



Waste Management Strategy 2018-2023

Waste Management Strategy
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Version 2

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Executive Summary

OVERVIEW AND PURPOSE

The Rural City of Wangaratta, like many other communities across Australia, is facing major challenges with the collection and disposal of waste. As our population continues to grow, the amount of materials and waste generated will also increase. How we generate and dispose of materials and waste can have a huge impact on our environment and the waste and resource recovery system that supports our health and wellbeing. Bowser Landfill is Council's last remaining landfill, and assuming current projections this landfill will close in less than 20 years and Wangaratta's waste will need to be transported to a regional facility. Despite the various new technologies that are emerging for waste disposal, landfill still remains the most common solution in Victoria.

The construction requirements for new landfill cells involves sophisticated engineered liner systems to prevent seepage of leachate to groundwater, and landfill gas emission. The last cell constructed, Cell 7 cost Council \$1.4 million to construct and will cost a further \$1 million to rehabilitate, making landfill an expensive solution to waste generation. There is growing community concern that councils need to take a more sustainable approach to waste management.

To help address these issues, the first waste management strategy was developed by the Rural City of Wangaratta in 2013. This strategy sets out a number of strategic changes in response to community expectations and a community generated vision to be waste free by 2030. This included the introduction of a food and garden waste bin to residential and commercial customers in urban Wangaratta. Further it laid the foundation for the Rural City of Wangaratta to develop a local organics processing plant, on-site works to build the plant have already started and the plant is on track to be commissioned in late 2018.

This new Waste Management Strategy (WMS) is Council's comprehensive vision for sustainable waste management over the next 5 years. The WMS identifies gaps between the current and desired position and details the best way of moving forward. It aims to continue achieving improvements in recycling, including reduced contamination and increased recovery; improvements in utilisation of food and garden waste bins; improved use and efficacy of transfer stations and increased support for the community with adapting to changes associated with the Victorian State Government policy to increase electronic waste recycling. Beyond this, the WMS aims to empower people living in, working, and visiting the Rural City of Wangaratta to 'do more with less', by avoiding the creation of waste in the first place.

THE VISION

The Rural City of Wangaratta's vision for waste management is:

The Rural City of Wangaratta will be a leader in resource recovery; we will work with our community to deliver waste solutions that achieve outstanding social, environmental and economic outcomes; and our community will become a cleaner and healthier place to live, work and recreate.

The following objectives have been identified to aid with this vision:

1. Reduce waste and maximise resource recovery from Council's offices and operations, including services provided to local communities;
2. To be recognised as a leader in municipal waste management, and inspire the business sector to move towards a circular economy for waste management to boost innovation and resource recovery;
3. Minimise the amount of residential waste sent to landfill and maximise household recovery of resources for recycling;
4. Ensure waste and recycling services are convenient, efficient and environmentally sensitive for the diverse and growing residential population of the Rural City of Wangaratta;
5. Foster sustainable consumption and waste management practices among the community; and
6. Reduce littering and dumping of rubbish.

The data collected from various technical reports, as well as results from the community surveys have influenced the strategic direction of this next strategy and informed the actions within this document. A total of 37 actions are proposed as a result of the information gathered and analysed. The actions have been prioritised from High to Medium to Low. With 7 High priority, 25 Medium priority, and 5 Low priority actions identified. These actions will help shape the future of waste for the Rural City of Wangaratta and its residents.

THE CURRENT POSITION

Current approach to waste management

Council recognises that most household and commercial waste produced in the Rural City of Wangaratta is recoverable and has adopted an approach which focuses on provision of systems and services to recover recyclables and food and garden organic waste, prior to disposal in landfill.

In September 2015 Council rolled-out a three-bin system to recover food and garden organics for processing. Currently, Council provides a weekly food and garden organics kerbside collection to residential and commercial customers in urban Wangaratta. A fortnightly kerbside collection of general waste for all households and a fortnightly kerbside collection of recyclables.

Council owns and operates four transfer stations and the Bowser Landfill. Council provides internal kerbside collection services of general waste and food and garden organics waste while the kerbside collection services for recycling is currently contracted to J.J. Richards and Sons (J.J. Richards).

The current approach to waste education focuses on increasing awareness of the environmental, social and economic impacts of waste. Council's waste education initiatives aim to support and encourage the community to view waste as a resource and participate effectively in waste avoidance and resource recovery activities. Key initiatives include a waste website, resource recovery, litter and illegal dumping campaigns and promotions for various events throughout the year.

Resource Recovery Performance

In 2016/2017 Council's waste management system handled 11,285 tonnes of waste which was sent to landfill. The Commercial and Industrial (C&I) sector provided the greatest contribution of 5,389 tonnes, followed by Municipal Solid Waste (MSW) 4,783 tonnes, Construction and Demolition (C&D) 736 tonnes and lastly Prescribed Industrial Waste Category C Soil (PWC) 285 tonnes and Prescribed Industrial Waste Category C Asbestos (PWA) 92 tonnes.

Municipal Solid Waste (MSW)

In 2016/2017 a total of 4,783 tonnes of waste was generated from municipal and residential activities and disposed of in landfill. Council's transfer stations received 28% (1,317 tonnes) of the total MSW.

Before the introduction of the third bin system in September 2015, 10,446 tonnes of material was collected through Council's kerbside system. Of this, 7,417 tonnes were placed in the general waste bin and landfilled and 3,029 tonnes were recycled.

Since the introduction of the food and garden waste bin in 2015 the amount of material going to landfill within the municipality has been reduced by 2,634 tonnes annually.

However, recent audit data has revealed that there is a strong opportunity to divert further material from landfill. For example, 31% of a typical Wangaratta general waste bin consists of paper and containers that could be recycled and 53% of the contents of general waste bins in the municipality consist of food waste that could be composted.

Commercial & Industrial (C&I) Waste

In 2016/2017, 5,389 tonnes of C&I waste was sent to landfill. Industrial waste has slowly dropped by 1000 tonnes over the past 3 years. It is thought that this is a result of higher fees at the Bowser Landfill when compared to neighbouring landfills at Albury and Benalla. Although Council does not control the resource recovery rates from the C&I sector, it will work collaboratively with the sector in order to achieve an overall reduction in waste to landfill.

Construction & Demolition (C&D) Waste

In 2016/2017, 735 tonnes of C&D waste was sent to landfill. Compared to the previous year C&D waste has increased by 200 tonnes. Similar to C&I waste Council does not control the resources recovered from the C&D sector, however Council will work collaboratively with the sector to reduce waste to landfill.

Cost and Equity

There are many costs associated with the provision of waste management services including:

- Up-front costs – initial investments and expenses necessary to put in place waste management services such as, machinery and equipment purchases, planning and construction;
- Operating costs – ongoing expenses including operations and maintenance, capital costs, debt service and statutory costs. For example, the EPA Levy that Council is required to pay is over

\$500,000 annually for accepting waste at the Bowser Landfill (all of which is passed on to landfill users in higher gate fees);

- Back-end costs – costs associated with closure, rehabilitation and aftercare of landfill cells and other facilities at the end of their useful lives. Some key future costs that Council will be required to meet include liabilities associated with the landfill closure and ongoing aftercare and monitoring;
- Ongoing costs associated with community engagement and education; and
- Administration and project management cost.

At present, Council's only source of funding to recover these costs are gained from fees charged at the Bowser landfill. To ensure funds are available to meet future back-end costs, and ensure fair and equitable cost sharing across generations, Council endeavours to charge appropriate fees and charges and place a portion of the funds generated into reserve. There is some uncertainty, however, regarding the true extent of future costs and whether current fees and charges and reserves are adequate to cover these liabilities when they arise.

STRATEGIES, ACTIONS AND IMPLEMENTATION

Strategies and specific actions that have been developed to assist Council in meeting the objectives are presented in the WMS Implementation Plan (Appendix 1). These strategies and actions will help Council to work with our community to achieve outstanding social, environmental and economic outcomes and become a leader in waste management and resource recovery. The actions have been prioritised according to a combination of their level of impact and ease of implementation.

1. Introduction

The Rural City of Wangaratta's Waste Management Strategy (WMS) was developed to provide a strategy for sustainable waste management over the next five years. The purpose of this document is to consolidate all the related issues and topics, to provide a complete picture of waste management within the municipality.

The WMS outlines the Council's future plans for waste initiatives, further it will act as an operational document outlining practical steps to assist Council, and the community to achieve its waste management goals. The focus of this strategy is to recover more resources and further increase the diversion of materials from landfill. The WMS is underpinned by the waste hierarchy of avoid and minimise, reuse, recycle, recover, treat and dispose and these principles will guide decision making.

"We are sustainable" is one of the five pillars in the 2017-2021 Council Plan. Council will ensure its long term viability and capacity to deliver quality services, and infrastructure. It will do this by focusing on reducing our environmental impact and ensuring resources are available for future generations of our community. The Council Plan provides the foundation for this commitment.

The Rural City of Wangaratta is a member of the North East Regional Waste and Resource Recovery Group (NEWRRG) and the Rural City of Wangaratta WMS was developed in accordance with the North East Regional Waste and Resource Recovery Implementation Plan.

The WMS was developed through consideration of the following:

- existing waste and recycling collection and management services provided;
- consultation with the local community and relevant stakeholders;
- review of local, state and national policies, regulations and plans;
- review of achievements and outcomes to date;
- analysis of current and future waste trends;
- assessment of waste and resource recovery infrastructure;
- analysis of management options for improving waste and recycling services; and
- assessment of the environmental, social and financial impacts of future strategies for sustainable waste management.

The WMS sets a vision for the future of waste management for Council. It identifies strategic gaps between the current and desired position and details the best way of moving forward. The document will be used by Council as:

- a guide for waste management;
- a tool for communicating with our stakeholders and our community; and
- a basis for implementing, monitoring, reporting and evaluating actions.

1.1 Structure of the Waste Management Strategy

Table 1 *Summary of the structure and contents of this Waste Management Strategy*

Chapter	Description
1. Introduction	Purpose and structure of the strategy
2. Framework for Waste Management	Overview of the statutory and administrative frameworks for waste management at National, State, Regional and Local levels.
3. Vision, Objectives and Targets	Overall vision for waste management for the Rural City of Wangaratta. Targets for recovery and objectives identified to achieve the vision.
4. Current Situation	This section provides an overview of our municipality's geographic and demographic profile and looks at current waste management systems.
5. Key considerations	This section identifies key issues that need to be addressed as we work towards the vision.
6. Management options	This section outlines strategies and actions that will be implemented to meet the key strategy objectives.
7. References	List of references used in the preparation of the strategy.
Appendices <ul style="list-style-type: none"> • Sustainability Assessment • Community Waste Survey September 2017 • Business Waste Survey 2017 • Waste Strategy Review Community Workshop Raw Data Report 2017 • List of abbreviations • Glossary 	These documents provide the information obtained from the community to inform the strategic direction of the strategy.

2. Framework for Waste Management

Development of the WMS is influenced by national, state and local government acts, legislation and policies, as well as regional initiatives of the NEWRRG. It is also developed within the context of community expectations, past performance and local issues.

2.1 Policies and regulation

This section provides an outline of the legislation, policy and planning framework relevant to the management of waste at council level.

Commonwealth Government

The *National Waste Policy: Less Waste, More Resources* was developed in 2009 by the Commonwealth Government. This is the overarching policy for waste management and resource recovery in Australia and it complements other government action to deliver greenhouse gas emission reductions, reduce energy and water use, support jobs and invest in future long term economic growth. The policy sets directions in six key areas:

- shared responsibility for reducing the environmental, health and safety footprint of products and materials across the manufacture-supply-consumption chain and at end-of-life;
- efficient and effective Australian markets operate for waste and recovered resources, with local technology and innovation being sought after internationally;
- less waste and improved use of waste to achieve broader environmental, social and economic benefits;
- reduction of potentially hazardous content of wastes with consistent, safe and accountable waste recovery, handling and disposal;
- increased capacity in regional, remote and indigenous communities to manage waste and recover and re-use resources; and
- access by decision-makers to meaningful, accurate and current national waste and resource recovery data and information to measure progress and educate and inform the behaviour and the choices of the community.

The Commonwealth Government also established National Environment Protection Measures (NEPMs); these set the basis for agreed national objectives for protecting or managing aspects of the environment (and are enforced through state legislation). Waste-related NEPMs currently in place address used packaging materials and the movement of hazardous waste between states/territories.

National product stewardship arrangements (between government and industry) are in place for televisions and computers, end-of-life tyres, waste oil, mobile phones and other products. Future arrangements for other materials are likely to be established.

Victorian Government

The Environment Protection Authority (EPA) is responsible for enforcement of the *Environment Protection Act 1970* (EP Act) which is the key legislative mechanism for environmental protection in Victoria. Among other things, it outlines the Victorian waste and resource recovery planning framework, and scope for the development of state and regional waste plans, the establishment of landfill levies and industrial waste policies, as well as supporting regulations for waste and recycling facilities. Under this Act, councils are required to perform waste management functions that are consistent with Regional Waste and Resource Recovery Implementation Plans (such as the North East Waste and Resource Recovery Implementation Plan).

The *Local Government Act 1989* outlines the roles and responsibilities of Victorian councils, with additional waste management responsibilities set out in the *Public Health and Wellbeing Act 2008*. These responsibilities include maintaining the municipality in a clean and sanitary condition, planning for and providing community services and infrastructure, ensuring that services are delivered in accordance with best value principles, and striving for continuous improvement in service delivery.

The Victorian Government also established the *Local Government Performance Reporting Framework* in 2014, which is a mandatory system for consistent local government reporting across the state. Councils are required to measure and report annually on 66 performance measures set out in the framework, including waste management services. Council performance levels can be viewed and compared with other councils via the *Know Your Council* website (<https://knowyourcouncil.vic.gov.au/>).

There are additional waste issues currently under consideration which may affect future waste management in the region:

- The Victorian Government is committed to banning e-waste from landfills and is currently exploring the impact of enabling legislation; and
- With recent regulations announced by all other states, Victoria currently remains the only state in Australia without legislation planned to introduce a deposit on beverage containers. There may be future pressure on the Victorian Government to join a national scheme to enact this.

2.2 Victorian strategic directions and initiatives

Sustainability Victoria is responsible for implementing Victorian Government policies on resource recovery and waste management including the development of the *Statewide Waste and Resource Recovery Infrastructure Plan 2015-44* (State Infrastructure Plan). This plan provides strategic directions for improving waste and resource recovery infrastructure to achieve the long-term vision of an integrated state-wide waste and resource recovery system that provides an essential community service to:

- protect the community, environment and public health;
- recover valuable resources from our waste; and
- minimise long term costs to households, industry and governments.

