of Victoria and Sustainability Victoria forums and working groups
- Continue with membership of key industry bodies such as the Waste Management Association of Australia, Waste Management and Environment, and actively participate in industry forums
- Continue to actively participate in local, state and federal government forums
- Continue in-house liaisons between the heads of Departments for Waste Management and Planning (eg future truck routes, facilities development etc)

7 REFERENCES

- Victorian Waste and Resource Recovery Policy 'Getting Full Value' 2013 (State Policy)
- Draft Statewide Waste and Resource Recovery Infrastructure Plan 2013-2043 Victoria
- Greater Shepparton City Council – Waste management Strategy 2005-2015
- Victorian Litter Strategy 2012-14
- National Waste Policy: Less Waste, More Resources
- Food and Garden Organics – Best Practice Collection Manual. Department of Sustainability, Environment, Water, Population and Communities, 2012.
- Waste Flows in the Victorian, Commercial and Industrial Sector 2013
- Landfill Licensing Guidelines – EPA Information Bulletin Aug 2011
- Guide to Best Practice for Organics Recovery. Sustainability Victoria 2009
- Guide to Best Practice at Resource Recovery Centres. Sustainability Victoria 2009
- Guide to Preferred Service Standards for Kerbside Recycling in Victoria, August 2004
- Victorian Freight and Logistics Plan
- Draft – Greater Shepparton Environmental Sustainability Strategy 2014 – 2030
- Resource GV Business Plan 2013-14 to 2015-16
- Greater Shepparton City Council – Waste Minimisation and Litter Education Plan – Waste Wise in Greater Shepparton, 2002.
- Greater Shepparton City Council – Council Plan/Corporate Plan
- Greater Shepparton City Council – Local Laws
- Greater Shepparton City Council – Planning Strategies
- Greater Shepparton City Council – Waste Services Review 2012
- Greater Shepparton City Council – Discussion Paper – Review of Waste management Strategy Apr 2013
- Greater Shepparton City Council – Waste Management Strategy Review 2010
- Closed Landfill Guidelines – EPA Publication No 1490
- Licence Management Guidelines – EPA Publication No 1322.4
- Licence Assessment Guidelines – Guidelines for Using a Risk Management Approach to Assess Compliance with Licence Conditions – EPA Publication No 1321.2
- Victoria Government Gazette, Waste Management Policy (Siting, Design and Management of Landfills), Dec 2004

APPENDIX A POTENTIAL IMPACTS FROM VICTORIAN WASTE AND RESOURCE RECOVERY POLICY

Section	Sub Sections	Description and Risk Criteria
Policy Objectives (VWRRPol) <i>All future decisions will be conducted with due considerations of these objectives</i>	Environmental Protection	➤ Improving or maintaining the environmental performance of all waste and resource recovery facilities;
	Public Health and Wellbeing	<ul style="list-style-type: none"> ➤ Increasing efficiency by reducing costs and promoting the economical use of resources; ➤ Providing cost effective waste and resource recovery services; ➤ Seeking to continually improve the performance of waste and resource recovery facilities and operations(6.1);
	Economic Prosperity	<ul style="list-style-type: none"> ➤ Increasing efficiency by reducing costs and promoting the economical use of resources; ➤ Providing cost effective waste and resource recovery services;
	Integrated and Efficient Waste Management and Resource Recovery Systems	<ul style="list-style-type: none"> ➤ Clearly defining roles, responsibilities and accountabilities for all public sector entities involved in resource recovery and waste management; ➤ Improving information and data management to allow better and transparent decision making(6.2);
Waste Management and Resource Recovery Principles	Transparent and Informative Decision Making	➤ Waste management and resource recovery decision making processes should be transparent and accessible;
	Evidence Based Decision Making	<ul style="list-style-type: none"> ➤ When identifying and recommending waste and resource recovery management options, the best available data, information and evidence should be used(6.3); ➤ When assessing significant waste management and resource recovery options.....should carry out an analysis of costs and benefits, which considers environmental, economic and social factors; compares options and determines the net benefit.....(6.4); ➤will collect waste management and resource recovery information.....(6.5);
Reducing Waste Generation and Using Resources Efficiently	Strategic Directions	➤ Provide households with the information and support they need to reduce waste by using household goods more efficiently;