Strategic directions outlined in the State Infrastructure Plan are to:

- maximise the diversion of recoverable materials from landfills;
- support increased resource recovery;
- achieve quantities for reprocessing;
- manage waste and material streams;
- maximise economic outcomes, provide cost effective service delivery and reduce community environment and public health impacts; and
- facilitate a cost effective state-wide network of waste and resource recovery infrastructure.

Sustainability Victoria has also developed a range of other strategies and frameworks related to waste including the following:

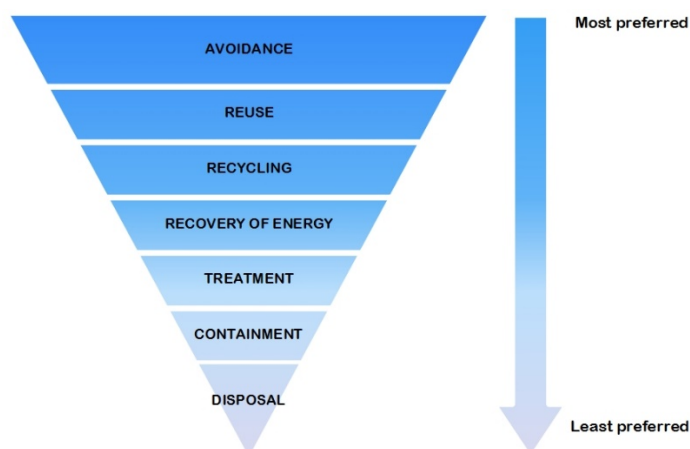
- The *Collaborative Procurement Framework* that outlines a consistent approach to identifying, assessing and planning collaborative procurement of waste and resource recovery infrastructure and services.
- The *Infrastructure Facilitation Framework* that provides a coordinated, consistent and long-term approach to promoting and facilitating waste and resource recovery investment opportunities locally and abroad.
- The *Victorian Market Development Strategy for Recovered Resources* that aims to stimulate markets for recovered resources by reducing barriers and supporting the right conditions for material and product markets to grow and mature.
- The *Victorian Organics Resource Recovery Strategy* that outlines the goals, directions, outcomes and actions for improving the management and recovery of organic waste.
- The *Victorian Waste Education Framework* that provides a coordinated approach to waste and resource recovery education in Victoria.
-

2.3 Waste Management according to Environmental Protection Act

Waste management hierarchy

The waste management hierarchy is the underlying principle of waste management policies in Australia and is included in the *Environment Protection Act 1970*. The hierarchy establishes the order of preference for waste management, where avoidance is the most preferred option and disposal the least preferred option as shown below. The EPA levy was introduced as a way to drive the waste management hierarchy, whereby the levy is applicable to all waste disposed of in Victoria.

Figure 1 **Waste management hierarchy**



2.4 Regional Waste and Resource Recovery Plans

The North East Waste and Resource Recovery Implementation Plan was developed by NEWRRG in 2017. The plan identifies the infrastructure capacity needs and priorities of the region and shares the strategic directions and visions of the State Infrastructure Plan. The regional strategic objectives of this plan are:

- establish material recovery infrastructure and service solutions to meet the region's current and future needs;
- ensure there is efficient and effective transport to infrastructure that aggregates waste to maximise resource recovery and reduce cost to the community;
- advance the performance of waste and resource recovery infrastructure through continuous improvement and innovation;
- provide a minimum number of landfills cost effectively servicing the region's current and future needs; and
- gather reliable data to inform current and future waste and resource recovery planning.

To comply with the EP Act, councils need to adopt these (or similar) strategic waste objectives to ensure waste management functions are consistent with the regional plan. To deliver on these objectives, NEWRRG have developed 10 priority actions. Each priority action has sub-activities and initiatives involving various stakeholders such as NEWRRG, councils, Department of Environment, Land, Water and Planning (DELWP), Environmental Protection Agency (EPA), industry, etc.

Councils are required to play either a lead role or partnering role in almost all of the activities and initiatives outlined in the regional plan. These are summarised in table 2 below. Note actions and initiatives where Council play neither a lead nor partner role have been excluded from the table.

Table 2 **Actions and initiatives involving Council**

Priority action (PA)	Activities/initiatives	When	Council's role
Improve recycling			
Develop and support solutions to increase the recovery of priority materials including organics, plastic glass, textiles, timber, aggregates and low toxicity materials	Investigate and, where viable facilitate opportunities to increase recovery of timber pallets	2018	Partner
	Investigate opportunities to increase the recovery of hard and soft plastics	2021	Lead
	Facilitate discussions with stakeholders to develop new local processing facilities meeting the identified needs of the north east implementation plan	2022	Partner
	Work with local and state government to identify and implement opportunities to expand collections of batteries, paint and fluorescents lights	2018	Partner
Assess and where viable, support systems to increase recovery from mixed loads of materials and waste	Conduct waste audits to inform pre-sort viability assessment	Ongoing	Partner
	Investigate viability of pre-sort infrastructure at landfills and large RRCs	2020	Lead
Increasing the efficiencies and cost effectiveness of recycling			
Facilitate the development of regional partnerships to enable efficiencies in materials and waste transport, disposal and resource recovery	Develop infrastructure that enables efficiencies in materials and waste transport	Ongoing	Lead
	Facilitate collaborative procurements to maximise waste and resource recovery outcomes	Ongoing	Partner
	Consider options to consolidate and upgrade landfill and RRC infrastructure	Ongoing	Lead
	Work across state government to consider and facilitate regional needs to facilitate diversions of e-waste to landfill in line with government commitment	Ongoing	Partner
	Work with councils/alpine resorts and state authorities to develop mechanisms to appropriately manage materials and waste during and after emergency events	2018	Partner
Increase the performance and safety of waste and recycling infrastructure			
Support councils, alpine resorts and industry to upgrade infrastructure and improve operations	Support councils/alpine resorts to establish waste management strategies aligned with this north east implementation plan.	Ongoing	Lead
	Facilitate training opportunities to support councils and alpine resorts to continuously improve landfill and RRC operations.	Ongoing	Partner
	Investigate options to improve infrastructure and systems to collect and	Ongoing	Partner

Priority action (PA)	Activities/initiatives	When	Council's role
	aggregate quantities of viable materials for reprocessing		
	Establish hardstand areas to reduce contamination of organics at RRC's	2019	Partner
Work with councils and across state government to site new infrastructure appropriately and protect existing and proposed facilities from encroachment	Work with local government to discuss potential planning controls to protect buffers for proposed facilities and hubs	2019	Partner
	Work with local government to establish a procedure to ensure that regard is given to the north east implementation plan when considering planning permit applications for new waste and resource recovery infrastructure	2019	Partner
	Support industry and local government to identify possible sites for new resource recovery infrastructure	Ongoing	Partner
Work with councils, alpine resorts and industry to investigate innovative and technological advancements that could inform future infrastructure development	Monitor and provide advice on opportunities and advances in the waste and resource recovery sector and consider their application and viability for the region	Ongoing	Partner
Facilitate work between councils and the EPA to develop appropriate risk based approaches for rehabilitation of unlicensed closed landfills	Facilitate work between councils and the EPA to agree on risk assessment for unlicensed closed landfills	2019	Partner
	Facilitate work between councils and EPA in developing and implementing management strategies for unlicensed closed landfills	2021	Partner
Developing a long term strategy for landfill			
Develop a long term regional strategy for landfill	Work with councils and alpine resorts to develop regional strategy for landfill	2018	Partner
	Facilitate adoption of regional landfill strategy by councils and alpine resorts	2019	Partner
Improving data collection so better decisions can be made			
Establish a reliable regional data system to inform waste and resource recovery decisions	Work across state government to agree on an integrated data system platform	2018	Partner
	Investigate low impact regional data collection systems that can feed into the state-wide data platform	2019	Partner
	Work with councils and alpine resorts to implement systems to enable collection of data that feeds into the state-wide data platform	2017	Partner
Provide information to state government on regional infrastructure and market	Consult with industry, council and alpine resorts to gather information on infrastructure and market development needs and priorities	Ongoing	Partner

Priority action (PA)	Activities/initiatives	When	Council's role
development needs and priorities			
	Communicate market development and infrastructure needs and priorities to the state	Ongoing	Partner

2.5 Council Plans and Policies

'Our Road Map for the Future' 2017-2021 (Council Plan)

The most recent Council Plan "Our Road Map for the Future" has been developed acknowledging this waste management strategy and the outcomes deliverable within its contents. Following extensive community consultation the current Council Plan was adopted in 2017. The Council Plan sets out five 'pillars' which are:

- Health, wellbeing, being active, community;
- Economic development, tourism, planning, population growth;
- Infrastructure, roads, buildings, waste;
- Arts, culture, community engagement, participation; and
- Economic and environmental sustainability.

The Council Plan focuses on creating and delivering:

- a high quality waste service to our community; and
- the outcomes identified in the Rural City of Wangaratta Waste Management Strategy.

Local Law 1. Policy 35 – Disposal of Waste and Recyclable Materials

The Local Law 1. Policy 35 – disposal of waste and recyclable materials sets out the conditions that apply to the disposal of general waste, organics or recyclable materials to the services provided by Council.

Waste Charge Policy

The policy sets out the services that will attract fees and charges for kerbside waste collection and waste received at Council's waste and resource recovery sites. It also sets out the basis for any exemptions to these services and associated costs. The Waste Charge Policy assists in delivering the outcomes specified in the WMS.

3. Vision, Objectives and Targets

This section describes the future vision for waste management for the Rural City of Wangaratta. It also outlines the key objectives, targets and timeframes that will form the focus of our efforts as we work towards achieving the vision.

3.1 Vision

The vision for waste management for the Rural City of Wangaratta is;

The Rural City of Wangaratta will be a leader in resource recovery; we will work with our community to deliver waste solutions that achieve outstanding social, environmental and economic outcomes; and our community will become a cleaner and healthier place to live, work and recreate.

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

3.2 Objectives

The following objectives have been identified to aid with this vision;

1. Reduce waste and maximise resource recovery from Council's offices and operations, including services provided to local communities
2. To be recognised as a leader in municipal waste management, and inspire the business sector to move towards a circular economy for waste management to boost innovation and resource recovery
3. Minimise the amount of residential waste sent to landfill and maximise household recovery of resources for recycling
4. Ensure waste and recycling services are convenient, efficient and environmentally sensitive for the diverse and growing residential population of the Rural City of Wangaratta
5. Foster sustainable consumption and waste management practices among the community
6. Reduce littering and dumping of rubbish

3.3 Recovery Targets

Performance measurement and target-setting are important to ensure the success of Council's WMS. Having a good measurement system in place will assist Council to measure the effectiveness of actions and examine the triggers for any changes in performance and places Council in a better position to manage our performance proactively.

To ensure the success of the WMS, Council has set recovery targets to provide a clear sense of what we are aiming for in our WMS and to make it easier to manage the process of delivering the WMS objectives.

Council's recovery targets for each of the key waste streams are discussed in the following sections. The division of waste into streams (municipal, C&I and C&D) is important when considering targets as each of the waste streams have different characteristics and sources. Each waste stream therefore requires different strategies for addressing and measuring performance. The waste stream categories selected also align with the State-wide Waste and Resource Recovery Infrastructure Plan.

Municipal Solid Waste

Municipal Solid Waste includes solid waste generated from residential and municipal activities including kerbside waste (general waste, recycling and food and garden organics waste) collected by, or on behalf of Council, waste from Council operations, waste from street litter bins and material dropped off by residents at the Wangaratta, Moyhu, Eldorado and Markwood Transfer Stations.

Currently Wangaratta is the only township with organic waste collection. The construction of a local organics processing plant will enable kerbside food and garden organics waste collections to be rolled out to nearby Rural Townships of Milawa, Oxley and Glenrowan.

Target to recover an additional 500 tonnes of food and garden organics from the municipal waste stream.

Commercial Industrial (C&I) and Construction and Demolition (C&D) Waste

C&I waste is material generated from manufacturers, shops and businesses. Local governments have limited control over the way C&I waste is managed. There is limited weight, and categorisation data available for commercial businesses using the transfer station, and Council's kerbside collection. This is because it is collected and counted with the municipal waste through these services. However, Council is able to record and separate commercial data through the Bowser Landfill weighbridge system.

C&D waste is material generated through activities such as housing and commercial developments, renovations, civil engineering works and other building activity. Despite increasing waste fees much waste generated from the C&D sector is unsorted, and it is not uncommon to have recyclable resources, timber, brick and steel disposed of in the landfill. This sector could benefit from a pre-sort facility prior to waste being landfilled.

Target to recover a further 1000 tonnes of resources from the landfill.

Waste Education

Our community are strongly supportive of waste management and resource recovery initiatives such as kerbside recycling and food and garden organics collection. However, Council faces many ongoing and new challenges such as increasing recycling, increasing composting, decreasing contamination, reducing litter and illegal dumping and minimising the amount of waste generated in the municipality. In order to tackle these challenges we need a coordinated and collaborative approach with our community to waste and resource recovery. Education plays an important role in engaging with the community on waste avoidance and resource recovery. Local government has a shared responsibility with state government, industry and other stakeholders for waste education and engagement.

Target to have a community that is well informed and taking practical action to avoid waste and increase resource recovery.

4. Current Situation

This section provides an overview of the Rural City of Wangaratta's geographic and demographic profile. It also projects changes to the profile to 2021 based on available demographic data. This section then details Council's existing approach to waste management and current waste statistics and trends.

4.1 The Rural City of Wangaratta Profile

Geographic Profile

The Rural City of Wangaratta is located in North East Victoria, 250 kilometres North East from Melbourne. The rural city is located at the junction of the Ovens and King rivers, which drain the north western slopes of the Victorian Alps. The municipality covers a land area of 364,381 km².

Figure 2 *the Rural City of Wangaratta municipality*



Existing Demographics

There are more than 28,000 residents living in the Rural City of Wangaratta, approximately 18,800 of whom live in urban Wangaratta. Prominent townships and villages include Boorhaman, Cheshunt, Eldorado, Everton, Glenrowan, Oxley, Milawa, Moyhu, Peechelba, Springhurst, Tarrawingee, Whitfield and Whorouly.

The municipality is expected to experience a relatively small growth rate of 0.5% between 2014 and 2024. The population density is relatively low, with 0.08 persons per hectare. The largest age group in the municipality is 45-69, with the smallest from 24-39. There are 4% more females (52%) than males (48%).

4.2 Council's Existing Approach to Waste Management


The following sections describe Council's current approach to waste management, which is underpinned by Council's Waste Charge Policy.

Kerbside collection services

Council introduced a third bin system in September 2015 in urban Wangaratta. The new standard service consisted of a 240L food and garden organics waste bin collected weekly; a 240L recycling bin collected fortnightly and a 140L general waste bin collected fortnightly.

The rural areas collection service was also changed and general waste bins were upsized from 140L to 240L and collected fortnightly.

Table 3 Council kerbside collection services

Service	Bin size	Charge 2017/18		Number of bins	Collection frequency
		Urban	Rural		
 Garbage	240L 140L	\$142	\$240	1	Fortnightly
 Recycling	360L 240L	\$102	\$102	1	Fortnightly
 Food and Garden Organics	240L 140L	\$142	NA	1	Weekly

Public place waste and recycling bins

Council has a number of public place waste and recycling bins around the municipality in the CBD, parks and gardens, sporting facilities, halls and neighbourhood shopping districts. Overall, Council has 257 general waste public place bins, and 197 recycling public place bins.

The results of the 2015 North East Victorian waste and recycling public place audit revealed that the waste bin was mostly made up of recycling (39%) and organic matter (51%). Of the total contents of the waste bin only 10% was actually landfill material. The recycling bins showed 20% contamination rate with the contamination mostly from food (17%). Overall resource recovery from these bins is low with only 50% of this material recovered.

There are a number of issues with the public place bins around the municipality. The first and foremost is that not all general waste bins are paired with a recycling bin. The other issue is illegal dumping into these bins, causing overflow. Tourism is also another source of additional waste in the municipality, and visitors do not always use the bins correctly.

Litter and illegal dumping

Litter and illegal dumping is a widespread issue across the municipality with regular dumping occurring in a number of hot spots identified by Council. Council's current approach to managing illegal dumping and litter is largely reactive.

What we know about litter is:

- 95% of litter that ends up in our oceans and waterways is transported from suburban streets through the stormwater system;
- litter harms aquatic animals by polluting their habitat, being mistaken for food, and trapping or injuring them;
- litter can be a fire hazard (e.g. lit cigarettes thrown from vehicles);
- litter can cause flooding by blocking the storm water system;
- litter such as broken glass, needles and syringes can harm people; and
- people are more likely to litter in areas that are already littered.

Fines and penalties can be applied to those who are caught littering or illegally dumping in the municipality. Council's data recognises that illegal dumping is most likely to occur when someone is moving house, this makes it difficult to trace especially if they leave town. The top 5 household items to be dumped are:

1. Electronic waste;
2. General rubbish;
3. Mattresses;
4. Furniture; and
5. Asbestos

The free waste disposal days (i.e. free green waste in November) and the \$5 hard-waste voucher, are some of the Council led initiatives aimed at reducing illegal dumping.

Commercial collections

Council provides a kerbside collection service of general waste, recycling and food and garden organics waste (urban only) to commercial businesses within the municipality. Commercial businesses are able to choose what bin sizes they require, the frequency of collection and the number of bins. General waste and recycling services are compulsory for all businesses however, businesses can seek an exemption if they can prove they have another service in place. Food and garden organics is also compulsory for any registered food premises in urban Wangaratta, once again exemptions can apply if an alternative system is in place.

Other arrangements and programs

Council in conjunction with Sustainability Victoria (SV) facilitate an annual detox your home program, where residents can safely dispose of their unwanted toxic household chemicals. The Wangaratta transfer station is also nominated as the permanent detox your home site for the North East region.

In November of each year Council holds a free green waste month at all the transfer stations to encourage people to clean up their properties in preparation for the upcoming fire season. Council has also successfully trialled free waste days for electronic waste and asbestos.

4.3 Recycling and waste disposal facilities

Bowser Landfill

Bowser Landfill is a type 2 EPA licenced landfill in accordance with *Best Practice Environmental Management Guidelines – Siting, design, operations and rehabilitation*. The landfill is subject to an annual Section 53v environmental audit (EP Act 1970), to demonstrate compliance to relevant State Environmental Protection Policies and EPA guidelines. The landfill site has shallow landfill cells due to the proximity to groundwater, as such a height extension was sought to extend the life of the landfill by increasing the available space. Based on current fill rates the site will close in the next 20 years, with no other landfill sites proposed for the municipality.

The site is located to the North of Wangaratta at 5 Coleman Road. The site is open 6 days a week to commercial businesses from 8am to 3.30pm and Saturdays 8am to 10.30am. The site has a weighbridge and operates under the Tipsite program recording all information and data. The landfill is a licenced facility and has the ability to accept:

- prescribed commercial industrial waste;
- building and demolition waste;
- commercial and household asbestos;
- category C contaminated soil; and
- municipal waste.

Wangaratta Transfer Station

The Wangaratta Transfer Station is open 6 days a week Tuesday to Sunday from 9 am to 4.30pm weekdays, and weekends 10am to 4.30pm and accepts:

- | | | |
|-----------------------|----------------------------|-----------------|
| ◆ Concrete and rubble | ◆ Mixed comingle recycling | ◆ Hard plastics |
| ◆ Tyres | ◆ Paint and paint tins | ◆ Soft plastics |
| ◆ Mattresses | ◆ Fridge and freezers | ◆ Batteries |
| ◆ Metal | ◆ Gas bottles | ◆ Waste |
| ◆ Green waste | ◆ Motor oil | ◆ General waste |
| ◆ Electronic waste | ◆ Plastic oil containers | ◆ Furniture |
| ◆ Florescent globes | ◆ Drum muster | ◆ Timber |
| | ◆ Cardboard | |

The Wangaratta site is the largest transfer station in the municipality and recovers the most resources for recycling. The site is home to the permanent detox your home site that is funded externally by Sustainability Victoria.

Customers are required to separate mixed loads into a series of collection bays for garden organics, clean fill, steel, timber, bricks and concrete, cardboard, mattresses and mixed waste. Dedicated areas are also set aside for other items including white goods, oils and batteries.

In the future Wangaratta Transfer Station will need a complete site re-design to cater for increased traffic and storage of materials. Currently, the infrastructure required to meet the better practice at resource recovery centres standards include an electronic waste shelter, hardstand for fridges and freezers, removal of asbestos contaminated stockpile, installation of adequate drainage and resurfacing of the garden organics waste hardstand.

Eldorado Transfer Station

The Eldorado Transfer Station is a rural transfer station that is open fortnightly on a Sunday from 9am to 11.50am and only accepts:

- ◆ General waste;
- ◆ Recyclables (Electronic waste, soft plastic, comingled recycling and metal); and
- ◆ Green waste and timber (chipped and used onsite).

This site does not make a cost recovery as a transfer station and Council contributes \$15,000 annually to its operation. The Eldorado Transfer Station is currently sitting on an old landfill site that requires rehabilitation. A study will need to be conducted to evaluate the cost viability of removing the landfill contents to Bowser compared to rehabilitation in situ. The site was recently upgraded with minimum infrastructure, however, the site does not meet storage requirements of stockpiles as no hard stands exist. Contamination of stormwater by treated timber onsite is another issue that needs to be addressed.

Markwood Transfer Station

The Markwood Transfer Station is a rural transfer station that is open fortnightly on a Sunday from 1pm to 3.50pm and only accepts:

- ◆ General waste;
- ◆ Recyclables (oil, electronic waste, soft plastic, comingled recycling and metal); and
- ◆ Green waste and timber (used onsite).

This site does not make cost recovery as a transfer station and Council contributes \$12,000 annually to its operation. Markwood Transfer Station is a rural transfer station that is also located on a landfill site and will require either temporary or permanent closure when the site is rehabilitated. Similar to Eldorado Transfer Station this site was recently upgraded with minimum infrastructure, however, the site does not meet storage requirements of stockpiles. Contamination of stormwater by treated timber also occurs onsite and needs to be addressed.

Moyhu Transfer Station

The Moyhu Transfer Station is a rural transfer station that is opened fortnightly on a Saturday from 9 am to 11am and only accepts:

- ◆ General waste;
- ◆ Recyclables (oil, electronic waste, soft plastic, comingled recycling and metal);
- ◆ Green waste and timber (used onsite); and
- ◆ Drum muster containers.

This site does not make cost recovery as a transfer station and Council contributes \$16,000 annually to its operation. Moyhu Transfer Station is the only rural transfer station that is not located on top of an old landfill site and so rehabilitation of this site will not affect site operations. The site was recently upgraded with minimum infrastructure, however, the site still does not meet storage requirements of stockpiles. Contamination of stormwater by treated timber occurs onsite and needs to be addressed.

Alpine Medium Density Fibreboard (Alpine MDF)

Alpine MDF uses waste timber and garden organics combustion to produce heat and power and high quality MDF. Upgrades are needed to eliminate the grit/sand contamination at their Resource Recovery Centres.

Wangaratta Material Recovery Facility

Wangaratta Material Recovery Facility (owned and managed by J.J. Richards) uses a material sorting machine (disc screen, trommel, bounce belt, air classify, eddy current, conveyor belts) and manual sorting to sort Council's kerbside recycling material. The site also has capacity to bale cardboard and plastic, as well as having a metal and aluminium press. The site has an education room dedicated to educating the community on recycling. Upgrades needed at the site are automated equipment and potential for further separation of glass and glass crushing.

Bowser Organics Processing Facility – soon to be constructed

Council has recently gained EPA works approval to construct a food and garden organics processing facility. The aim of this project is to support further diversion of food and garden organics within the municipality and North East region by offering a financially viable processing solution.

The plant will comprise of seven bunkers with the capacity of 425 cubic metres per cell. The process will involve using a covered aerated static pile composting (ASP) technology which incorporates the use of expanded polytrafluoroethylene covers for process enhancement and emissions control. The process can handle a range of organic feedstock materials, with the main inputs to this system including kitchen, garden and food wastes from commercial businesses. This is the typical organic waste that is currently collected with the Council's food and garden organics kerbside collection.

The facility will have capacity to process up to 12,000 tonnes of organics material a year. After the plant is commissioned it is anticipated that the facility will process 3,500 tonnes of organic material from Wangaratta's kerbside food and garden organics waste collection, as well as an additional 500 tonnes from the transfer station. This will continue to rise as other nearby councils such as Alpine and Mansfield begin a food and organics waste collection and contracts end with current providers.

Closed Rural Landfills

The environmental risks posed by a landfill site continue to be evident for a long time after waste has ceased to be accepted. There are 18 closed unlicensed landfills that the Rural City of Wangaratta is legislatively responsible for under the EP Act 1970. In 2015, the EPA released their closed landfill guidelines that stipulated that any unlicensed landfill that closed within the last 30 years and had not been rehabilitated would require rehabilitation to the current *Best Practice Environmental Management –Siting, design, operation and rehabilitation of landfills*.

These 18 landfill's likely closure dates have been listed as part of the NEWRRGs Implementation Plan July 2017. Consequently, Council will be required to rehabilitate the 9 closed landfills listed below:

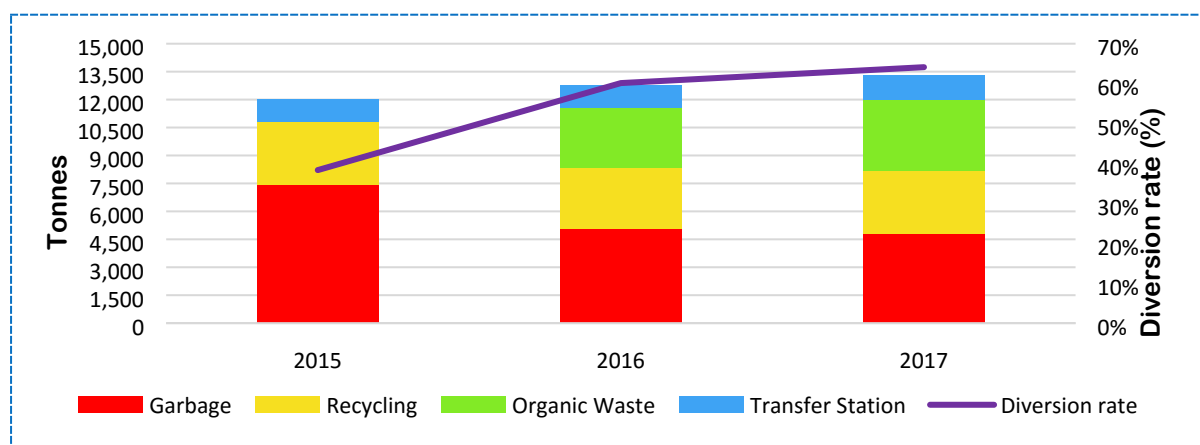
- Whitfield
- Moyhu
- Eldorado
- Springhurst
- Hansonville
- Boorhaman
- Markwood
- Glenrowan
- Bowser East

4.4 Current Data Trends

This section provides details of Council's waste quantities and recovery statistics and trends and the results of projected waste quantities and recovery for each of the municipal, C&I and C&D sectors up to 2021. It also shows the rural city's waste stream characteristics and highlights potential recovery both at kerbside and at the Transfer Stations and at Bowser Landfill. Finally, household behaviours and attitudes from the recent survey are presented.

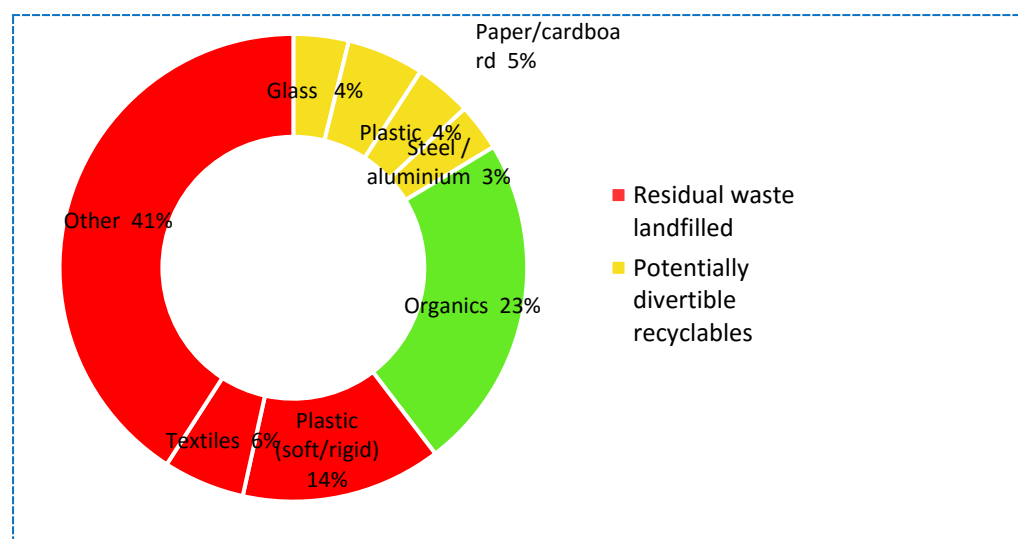
In the past three years, there has been significant changes to the waste sector for the Rural City of Wangaratta. The introduction of organics collection has significantly reduced the waste going to landfill, which can be seen in figure 3 below. The recovery of organics is steadily increasing, while recycling is remaining the same each year.