Section	Sub Sections	Description and Risk Criteria
	Provide households with the information and support they need to reduce waste by using household goods more efficiently	<ul style="list-style-type: none"> ➤target food waste as a key area of focus.....(6.6); ➤ Partner with local government to increase household awareness of the benefits of reducing waste, particularly food waste, through statewide information campaigns(6.7);
Strong Markets for Recovered Resources	Work to develop the right conditions for resource recovery markets to grow and mature in Victoria	<ul style="list-style-type: none"> ➤ Re-processors can only optimise their systems and maximise profitability if they are supplied with sufficient volumes of uncontaminated material. This means improving the quantity and quality of recovered materials collected through kerbside and commercial recycling services(6.8); ➤ Continue to partner with local government to deliver statewide education campaigns that increase the quality and quantity of materials recovered through kerbside and commercial collection systems(6.9);
	Continue to use the landfill levy as a market signal that provides incentives to resource recovery industries and provides certainty to Victorian industries and businesses	<ul style="list-style-type: none"> ➤ The landfill levy will continue to be a central policy tool for making alternatives to landfill more viable; The Victorian Government confirms that the ongoing purpose of the landfill levy is to: ➤ Send a clear signal to industry and local government that the Victorian Government is committed to facilitating resource recovery options by making them more cost competitive with landfills(6.10); ➤ Enabling opportunities for future levy adjustments to target strategic materials that continue to create significant environmental and public health risks when sent to landfill, for example untreated organic materials(6.11); ➤the landfill levy will continue post July 2014 at 2014 rates for a further 10 years.....; ➤ The exception is to allow for differential levy changes, within the ten-year period, to target strategic materials – such as untreated organic materials in landfill(6.12);
Infrastructure and Planning	Undertake planning that promotes a cost effective, statewide network of infrastructure capable of moving waste materials to where the highest economic value can be achieved	<ul style="list-style-type: none"> ➤ 'hubs' will be major facilities that process or contain significant quantities of waste, or provide specialised processing capacity for smaller quantities; ➤statewide infrastructure plan and corresponding.....regional waste and resource recovery plans. All plans will align with the waste and resource recovery vision, policy objectives and principles and the government's approach to infrastructure planning, set out in this policy; The statewide waste and resource recovery infrastructure plan will include: ➤ A comprehensive audit of existing infrastructure across the state, including current and future capacity, and

Section	Sub Sections	Description and Risk Criteria
		<p>current environmental performance(6.13);</p> <ul style="list-style-type: none"> ➤ Assessment of the potential for, and opportunities from, co-locating new waste and resource recovery infrastructure with similar activities such as waste water treatment and other industrial precincts; ➤ Identifying and assessing possible precincts for infrastructure, along with necessary mechanisms to secure land through infrastructure/landfill schedules;
	Align waste and resource recovery planning and delivery with land use and transport requirements	<ul style="list-style-type: none"> ➤with the regions expected to account for around one quarter of the state's economic output and population, and around one third of Victoria's exports, by 2031. It is expected that these changes will continue to alter the mix of waste materials and increase waste volumes(6.14); ➤ Historically, planning for waste and resource recovery infrastructure has been focused on landfills, where development has often relied on relatively short-term planning and opportunistic use of ex-quarries(6.15); ➤foster reduced waste and resource recovery costs through optimising the use of existing land that accommodates waste and resource recovery facilities. As facilities are decommissioned, the suitability of these land parcels will be assessed for alternative resource recovery uses. If retained, they will be managed as waste and resource recovery precincts(6.16); <p>Develop planning guidance and support for planning authorities, with a focus on:</p> <ul style="list-style-type: none"> ➤ Maximising kerbside collection activities for new development, including mixed-use and multi-unit development.....(6.17); ➤ Assessing and managing transfer stations(6.18);
	Foster investment in a diversified portfolio of infrastructure that can manage the projected mix and volumes of waste materials	<ul style="list-style-type: none"> ➤if local government wishes to invest in resource recovery, it is likely that large-scale, regional facilities will be the most capable of delivering value for money services. However, achieving economies of scale requires agreements with other local governments, so regional local government procurement will be necessary;
		<ul style="list-style-type: none"> ➤ The carbon price's potential impact on broader Victorian waste and resource policy directions, whether it will support or hinder moves towards greater waste minimisation, waste diversion and landfill aggregation, is unclear at this stage; ➤ Bringing a greater commercial discipline to infrastructure provision through budgeting and procurement processes(6.19); ➤ Government welcomes investments in waste to energy and other alternative reuse technology that can convert waste into useful products. Government will expect