Figure 3 Waste and material generation 2015-2017



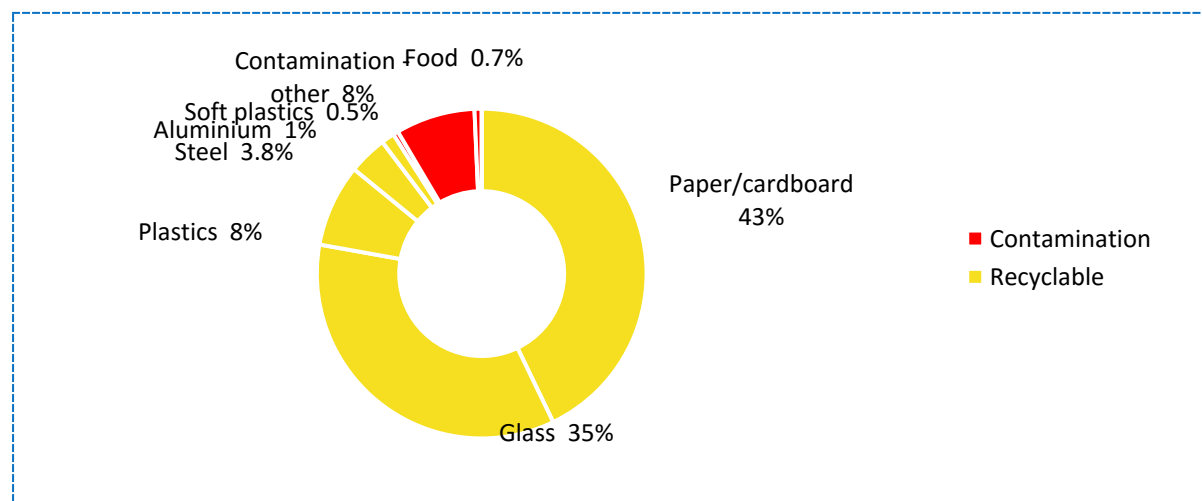
In 2017 NEWRRG completed an audit of the organic, garbage and recycling kerbside bins to identify the composition of each bin. The results of the audit revealed that 41% of the total waste collected in the garbage bin was general waste and the other 59% contained materials that could have been recovered and recycled in various formats (figure 4).

Figure 4 *Kerbside garbage bin composition 2017*



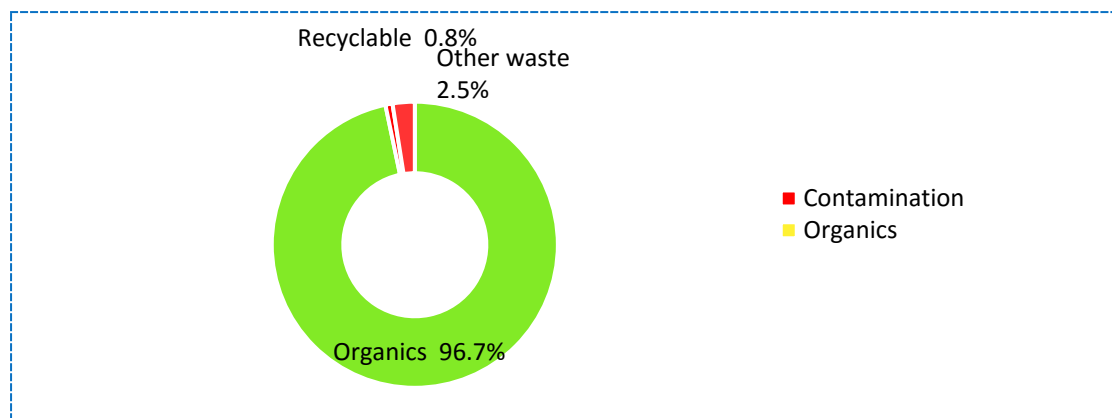
The results of the recycling bin audit composition can be seen below in Figure 5. These results showed that 9.2% of the recycling collected was contaminated with the wrong items, of this soft plastics and food waste made up 1.2% of the contamination. This is quite high and not reflective of past audit data from the material sorting facility which has always indicated around 5-6% contamination rate. It is clear that more education needs to be conducted around the recycling bin and the contents to be disposed of in this bin.

Figure 5 *Kerbside recycling bin composition 2017*



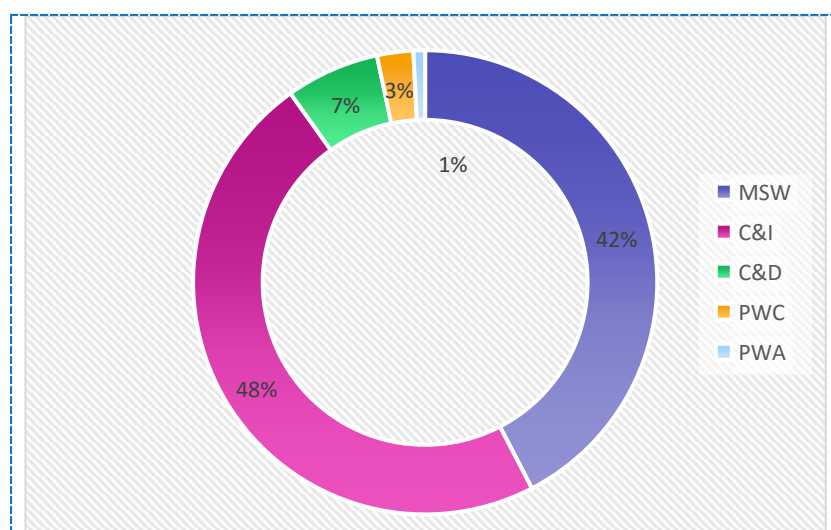
The data collected from the audit also indicated a higher (3.3%) organics contamination rate than what is normally recorded (0.5%). This is because the drivers are trained to identify contamination, and they do not collect the bins if there is obvious contamination. Once the organics arrive at the landfill it is sorted and any remaining contamination is removed prior to going to an organics processing facility.

Figure 6 *Kerbside garden waste bin composition 2017*



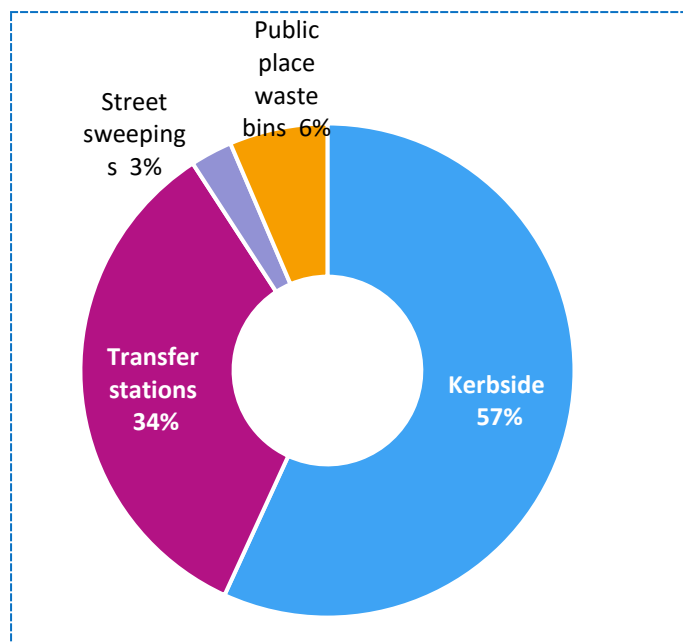
The breakdown of waste entering the landfill 2016/2017 can be seen in the figure below (figure 7). C&I is the largest proportion of waste entering the landfill followed by MSW. A smaller portion 11% was made up by C&D, prescribed waste category C (PWC) and asbestos.

Figure 7 *Waste by sector 2017*



The breakdown of origin of the waste from municipal waste to landfill is shown in the figure below (figure 8). Majority of municipal waste is sourced from the kerbside collected waste bins (57%). Transfer station waste makes up another 34% of municipal waste, and a small percentage is from public waste bins (6%) and street sweepings (3%).

Figure 8 **Sources of municipal waste 2017**



Business as usual

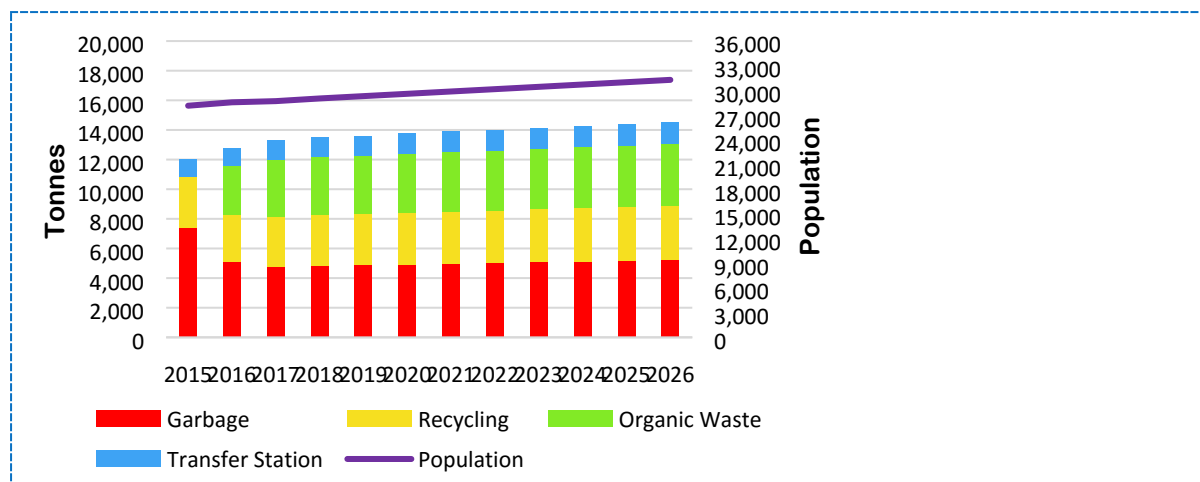
Based on current growth rates (figure 9), the population of Wangaratta and its surrounds will continue to grow steadily over the next 10 years. This will see an increase in new housing estates established to the south east and west of Wangaratta, and the continued growth in the surrounding industries. More people and industry, equals more waste for Council to service.

Bowser Landfill was due to close in 2019-2020 based on the fill rates at the time and remaining airspace in 2013. In 2015 Council applied to the EPA for a works approval to extend the height and increase the life span of the landfill. The height extension extended the life of the landfill by another 20 years based on current fill rates. Council also purchased a new compactor in 2015 to replace a 1985 compactor and Council is now achieving greater compaction rates, which has also aided the increased volume available at the landfill. A further 33% decrease in waste going to landfill has been achieved by diverting the food and garden organics waste. Once the landfill is completely filled Council will have to look at other alternatives for general waste disposal. This is likely to be a regional landfill located within the North East.

Council operates a number of transfer stations around the municipality, three of which are substandard and are located outside rural townships (Eldorado, Markwood and Moyhu). These transfer stations do not recover as much as Wangaratta transfer station as the distance for contractors to service these centres is not viable for the small amount of material recovered on a fortnightly basis.

Wangaratta transfer station is located ideally in town, but the site is small and requires many upgrades to the containment infrastructure and general layout of the site. During the spring/ summer months it is not uncommon to have large lines extending out onto the main road. With the expected population growth it will be difficult for this site to keep up with the waste and recycling disposal under its current conditions.

Figure 9 Waste and material generation 2015-2026



Community waste survey

The waste survey released in October 2017 asked a series of questions in relation to Council's waste services and possible future options for the treatment of waste in the Rural City of Wangaratta. The survey was written to gauge the community's understanding of waste issues and their attitudes and behaviours around waste issues. A total number of 406 residents completed the survey of which 62% were located in Wangaratta and the remaining 38% were located either in a rural township or in a rural location.

The main themes coming out of the survey were:

- issues with the three bin system;
- organics collection for rural residents;
- more waste education;
- plastic pollution;
- transfer station use and future use; and
- Bowser Landfill and reducing waste.

Respondents were asked their location in order to determine the representation of both urban and rural communities. 406 people completed the survey of which; 253 respondents were located in urban Wangaratta and; 53 respondents were located in rural areas.

Small business waste survey

Council released an online waste survey that targeted small businesses in the Rural City of Wangaratta. The small business survey (business survey) was released in October 2017 to assess small business waste needs within the municipality. The survey was completed by 119 businesses of which 61% were located in urban Wangaratta and 39% in rural areas. The results of the survey have been used to inform the WMS.

Waste Workshops

Council ran a series of three workshops based on six key themes from the survey results:

- the three bin system;
- organic waste in rural areas;
- plastic pollution;
- transfer stations;
- landfill; and
- waste education.

Overall 30 people participated in these workshops which aimed at assessing what has worked with the last strategy, what the barriers/challenges were, and what were people's ideas about how to continue to improve our waste management and resource recovery. These sessions have helped to inform this strategy, and provide direction and solutions to current waste issues. Fundamentally the groups acknowledged that community education was the basis to promote waste awareness and importance within the community. Moving forward the groups suggested a range of different initiatives that have been incorporated where possible throughout the WMS.

5. Key considerations

This section discusses the key waste issues for the Rural City of Wangaratta and these are the priority areas for consideration. The following section develops the actions and initiatives Council will implement to improve waste management and work towards Council's WMS vision for waste management in the Rural City of Wangaratta.

5.1 Council's Sphere of Influence and Priority Waste Sectors

The Rural City of Wangaratta provides waste services to a number of small businesses as part of the residential service. Despite this, local government's responsibilities in Australia generally is limited to municipal waste. Local government has little or no regulatory control over waste generated from commercial and industry sources. The vast majority of commercial and industrial waste is managed by private operators. Further, businesses are not required to report any waste information to governments at any level. This makes it difficult for councils to influence commercial waste generation and reduction or to even collect information about waste generation from the commercial sector.

The results of the business survey indicated that, as a general rule, businesses are well informed about waste. Many businesses are proactively recycling their waste and indicated that they require little assistance in this area. Packaging waste is fairly prominent in most businesses and is a by-product of many goods and services. Polystyrene is an issue for many take away food stores, with many shops still using it in their services. Community attitudes are changing in relation to single use packaging for example retail and food businesses will be affected by the State Government's plan to ban single-use plastic bags.

Some small rural businesses are struggling with a fortnightly collection of general waste, and may not be aware they are able to get a weekly collection for an additional cost. The rural townships and their businesses are also subjected to an influx of tourists throughout the year particularly during school holidays and special events. The waste system that Council operates is primarily designed to cater for the residential population that produces a fairly consistent volume of waste. This highlights that Council could better engage with the business community to understand their needs and any inefficiencies with how they access council services.

Education could benefit some businesses and how they access waste disposal services. This can be achieved at the ground level with staff identifying issues on the ground, to overall management of waste within a business. The survey results also show that some businesses are not aware of the different waste services offered at the transfer stations and could benefit from using these services.

5.2 Municipal Waste Stream

Councils have the greatest influence over municipal waste, as it is council's responsibility to provide waste services to its residents. Of the total 11,285 tonnes of material that was landfilled in 2016/2017, MWS made up 42% of the total. Currently municipal recovery rates are fairly high with 64% of material recovered in FY16/17.

The results of the 2015 North East Victoria Waste and Recycling Public Place Bin Audit Report, indicated that food waste was the largest contamination factor in both the recycling and the general waste bin. Furthermore the general waste bin also had significant contamination, indicating that more education and awareness is needed for the community who use these bins.

Another key issue that councils across Victoria will be facing is in relation to the Victorian State Government's plan to ban electronic waste (anything with a power cord or a battery) from landfill in July 2018. Council will need to work with the community and stakeholders to ensure that people are aware of the change and why it is occurring to ensure that residents are not putting electronic waste into their general waste bin.

5.3 Commercial and Industrial Waste Stream

Councils have limited influence over C&I waste. This is also the case for material entering the Bowser Landfill and the Wangaratta Transfer Station. In 2016/2017 Bowser landfilled 6,125 tonnes of C&I and C&D material. Currently, the transfer stations operating systems have limited ability to record business waste quantities and therefore the data captured on commercial businesses is inadequate.

5.4 Resource Recovery

Resource recovery occurs at all four transfer stations and Bowser Landfill. Council currently recovers over 60% of waste from landfill through our kerbside collection system. The Wangaratta Transfer Station also recovers a significant amount of resources and recycles them through a variety of different avenues.

In 2016, Council successfully introduced hard and soft plastic recycling for free at all Council Transfer Stations. There are further opportunities to divert polystyrene from landfill and Council has been researching the purchase of a polystyrene extruder to be located at the Wangaratta Transfer Station. A part time transfer station employee would be required to operate the extruder. This additional

employee could also aid and increase resource recovery by baling hard and soft plastic, as well as ensure increased diversion of recyclables from mixed loads entering the transfer station. There is also potential to increase income by baling cardboard and selling it directly to a reuse facility.

Currently all timber, treated and untreated is mixed together upon disposal, then chipped and relocated to Bowser Landfill to be used by internal haul road construction. If the untreated timber is separated from treated timber it could be reused by woodwork groups, sold as firewood, or composted in the new organics processing plant.

The previous strategy identified the Wangaratta Transfer Station could be relocated to Bowser Landfill once it closed in 2019. The height extension and the diversion of organics have changed this option for Council as the airspace available has ensured that the Bowser Landfill will remain open for another 20 years. The current site layout of the Wangaratta Transfer Station is in need of a redesign due to traffic and storage requirements. Significant investment is needed to upgrade the site, currently there is also no space to open a “Tip Shop” onsite, a popular idea coming out of the waste survey. However, Council will be looking at other ways to recover more household items for reuse, to be upcycled or repaired.

5.5 Waste Education

Current waste education practices focus on encouraging residents to take ownership and personal responsibility for waste, and to view all waste as a resource. Council has a key role in improving residents’ understanding of waste management issues and the services offered by Council and other providers. Council has a key role in supporting the community and building its capacity, knowledge and skills to actively participate in waste avoidance, reduction, reuse and recycling.

Resources and initiatives to support the community to build a better understanding of how to use Council’s waste services exist however a more strategic and structured approach for engagement and education could help focus on key problem areas.

One area where there is a gap between the distribution of information and residents is when residents live in rental properties. Council's waste collection brochure and collection calendar is delivered with all new services. However, this does not occur when new tenants move into a property, as bins are usually already onsite. Therefore, unless the service is provided by the real estate agents, new rental residents are not provided with the information necessary to participate in the correct use of the three bin system.

As previously discussed, Council has recently surveyed the community to gauge levels of support for its approach to waste management, and to determine waste management practices and behaviours. These surveys indicated a high degree of engagement with waste management. However the waste audits undertaken earlier in 2017 of the three bin system highlighted that residents are still placing items which could be recycled or composted in their general waste bin. This may be because of the sample size of the waste survey and the waste audits, or it may point to an inconsistency between what people say and what they do or that people are misinformed about how to correctly use the waste services offered by Council.

5.6 Cost Effectiveness and Equity

There are numerous costs associated with the management of waste. Some of these are current costs and others are future costs. To ensure equity between generations, it is important that the fees charged for waste management services properly reflect these costs. In 2017 Council commissioned Blue Environment to model the cost and fee structure associated with the Bowser Landfill, its future rehabilitation and ongoing monitoring and maintenance.

Cost effectiveness

Kerbside waste and recycling cost indicators suggest the kerbside services provided to residents are already quite cost-effective, and they are on par with best practice.

Bowser Landfill is the last landfill for the Rural City of Wangaratta, and while landfilling is the least preferred option for waste disposal, at this present time it is still needed. Based on financial modelling conducted by Blue Environment, Benalla Landfill and Cosgrove Landfill are possible future options for Wangaratta's waste disposal. Waste would need to be collected, consolidated and then transported to the landfill. The Bowser Landfill site will in the long term become a waste transfer station, and there is a possibility to turn the site into a general waste (dirty) material sorting facility (MRF) to try and recover as much as possible before it is relocated to a landfill. This would still offer a place for commercial businesses to dispose of waste prior to being sorted and relocated offsite. This could ensure an ongoing income to offset the cost of operating the transfer station.

EPA Levy

The Environment Protection Act 1970 ('the EP Act') requires the holder of a licence for a landfill ('licence holder') to pay a levy for each tonne of waste deposited onto land at the licensed premises. The landfill levy was introduced in Victoria in 1992 for landfills in the Melbourne, Bendigo, Ballarat and Geelong metropolitan districts and was extended to include all licensed landfills in Victoria in 1996.

Landfill levies play an important role in providing funding assistance to establish waste management infrastructure, support programs for industry, education programs and the resourcing of the bodies responsible for waste planning and management in Victoria. The levies also act as an incentive to minimise the generation of waste and to promote investment in developing alternatives to disposal in landfill.

According to the EP Act, Landfill levies are required to be paid to the EPA on a quarterly basis, in respect to the waste deposited at the landfill premises for each of the following quarters:

- a. 1 July to 30 September;
- b. 1 October to 31 December;
- c. 1 January to 31 March; and
- d. 1 April to 30 June.

The levy increases annually and is categorised in four waste types with differing levy requirements:

- Municipal Waste FY2016/17 \$31.71
- Industrial Waste FY2016/17 \$55.46
- Prescribed Industrial FY2016/17 \$70.00
- Asbestos FY2016/17 \$30.00

In the last financial year Council paid \$560,848 in landfill levy fees for the waste deposited at the Bowser Landfill.

Rehabilitation Costs

Council will be required to cover over \$14 million worth of rehabilitation costs over the next 10 years. This includes any landfill licenced or un-licenced that closed in the last 30 years (1985).

Table 4 *Rehabilitation cost for landfills*

Location	Type Landfill	Risk Assessment rating	Capping value	Area in m ²	Estimated cost to rehabilitate	Expected Year to Rehabilitate Financial Year
Bowser West	2	High	Varying	78,000	\$4,021,000	Broken into 4 stages commencing in 2019; not including cells 5 and 6.
Whitfield	3	Low	\$48.12/m ²	3,000	\$144,360	2026
Springhurst	3	Low	\$51.05/m ²	1,000	\$51,050	2028
Markwood	3	Medium	\$65.88/m ²	30,000	\$1,976,400	2025
Mohyu	3	Low	\$49.56/m ²	4,000	\$198,240	2027
Hansonville	3	Low	\$72/m ²	2,500	\$180,000	2028
Glenrowan	3	Medium	\$66.95/m ²	30,000	\$2,008,500	2018
Eldorado	3	Medium	\$63.96/m ²	4,000	\$255,840	2024
Boorhaman	3	Low	\$51.05/m ²	2,000	\$102,100	2028
Bowser East	2	High	Varying	150,000	\$6,003,300	Staged into 9 commencing 2021 and expected completion is 2030.

6. Management options

6.1 Waste Avoidance and Minimisation

Waste management for Council includes the collection, transport, processing and disposal of waste materials. The aim of the waste hierarchy is to first avoid waste and second to extract the maximum practical benefits from products thereby generating the minimum amount of waste. The proper application of the waste hierarchy can have several benefits. It can help prevent emissions of greenhouse gases, reduce pollutants, save energy, conserve resources, create jobs and stimulate the development of green technologies. Councils are often faced with a number of challenges when implementing waste management systems including:

- inadequate separation, collection and sorting systems for many different waste streams;
- inadequate treatment and disposal facilities to service the whole community;
- gaining co-operation and coordination between the different levels of government;
- finding financing for the establishing or upgrading of expensive sustainable waste management infrastructure to address the needs of managing waste; and
- a lack of data available on waste management strategies must be overcome and monitoring requirements must be met to implement the waste programs.

Waste avoidance and minimisation is aimed at reducing the production of waste through education and improved production process rather than aiming to increase technology to improve treatment of waste. The idea of minimisation is not centred on technological advances, it can be viewed as a method of managing existing resources and technology in order to maximise the efficiency of available resource use. Minimising waste generation has the potential to reduce costs to the individual by maximising the use of resources and by reducing the amount of waste to be disposed of reduces waste management costs.

Waste avoidance and minimisation is the most important element of the Waste Hierarchy and also the one that presents some of the toughest challenges. Unfortunately, in spite of growing awareness in the community about the need to reduce waste, waste generation rates have continued to rise with population growth and improvements in standards of living.

To ensure maximum participation and support for waste minimisation, Council will participate in public awareness and education programs for both the community and business, particularly with regard to the need to avoid or reduce packaging.

ACTIONS

- Provide community leadership through local groups and businesses.
- Support the community in the transition from using single use plastic bags.
- Support the community in implementing plastic free July.
- Consider a rewards based system for those who are actively trying to minimise their waste.
- Investigate options to host annual buy, swap or sell of unwanted household items.

6.2 Community education and awareness

How we generate and dispose of waste has a huge impact on our environment and the waste and resource recovery systems that support our standard of living. As our growing population generates greater volumes of waste, additional pressure is placed on our waste and resource recovery system. This essential service, which is delivered to the residents of the Rural City of Wangaratta via household kerbside collections, is most effective when people are aware of the waste they are generating and are correctly disposing of waste and recoverable materials. It is clear from the community waste workshops that people are strongly supportive of waste management and resource recovery initiatives. We need to continuously educate our residents, if we are to reach the targets of our WMS.

Contamination of kerbside bins is an ongoing issue faced by Council, the contamination rates are highest in the general waste bin. The results of the NEWRRG audit indicate that some people are using this bin for the overflow when their other bins are full also for some people there is a lack of awareness or confusion on items that can go into which bins.

Another issue for kerbside waste services is electronic waste. Electronic waste causes significant contamination in general waste bins, and data recorded at the Bowser Landfill indicates that the top five electronic waste items coming in from the general waste kerbside collection are:

1. vacuum cleaners;
2. stereo/radios;
3. fans;
4. printers/scanners; and
5. televisions

These items can be recycled at all the transfer stations but are still making their way to the landfill.

Tourism also presents many waste challenges to Council and service providers in the region. While our established residents are enthusiastic recyclers, many visitors to the region may not be so well versed in our recycling guidelines. Education of tourists is difficult especially for those unfamiliar with food waste bins.

The major challenge is to educate residents and visitors to the municipality on the range of council services available to them and how they can help us sustainably manage waste.

There are also a number of groups within the community that are actively involved in reducing waste. These groups include:

- Waste Wise Wangaratta;
- Boomerang Bags; and
- Wangaratta Repair Cafe

These groups are important because they have formed out of a community initiative, and are supporting waste minimisation at a grassroots level.

ACTIONS

- Develop and implement a waste education strategy.
- Conduct community tours (for residents and schools) at waste, organics and recycling facilities.
- Develop standardised signage on entry to towns for tourists about the municipality's waste commitment.
- Further develop ongoing media and communication material on key waste issues.
- Support community groups to implement waste programs and initiatives.
- Design waste education material for tourist information centres and work with the tourism industry to service the needs of tourists.
- Investigate options to reuse, upcycle and repair hard waste.

6.3 Kerbside collections

Monitoring of the kerbside collection through audits can drive behaviour change and reduces contamination of bins. The electronic waste ban from landfill next year will require a significant boost in education of the community on the changes and the proper disposal of electronic items. Audits of the general waste bin are needed as part of this program to reinforce educational messages. As already discussed the kerbside bins overflow is still an issue and audits demonstrate that more packaging is entering the waste stream because of full recycling bins. A weekly recycling collection is a possible solution to this and will be explored when Council tenders the next recycling contract in 5 years.

The public place bins distributed around the municipality need to be reviewed, as they do not always have a matched recycle bin. Furthermore audits of the general waste bin in the CBD have shown that most of these bins contain organics, and the CBD could benefit from a food organics bin in the CBD. Better signage of bins is required to help people ensure the correct bin is used.

To improve illegal dumping and increase waste education of residents, Council needs to work with real estate agencies to ensure a consistent approach is given to tenanted properties.

The development of a waste handbook for businesses will provide a useful tool on waste options and locations of where they can take a range of waste products may assist businesses in increasing proper waste disposal, as well as education and awareness. Packaging from fast food outlets is still a concern and Council needs to re-engage with businesses to identify packaging solutions and awareness of their products.

ACTIONS

- Implement a general waste audit to measure electronic waste and recyclables contamination.
- Assess potential for expansion of organics collection services to households and small businesses in rural towns.
- Review public place bins and match waste bins with a recycling bin.
- Review Public Place Recycling bin station signage.
- Trial organic bins in parks and CBD.
- Investigate weekly recycling for the next contract.
- Work with real estate agents to solve waste issues associated with rental properties.
- Engage with businesses on solutions to current waste issues experienced i.e. weekly collection options.
- Re-engage with fast food take away cafes and restaurants around packaging of take away food.
- Prepare a business waste handbook that can be used as an education tool.