Section	Sub Sections	Description and Risk Criteria
		<p>project proponents to demonstrate that investment will deliver strong environmental, public health and economic outcomes (government will not support any type of waste to energy technology that does not produce a useful end product with market value e.g. waste incineration)(6.20);</p> <ul style="list-style-type: none"> ➤ Develop waste and resource recovery cost benefit analysis guidelines.....(6.21); ➤ Partner with local government to reduce costs through benchmarking municipal waste and resource recovery service costs(6.22); ➤ Provide clear assessment requirements for waste to energy proposals through assessment and performance criteria; Provide guidance on how the environment protection principles under the <i>Environment Protection Act 1970</i> will be applied to the assessment of approvals applications, such as advanced resource recovery proposals;
Protecting the Environment and Public Health	Minimise environmental and public health impacts of waste and resource recovery facilities	<ul style="list-style-type: none"> ➤ensure there are clear performance standards for waste management and resource recovery facilities. For technologies new to Victoria, this will include clear guidance on the performance expected and how it will be assessed; ➤ Develop a consistent and simple way to apply financial assurances to maintain appropriate environmental accountability for landfills(6.23); ➤ Monitor technology trends, and actively plan and prepare for regulating technologies and recovery processes that are new to Victoria.....(6.24);
	Prioritise actions that minimise the short and long term environmental impacts of organic waste	<ul style="list-style-type: none"> ➤ Food waste is likely to require different processing infrastructure to garden waste, and different end products will be manufactured. The large-scale separation and processing of food waste is a relatively new practice in Victoria(6.25); ➤work with local government and industry to adopt cost-effective ways of diverting untreated organic material from landfill.....(6.26); ➤develop an organics strategy to ensure reductions in the environmental impacts of organic waste are cost-effective, achievable, and integrated with the broader waste and resource recovery system. The organics strategy will be informed by the statewide infrastructure plan and will align with.....regional waste and resource recovery strategic plans(6.27); ➤ Partner with local government and industry to develop and implement an organics strategy that prioritises action to reduceimpacts of food and garden waste(6.28); <p>How does this policy tackle food and garden organic waste:</p>

Section	Sub Sections	Description and Risk Criteria
		<ul style="list-style-type: none"> ➤ Supporting industry, business and the community to minimise the amount of organic waste they produce through measures that promote resource efficiency; ➤ Developing the right conditions for organic resource recovery industries to grow and mature.....; ➤ Supporting industry investment in alternative technologies.....; ➤ If..... organic materials are still causing unacceptable short and long-term risk in landfills, a future adjustment to landfill levy rate for organic materials will be considered;
	Facilitate the long term purpose of landfills to be for receiving and treating and residual waste, and ensure a range of support mechanisms for closed landfills	<ul style="list-style-type: none"> ➤ Government is signalling its intent that in future landfills will only receive treated, residual waste, 'treated residual' wastes are materials that have been through a process to extract all materials with economic value(6.29); ➤ Government will minimise the long-term effects of closed landfills on the environment and on surrounding communities, by requiring landfill owners to incorporate the cost of post-closure management into the operational phase of the landfill and by requiring owners to pay for any post-closure impacts that may occur(6.30); ➤ EPA Victoria will continue to work with the landfill operators to ensure the closed landfills are managed to the required standards. EPA Victoria will also work with the operators of active landfills to ensure they are planning appropriately to manage their sites beyond the landfills' operational lives(6.31); ➤ Long-term liability for landfill operators is a significant consideration.....; ➤ EPA Victoria will monitor closed landfills to assess management practices and, if necessary, allow post-closure management requirements to be updated.....(6.32); ➤ Consult with industry and local government to explore the financial impacts of managing closed landfills(6.33);
Reducing Illegal Dumping and Littering	Curb illegal dumping to protect environmental and human health	<ul style="list-style-type: none"> ➤ Reasonable access to infrastructure and services is also necessary to reduce the motivation to illegally dump any material; ➤ Assess waste infrastructure and services across the state, to ensure they can satisfy the community's demands for convenient and safe waste disposal;
Governance for the Future	Actions	<ul style="list-style-type: none"> ➤ Appoint an independent and expert Waste and Resource Recovery Ministerial Advisory Committee to advise.....on the optimal institutional and governance arrangements needed to implement <i>Getting Full Value</i>, by end of May 2013(6.34);
Measuring Performance	Goal	<ul style="list-style-type: none"> ➤Victorian Auditor-General recommended the development of "...a knowledge management system to rationalise data, identify and rectify data quality issues

Section	Sub Sections	Description and Risk Criteria
		and modelling accuracy.” Improving our monitoring and data management will increase government’s capacity to measure performance and adjust policy appropriately(6.35);
	Measuring and reporting progress towards the government’s new vision for waste	<ul style="list-style-type: none"> ➤Government will measure and biennially report on a range of new indicators that will track progress towards realising the four policy objectives for waste management and resource recovery; ➤ Government will work closely with local government and industry partners to assess and set baselines for measuring progress of towards these outcomes; ➤ Government will develop an implementation plan for delivery of the policy with targeted consultation with local government.....(6.36);
Context	Waste and resource recovery challenges and opportunities in Victoria	<ul style="list-style-type: none"> ➤move waste management in Victoria to an advanced system focused on resource recovery; <p><i>Systems: When things go wrong, problems can include:</i></p> <ul style="list-style-type: none"> ➤ Inadequate data for monitoring progress and informing future decisions(6.37);
	Waste has economic impacts and opportunities	<ul style="list-style-type: none"> ➤ The decrease in waste to landfill and the increase in waste recovered are consistent with a shift in Victoria from waste management to resource recovery. Waste materials are valued for their next use in the economy, rather than seen as having no value and buried in landfill(6.38);