Food and garden waste

Since the introduction of the food and garden waste bin, Council has reduced 3,500 tonnes of organics entering the landfill annually. The success of this new bin can be measured by residents maintaining low contamination rates (0.5-0.7%). As part of this new system Council implemented a four strike contamination policy for both the organics and recycling bin. This policy gives the resident four chances to rectify behaviour before their bin is taken away, and the charge remaining on the rates.

From recent audits of the general waste bin, people are still throwing out food in containers/packaging, rather than removing the food from the container and separating into the correct bin. This will be addressed in Council's waste education strategy.

Council is currently in the process of constructing an organics processing plant locally, which will make it more viable to offer organics to nearby rural townships. There is potential to expand the current food and garden waste recovery efforts especially at food events (markets etc.), council run events, rural households/townships and at the transfer stations. There is also potential to expand this facility to include nearby councils whom currently do not offer an organics service.

ACTIONS

- Investigate the potential to offer a weekly organics bin collection to the rural townships Oxley, Milawa and Glenrowan.
- Offer free food waste disposal at the Wangaratta Transfer Station.
- Investigate communal compost bins for rural communities wanting to divert their food waste.
- Provide organic bins at local events.

6.4 Future waste and recycling infrastructure

Changes to existing waste infrastructure as well as the introduction of new infrastructure will recover more resources that would otherwise go to landfill. As Council has little control over the commercial and building sector, and increased gate fees has little effect on sorting of waste. A pre-sort pad prior to entering the landfill cell could see the recovery of an additional 1000 tonnes of timber, brick, steel and other reusable materials.

A long term plan is required for Bowser Landfill for when it does close, and this needs to be reflected in the next strategy. There are a number of options for this site, for example it could possibly be a regional waste transfer site or pre-sort facility. The Wangaratta Transfer Station design and layout also needs to be considered with population growth, along with increased resource recovery such as timber, e-waste and polystyrene. Additional staff at the transfer station are required to further assist and educate people on waste disposal at the transfer station. The additional attendant would also assist with site clean-up and bailing of plastic and polystyrene for offsite transportation.

While the transfer station and the commercial supermarkets take a number of soft plastics to be recycled, there are many that they do not take. It is also hard to educate on which soft plastics are taken and which are not. A local solution for soft plastics is needed. Polystyrene is another concerning plastic product that is currently being landfilled. The transfer station and commercial skips are the biggest sources of polystyrene.

ACTIONS

- Investigate viable 'pre-sort' infrastructure at the landfill to improve resource recovery.
- Consider future options for Bowser Landfill as a waste transfer station or general waste material sorting facility.
- Engage a consultant to re-design the Wangaratta Transfer Station site.
- Investigate local solutions for soft plastics.
- Upgrade electronic waste collection facilities.
- Divert polystyrene from landfill by collecting it at the transfer station.
- Further separation of treated timber from untreated timber for recycling.
- Increase resource recovery at the Wangaratta transfer station.

6.5 Closed unlicensed landfills

Council will be required to do extensive work in this area over the next 10 years to meet the requirements stipulated by the EPA for landfills that closed since 1985. Significant work on the Bowser East and Glenrowan landfills rehabilitation is already occurring. Of the nine landfills requiring rehabilitation, Eldorado Landfill is problematic given its location in an old creek bed. A study needs to be conducted for viability of removing the landfill material and transporting it to Bowser Landfill rather than engineering a suitable cap.

ACTIONS

- Conduct a feasibility study of Eldorado landfill rehabilitation.
- Develop rehabilitation plans for all 8 landfills listed.
- Develop ongoing aftercare, maintenance and inspection programs for all 18 landfills known to council.

7. Appendices

7.1 Sustainability Assessment

The following issues were considered in assessing the environmental, social and economic impacts of each option:

- **Environmental:**
 - En1: waste and litter reduction (including avoidance and minimisation)
 - En2: resource recovery
 - En3: contamination of recovered resources
 - En4: resource consumption in implementing the strategy
 - En5: impact on the surrounding environment
- **Social:**
 - S1: level of service to the community (including equity of access)
 - S2: community acceptance
 - S3: impact on amenity
 - S4: awareness and compliance with waste management systems and policies
 - S5: health and safety
- **Economic:**
 - Ec1: financial cost of implementation and operation
 - Ec2: regional economic development
 - Ec3: local employment

A score of 1 (positive impact), -1 (negative impact) or 0 (no impact) was assigned to each action. Outcomes of the unweighted scoring is shown in Table 5.

Percentage weighting has been applied to each of the issues which actions have been assessed against. Outcomes from the weighted scoring are shown in table 6.

Table 5 *Environmental, social and economic impact assessment (unweighted scores)*

No.	Actions	En1	En2	En3	En4	En5	Score	S1	S2	S3	S4	S5	Score	Ec1	Ec2	Ec3	Score
WASTE AVOIDANCE AND MINIMISATION																	
1	Provide community leadership through local groups and businesses.	1	1	0	1	1	4	1	1	1	1	0	4	1	1	0	2
2	Support the community in the transition from using single use plastic bags	1	1	1	1	1	5	1	-1	1	0	0	1	-1	0	0	-1
3	Support the community in implementing plastic free July	1	1	1	1	1	5	1	-1	1	0	0	1	-1	0	0	-1
4	Consider a rewards based system for those who are actively trying to minimise their waste.	1	1	1	1	1	5	1	1	1	1	0	4	0	0	0	0
5	Investigate options to host annual buy, swap or sell of unwanted household items.	1	1	0	0	1	3	1	1	1	1	1	5	-1	0	0	-1
COMMUNITY EDUCATION AND AWARENESS																	
6	Develop and implement a waste education strategy	1	1	1	-1	0	2	1	1	0	1	0	3	-1	0	0	-1
7	Conduct community tours (for residents and schools) at waste, organics and recycling facilities.	1	1	1	-1	1	3	1	1	0	1	1	4	-1	0	0	-1
No.	Actions	En1	En2	En3	En4	En5	Score	S1	S2	S3	S4	S5	Score	Ec1	Ec2	Ec3	Score

8	Develop standardised signage on entry to towns for tourists about the municipality's waste commitment	1	1	1	-1	1	3	1	1	1	1	0	4	-1	1	0	0
9	Further develop ongoing media and communication material on key waste issues	1	1	1	-1	1	3	1	1	1	1	0	4	-1	0	1	0
10	Support community groups to implement waste programs and initiatives	1	1	1	0	1	4	1	1	1	1	0	4	-1	1	1	1
11	Design waste education material for tourist information centres	1	1	1	1	1	5	1	1	1	1	0	4	-1	0	0	-1
12	Investigate options to reuse, upcycle and repair hard waste	1	1	1	1	1	5	1	1	1	1	0	4	0	0	0	0
KERBSIDE COLLECTIONS																	
13	Implement a general waste audit to measure electronic waste and recyclable contamination	1	1	1	1	1	5	1	-1	1	1	0	2	-1	0	1	0
14	Assess potential for expansion of organics collection services to households and small businesses in rural towns.	1	1	1	1	1	5	-1	1	1	1	1	3	-1	0	1	0
15	Review Public Place Recycling bins and match waste bins with recycling bins	1	1	1	1	1	5	1	1	1	1	1	5	-1	0	0	-1
16	Review public place recycling bin signage	1	1	1	0	1	4	1	1	1	1	1	5	-1	0	1	0
17	Trial organic bins in parks and CBD	1	1	1	1	1	5	1	1	-1	1	-1	1	-1	0	0	-1
18	Investigate a weekly recycling option for the next contract	1	1	1	1	1	5	1	1	1	1	0	4	-1	0	1	0
19	Work with real estate agents to solve waste issues associated with rental properties	1	1	1	1	1	5	1	1	1	1	0	4	-1	0	0	-1

20	Engage with businesses on solutions to current waste issues	1	1	1	1	1	5	1	1	0	1	0	3	1	0	0	1
21	Re-engage with fast food take away cafes and restaurants around packaging of take away food	1	1	1	1	1	5	1	1	1	1	0	4	-1	0	0	-1
22	Write a business waste handbook	1	1	1	1	1	5	1	1	0	1	0	3	-1	0	0	-1
FOOD AND GARDEN WASTE																	
23	Investigate the potential to offer a weekly organics bin collection to the rural townships Oxley, Milawa and Glenrowan	1	1	1	1	1	5	1	-1	1	1	0	2	-1	0	1	0
24	Offer free food waste disposal at the Wangaratta transfer station	1	1	0	0	1	3	1	1	1	1	0	4	0	0	0	0
25	Investigate communal compost bins for rural communities wanting to divert their food waste	1	1	1	1	1	5	1	1	1	1	0	4	-1	0	1	0
26	Provide organics bins at local events	1	1	0	0	1	3	1	1	1	1	0	4	-1	0	1	0
FUTURE WASTE AND RECYCLING INFRASTRUCTURE																	
27	Investigate viable 'pre-sort' infrastructure at the landfill to improve resource recovery	1	1	1	1	1	5	0	0	1	1	1	3	-1	1	0	0
28	Consider future options for Bowser Landfill as a waste transfer station or general waste sorting facility	0	1	0	0	0	1	1	1	0	1	0	3	0	1	1	2
29	Engage a consult to re design the Wangaratta Transfer Station	0	1	0	1	1	3	1	1	1	1	1	5	-1	1	1	1
30	Investigate local solutions for soft plastics	1	1	0	0	1	3	1	1	1	1	1	5	-1	1	1	1

31	Upgrade electronic waste collection facilities	1	1	1	1	1	5	1	1	0	1	1	4	1	1	0	2
32	Divert of polystyrene from landfill	1	1	1	1	1	5	1	1	1	1	0	4	-1	0	1	0
33	Further separation of treated timber from untreated timber to be recycled	1	1	1	1	1	5	1	1	1	1	-1	3	-1	0	1	0
34	Increase resource recovery at the Wangaratta Transfer Station	1	1	1	1	1	5	1	1	0	0	1	3	-1	0	1	0
CLOSED UNLICENCED LANDFILLS																	
35	Conduct a feasibility study of Eldorado Landfill rehabilitation	0	0	0	0	1	1	-1	-1	1	1	1	1	-1	0	1	0
36	Develop rehabilitation plans for 8 landfills requiring rehabilitation	0	0	0	-1	1	0	1	1	1	1	1	5	-1	0	0	-1
37	Develop ongoing aftercare, maintenance and inspection program for all 18 landfills known to council.	0	0	0	-1	1	0	1	1	1	1	1	5	-1	0	0	-1

Table 6 *Environmental, social and economic impact assessment (weighted scores)*

No.	Actions	En1	En2	En3	En4	En5	Score	S1	S2	S3	S4	S5	Score	Ec1	Ec2	Ec3	Score
	WASTE AVOIDANCE AND MINIMISATION																
1	Provide community leadership through local groups and businesses	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.4
2	Support the community in the transition from using single use plastic bags	0.1	0.1	0.0	0.0	0.1	0.3	0.1	-0.2	0.0	0.0	0.0	-0.1	-0.3	0.0	0.0	-0.3
3	Support the community in implementing plastic free July	0.1	0.1	0.0	0.0	0.1	0.3	0.1	-0.2	0.0	0.0	0.0	-0.1	-0.3	0.0	0.0	-0.3
4	Investigate options to host annual buy, swap or sell of unwanted household items.	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.4	-0.3	0.0	0.0	-0.3
	COMMUNITY EDUCATION AND AWARENESS																
5	Develop and implement a waste education strategy	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
6	Conduct community tours (for residents and schools) at waste, organics and recycling facilities.	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
7	Develop standardised signage on entry to towns for tourists about the municipality's waste commitment	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
8	Further develop ongoing media and communication material on key waste issues	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3

9	Support community groups to implement waste programs and initiatives	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
10	Design waste education material for tourist information centres	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
	COLLECTION AND RECOVERY																
11	Implement a general waste audit to check for electronic waste and recyclables	0.1	0.1	0.0	0.0	0.1	0.3	0.1	-0.2	0.0	0.0	0.0	-0.1	-0.3	0.0	0.0	-0.3
12	Assess potential for expansion of organics collection services to households and small businesses in rural towns.	0.1	0.1	0.0	0.0	0.1	0.3	-0.1	0.2	0.0	0.0	0.0	0.2	-0.3	0.0	0.0	-0.3
13	Review public place bins and match waste bins with recycling	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.4	-0.3	0.0	0.0	-0.3
14	Review public place station signage	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.4	-0.3	0.0	0.0	-0.3
15	Trial organic waste bins in parks and CBD	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
16	Consider a rewards based system for those who are actively trying to minimise their waste.	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
17	Investigate a weekly recycling option for the next contract	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
18	Work with real estates to solve waste issues associated with rental properties	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
19	Investigate the potential to offer a weekly organics bin collection to the rural townships Oxley, Milawa and Glenrowan	0.1	0.1	0.0	0.0	0.1	0.3	0.1	-0.2	0.0	0.0	0.0	-0.1	-0.3	0.0	0.0	-0.3
20	Offer free food waste disposal at the Wangaratta transfer station	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

21	Investigate communal compost bins for rural communities wanting to divert their food waste	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
22	Work in conjunction with other Councils to offer viable food and garden processing services	0.1	0.2	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.3
23	Divert of polystyrene from landfill	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
24	Further separation of treated timber from untreated timber to be recycled	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
25	Upgrade electronic waste collection facilities	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.4
26	Provide organics bins at local events	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
27	Increase staff at the Wangaratta Transfer Station	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
28	Investigate options to reuse, upcycle and repair hard waste	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
29	Engage with businesses on solutions to current waste issues	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.3
30	Re-engage with fast food take away cafes and restaurants around packaging of take away food	0.1	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
31	Write a business waste handbook	0.1	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.3	-0.3	0.0	0.0	-0.3
WASTE AND RECYCLING INFRASTRUCTURE																	
32	Investigate viable 'pre-sort' infrastructure at the landfill to improve resource recovery.	0.1	0.1	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	-0.3	0.0	0.0	-0.3
33	Consider future options for Bowser Landfill as a waste transfer station or general waste sorting facility.	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

34	Engage a consult to re design the Wangaratta Transfer Station	0.0	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.4	-0.3	0.0	0.0	-0.3
35	Investigate local solutions for soft plastics	0.1	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.4	-0.3	0.0	0.0	-0.3
36	Conduct a feasibility study of Eldorado Landfill rehabilitation	0.0	0.0	0.0	0.0	0.1	0.1	-0.1	-0.2	0.0	0.0	0.0	-0.2	-0.3	0.0	0.0	-0.3
37	Develop rehabilitation plans for 8 landfills requiring rehabilitation	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.4	-0.3	0.0	0.0	-0.3
38	Develop ongoing aftercare, maintenance and inspection program for all 18 landfills known to council.	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.4	-0.3	0.0	0.0	-0.3

Based on the outcomes from the sustainability assessment, each action has been prioritised according to a low (L), medium (M) or high (H) priority as shown in Table 7 below:

Table 7 *Prioritised strategic actions*

No.	Actions	Environmental	Social	Economic	Total score	Priority
WASTE AVOIDANCE AND MINIMISATION						
1	Provide community leadership through local groups and businesses.	0.3	0.3	0.4	0.9	H
2	Support the community in the transition from using single use plastic bags	0.3	-0.1	-0.3	-0.2	M
3	Support the community in implementing plastic free July	0.3	-0.1	-0.3	-0.2	M
4	Investigate options to host annual buy, swap or sell of unwanted household items.	0.2	0.4	-0.3	0.2	H
COMMUNITY EDUCATION AND AWARENESS						
5	Develop and implement a waste education strategy	0.1	0.3	-0.3	0.1	M
6	Conduct community tours (for residents and schools) at waste, organics and recycling facilities.	0.2	0.3	-0.3	0.2	M
7	Develop standardised signage on entry to towns for tourists about the municipality's waste commitment	0.2	0.3	-0.3	0.2	M
8	Further develop ongoing media and communication material on key waste issues	0.2	0.3	-0.3	0.2	H
9	Support community groups to implement waste programs and initiatives	0.3	0.3	-0.3	0.3	H
10	Design waste education material for tourist information centres	0.3	0.3	-0.3	0.3	H
COLLECTION AND RECOVERY						
11	Implement a general waste audit to check for electronic waste and recyclables	0.3	-0.1	-0.3	-0.1	M
12	Assess potential for expansion of organics collection services to households and small businesses in rural towns.	0.3	0.2	-0.3	0.1	M
13	Review public place bins and match waste bins with recycling	0.3	0.4	-0.3	0.3	H
14	Review public place station signage	0.3	0.4	-0.3	0.3	H
15	Trial organic waste bins in parks and CBD	0.3	0.3	-0.3	0.2	M
16	Consider a rewards based system for those who are actively trying to minimise their waste.	0.3	0.3	0.0	0.6	H
17	Investigate a weekly recycling option for the next contract	0.3	0.3	-0.3	0.3	H

18	Work with real estates to solve waste issues associated with rental properties	0.3	0.3	-0.3	0.3	H
19	Investigate the potential to offer a weekly organics bin collection to the rural townships Oxley, Milawa and Glenrowan	0.3	-0.1	-0.3	-0.1	H
20	Offer free food waste disposal at the Wangaratta transfer station	0.2	0.3	0.0	0.6	H
21	Investigate communal compost bins for rural communities wanting to divert their food waste	0.3	0.3	-0.3	0.3	H
22	Work in conjunction with other Councils to offer viable food and garden processing services	0.4	0.4	0.3	1.0	H
23	Divert of polystyrene from landfill	0.3	0.3	-0.3	0.3	H
24	Further separation of treated timber from untreated timber to be recycled	0.3	0.3	-0.3	0.3	H
25	Upgrade electronic waste collection facilities	0.3	0.3	0.4	1.0	H
26	Provide organic waste bins at events	0.3	0.3	-0.3	1.0	M
27	Increase staff at the Wangaratta Transfer Station	0.3	0.3	-0.3	0.3	H
28	Investigate options to reuse, upcycle and repair hard waste	0.3	0.3	0.0	0.6	H
29	Engage with businesses on solutions to current waste issues	0.3	0.3	0.3	0.9	H
30	Re-engage with fast food take away cafes and restaurants around packaging of take away food	0.3	0.3	-0.3	0.3	H
31	Write a business waste handbook	0.2	0.3	-0.3	0.2	M
WASTE AND RECYCLING INFRASTRUCTURE						
32	Investigate viable 'pre-sort' infrastructure at the landfill to improve resource recovery.	0.3	0.1	-0.3	0.0	M
33	Consider future options for Bowser Landfill as a waste transfer station or general waste sorting facility.	0.1	0.3	0.0	0.4	H
34	Engage a consult to re design the Wangaratta Transfer Station	0.2	0.4	-0.3	0.2	M
35	Investigate local solutions for soft plastics	0.2	0.4	-0.3	0.3	H
36	Conduct a feasibility study of Eldorado Landfill rehabilitation	0.1	-0.2	-0.3	-0.4	M
37	Develop rehabilitation plans for 8 landfills requiring rehabilitation	0.1	0.4	-0.3	0.1	M
38	Develop ongoing aftercare, maintenance and inspection program for all 18 landfills known to council.	0.1	0.4	-0.3	0.1	M

Table 8 Implementation plan

Strategy	Priority	Responsibility	Performance indicator	Timeframe				
				2018	2019	2020	2021	2022
WASTE AVOIDANCE AND MINIMISATION								
Provide community leadership through local groups and businesses.	H	Waste Management Coordinator	Objective 5	✓	✓	✓	✓	✓
Support the community in the transition from using single use plastic bags	M	Resource Recovery Officer	Objective 5	✓	✓			
Support the community in implementing plastic free July	M	Resource Recovery Officer	Objective 5	✓				
Investigate options to host annual buy, swap or sell of unwanted household items.	H	Waste Management Coordinator & Resource Recovery Officer	Objective 3,5 and 6	✓	✓	✓	✓	✓
COMMUNITY EDUCATION AND AWARENESS								
Develop and implement a waste education strategy	M	Resource Recovery Officer	Objective 3, 5 and 6		✓			
Conduct community tours (for residents and schools) at waste, organics and recycling facilities.	M	Resource Recovery Officer	Objective 1,2,3,4,5 and 6		✓	✓	✓	✓
Develop standardised signage on entry to towns for tourists about the municipality’s waste commitment	H	Resource Recovery Officer	Objective 1	✓				
Further develop ongoing media and communication material on key waste issues	H	Resource Recovery Officer	Objective 1	✓	✓	✓	✓	✓
Support community groups to implement waste	H	Resource Recovery Officer	Objective 5	✓	✓	✓	✓	✓

programs and initiatives								
Design waste education material for tourist information centres	H	Resource Recovery Officer	Objective 1 and 6	✓				
COLLECTION AND RECOVERY								
Implement a general waste audit to check for electronic waste and recyclables	M	Resource Recovery Officer	Objective 1, 3,4,5 and 6	✓				
Assess potential for expansion of organics collection services to households and small businesses in rural towns.	M	Waste Management Coordinator	Objective 2		✓			
Review public place bins and match waste bins with recycling	H	Waste Services Team Leader	Objective 1,4,5 and 6	✓				
Review public place station signage	H	Waste Services Team Leader	Objective 1,4,5 and 6	✓				
Trial organic waste bins in parks and CBD	M	Waste Services Team Leader	Objective 1,4,5 and 6		✓			
Consider a rewards based system for those who are actively trying to minimise their waste.	H	Waste Management Coordinator	Objective 3 and 5		✓			
Investigate a weekly recycling option for the next contract	H	Waste Management Coordinator	Objective 1				✓	✓
Work with real estates to solve waste issues associated with rental properties	H	Resource Recovery Officer	Objective 1,3,4,5 and 6	✓	✓	✓	✓	✓
Investigate the potential to offer a weekly organics bin collection to the rural townships	H	Waste Management Coordinator	Objective 2		✓			

Oxley, Milawa and Glenrowan								
Offer free food waste disposal at the Wangaratta transfer station	H	Waste Services Team Leader	Objective 4		✓			
Investigate communal compost bins for rural communities wanting to divert their food waste	H	Resource Recovery Officer	Objective 4 and 5	✓				
Work in conjunction with other Councils to offer viable food and garden processing services	H	Waste Management Coordinator	Objective 2	✓	✓	✓	✓	✓
Divert of polystyrene from landfill	H	Waste Management Coordinator	Objective 3	✓				
Further separation of treated timber from untreated timber to be recycled	H	Waste Services Team Leader	Objective 3		✓			
Upgrade electronic waste collection facilities	H	Waste Services Team Leader	Objective 3		✓			
Provide organic bins at events	M	Resource Recovery Officer	Objectives 4 and 5	✓				
Increase staff at the Wangaratta Transfer Station	H	Waste Management Coordinator	Objective 1 and 3	✓				
Investigate options to reuse, upcycle and repair hard waste	H	Resource Recovery Officer	Objective 3,5 and 6				✓	
Engage with businesses on solutions to current waste issues	H	Resource Recovery Officer	Objective 1,2,4 and 5	✓	✓	✓	✓	✓
Re-engage with fast food take away cafes and restaurants around	H	Resource Recovery Officer	Objective 1,2 and 3	✓	✓	✓	✓	✓

packaging of take away food								
Write a business waste handbook	M	Resource Recovery Officer	Objective 1,3,4,5 and 6		✓			
COLLECTION AND RECOVERY								
Investigate viable 'pre-sort' infrastructure at the landfill to improve resource recovery.	M	Waste Management Coordinator & Team Leader Landfill	Objective 2					✓
Consider future options for Bowser Landfill as a waste transfer station or general waste sorting facility.	H	Waste Management Coordinator	Objective 2					✓
Engage a consult to re design the Wangaratta Transfer Station	M	Waste Management Coordinator	Objective 2				✓	
Investigate local solutions for soft plastics	H	Waste Management Coordinator	Objective 2			✓		
Conduct a feasibility study of Eldorado Landfill rehabilitation	M	Waste Management Coordinator	Objective 2	✓				
Develop rehabilitation plans for 8 landfills requiring rehabilitation	M	Waste Management Coordinator	Objective 2				✓	
Develop ongoing aftercare, maintenance and inspection program for all 18 landfills known to council.	M	Waste Management Coordinator	Objective 2		✓			

7.2 Community Waste Survey September 2017

Urban and Rural residents survey results

The survey posed a series of 22 questions in relation to Council's waste services and possible future options for the treatment of waste in the Rural City of Wangaratta. A total number of 406 residents completed the survey of which 62% were located in urban Wangaratta and the remaining 38% were located either in a rural township or in a rural location.

The main themes coming out of the survey were:

- Issues with the three bin system
- Organics collection for rural residents
- More education
- Plastic pollution
- Transfer station use and future use
- Bowser Landfill reducing waste

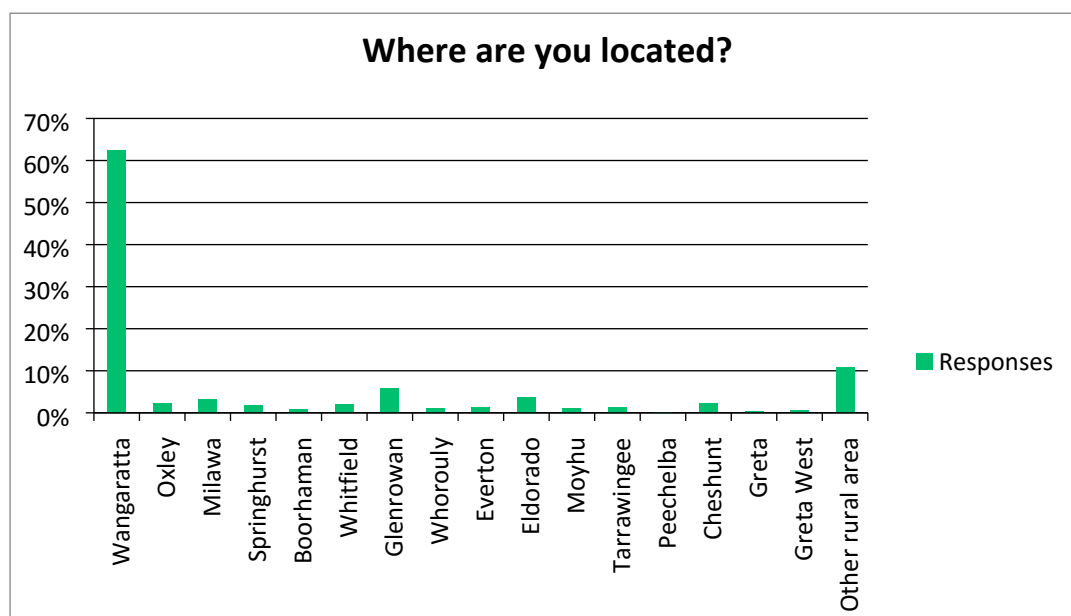
Respondents were asked their location in order to determine the representation of both urban and rural communities.

- 406 people completed the survey of which;
- 253 respondents were located in urban Wangaratta and;
- 153 respondents were located in rural areas.

Council's kerbside waste collection system currently services approximately 4000 rural households therefore 3.8% of the rural population completed the survey. The results also indicate that nearly all rural towns participated, with the exception of Peechelba. Glenrowan was the second largest response from a rural township with 24 people completing the survey.

Council provides a kerbside waste, recycling and organics collection to approximately 9000 people in urban Wangaratta therefore 2.8% of the urban population completed the survey. The survey also gauged an understanding of how many people were living in the respondent's household. The results show that 44% of respondents had 2 people per household, 19% had 4 people per household, 12% had 1 person per household, 11% had 3 people per household, 11% had more than 4 people per household and 3% preferred not to say.

Figure 10 **Waste Survey Results – Location of Residents**



Questions were asked about composting garden and food waste in order to find out what residents are currently doing with their organic waste. This question was answered by urban Wangaratta residents that have a weekly organics kerbside waste service. The results indicated that 63% of people use Council's organics kerbside collection for all organic waste and a further 25% of people use a combination of the Council's organics bin and home composting. A small segment of respondents (7%) use composting as their only form of recycling their organic waste. An even smaller percentage (4%), said they don't use the bin and they do not compost. The results indicate there is strong support in recycling food and garden waste by residents within urban Wangaratta. When people were asked about their attitude towards composting 231 (58%) stated they compost even if it requires additional effort.

A further question was designed to gauge how many compostable bin liners are used within a week. The results show (Figure 11) that on average 2-3 compostable liners are used per week per household. Based on this information a roll of 150 compostable liners should last 45% of households a year. The next highest percentage (17%) compostable liners are used was 4 a week, which would see a roll of 150 used within 8 months. Equally to this the 5+ compostable liner usage was the same percentage as those using 4 compostable liners a week.

Figure 11 Waste Survey Results – Compostable Liners Usage



There were a number of questions that were designed around gauging the community's attitudes, beliefs and general response to the three bin system. The results indicated that 94% of people when asked, either strongly agreed or tended to agree that reducing waste and increasing recycling through the three bin system bins is important. When asked 'Why do they feel this way?' the top response was 'because increasing recycling and composting reduces landfill' with a total of 215 out of 238 respondents choosing this answer.

The final question around the three bin system was about any issues residents had experienced with the three bin system. Most people (67%) stated they didn't have any issues with the bin, a small percentage (5%) of people had issues but were able to resolve them and 3% of people were unsure if they had any issues. However, 25% of people stated they still have issues with the three bin system.

The open response to this question indicated that there are still issues around bin capacity of both the red and yellow lidded bins as well as frequency of the red bin (general waste) collection. These responses align with the recent North East Waste and Resource Recovery Group (NEWRRG) audit data results (Table 2), which indicated that there was an issue with overfull bins and that the majority of the material found in overfull bins was either recyclable or organic material.

Figure 12 **Waste Survey Results – Issues with the Three Bin System**

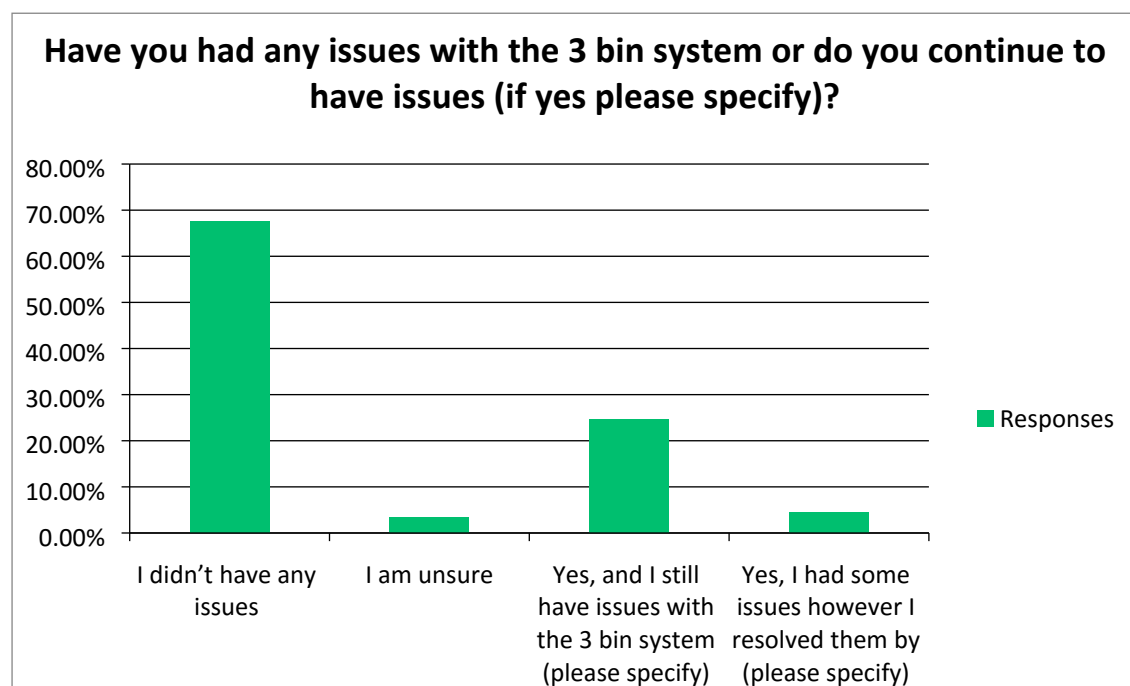


Table 9 **NEWRRG BIN THREE BIN AUDIT– Composition of the General Waste Bin**

Material found in 125 red general waste bins	Average weight in Kgs
Paper/Cardboard	15.92
Glass containers	5.16
Plastic containers (1-7)	10.01
Steel containers	2.73
Aluminium (containers, foil)	2.05
Steel	5.68
Food (fruit, veg, meat, seafood, tea, coffee, dairy)	76.49
Garden/ vegetation	26.73
Other compostable	8.37
Other putrescible	13.40
Wood/ timber	5.44
Plastic films	24.22
Other rigid plastics	11.59
Clothing/ textiles	13.25
Hazardous material	9.18
Other waste (not recyclable)	72.92

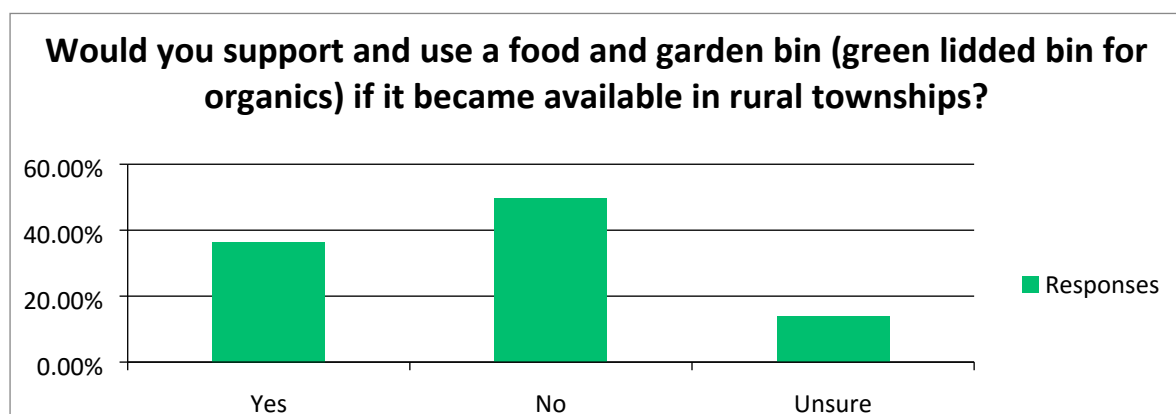
Rural Residents – Organics specific questions

Of the 406 residents who completed the survey, 153 were located in a rural area or in a rural township. Those residents who answered from rural town areas made up 27% of those completing the survey. Followed by 11% that were located in other rural areas.

The following survey questions were directly related to the rural residents, asking them what they currently do with their food waste and whether they would support the introduction of the third bin system. When residents were asked if they composted, 73% said yes and 27% said no. Those who answered no were then asked what they did with their food waste. It was a 50/50 split between putting their food waste in the garbage bin and feeding food waste to animals.

When residents were asked whether they would support and use a food and garden organic waste bin if it became available, it was another close response with 75 people (49.67%) saying no and 55 (36.42%) people saying yes. There was also some uncertainty with 21 (13.91%) of residents stating they were unsure.

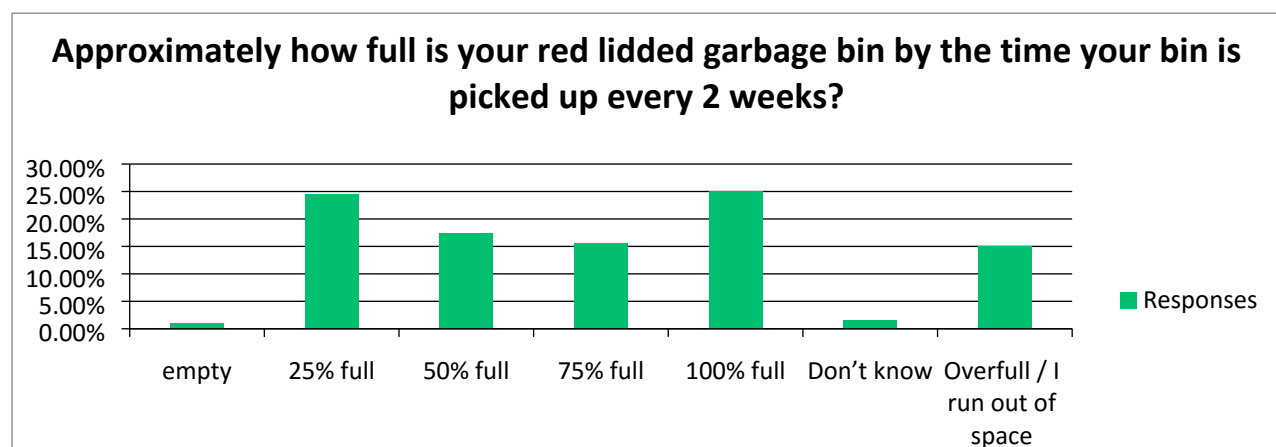
Figure 13 *Waste Survey Results – Organics bins in the rural areas.*



Both Rural and Urban residents were asked how full their bin was at the end of the fortnight. The results were fairly evenly spread, 24% of residents stated their bin was 25% full at the end of the fortnight. While on the opposite side of the spectrum 25% of residents said their bin was 100% full, and 15% of residents stated they ran out of space and had overfull bins.

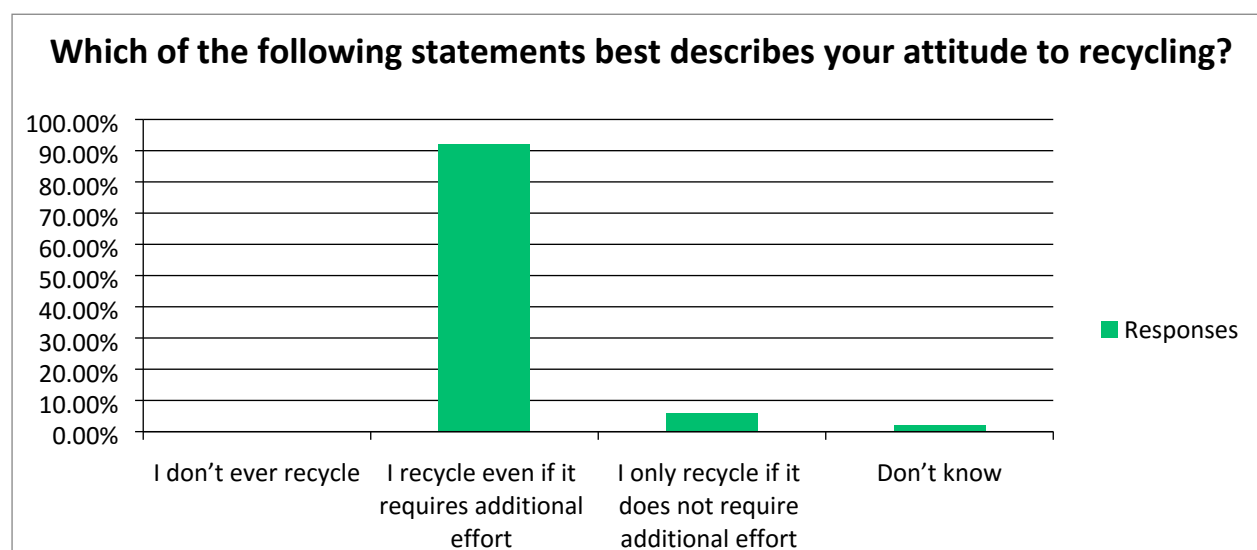
Residents were also asked about their recycling bin and the percentage of which it is filled at the end of each fortnight. A majority of the residents filled their bin between 75-100%, while 10% of those completing the survey said that they run out of space and had overfull bins. This is similar to the NEWRRG bin audit results showing on average that 71% of bins are full.

Figure 14 Waste Survey Results – percentage of red general waste bin filled



Residents were asked if they had a larger 360L recycling bin, the results indicated that it was almost a 50/50 split between those who had a 360L (43.88%) and a 240L (45.15%). Residents were then asked which statement best describes their attitude towards recycling and a majority (92%) of residents responded they will recycle even if it requires additional effort.

Figure 15 Waste Survey Results – Attitude towards recycling



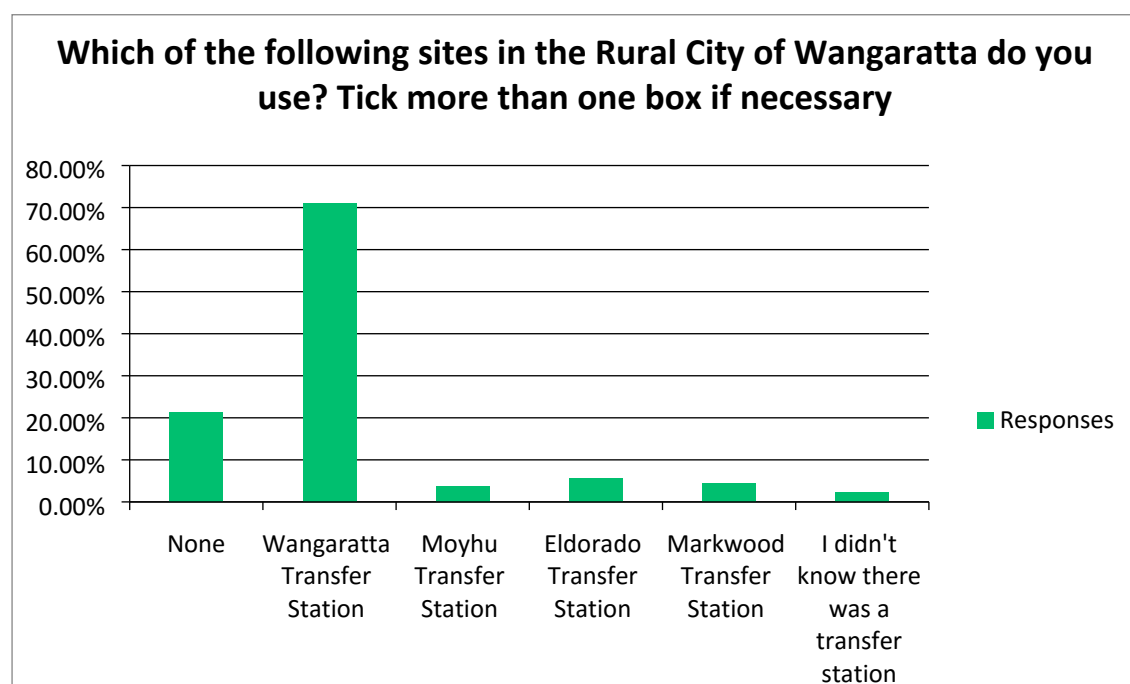
Transfer Stations

A series of questions were asked around transfer stations use, services and their importance. Currently there are four transfer stations, one based in Wangaratta and three located in rural areas (Markwood, Eldorado and Moyhu). Residents were asked which transfer station they used, and the results show that Wangaratta had the highest attendance out of the four transfer stations, followed by Eldorado, then Markwood and finally Moyhu. Residents were asked how many times a year they used the transfer station with the average result being a couple of times a year (57.76%).

The services on offer at the transfer station were rated either very important, fairly important, not at all important, N/A don't use, didn't know about it and uncertain. A majority of people rated the following services as very important or fairly important;

- Free drop off of paint, household batteries, florescent lamps (CFLs)
- Free drop off of motor oil
- Free drop off of empty farming chemicals containers
- Free drop off of green waste in November
- Free mulch collection
- Free drop off of unwanted electronic items
- Free drop off of scrap metal
- Free drop off of mixed (yellow lidded bin) recycling
- Free hard waste voucher provided in annual rates notice

Figure 16 **Waste Survey Results – Transfer Stations**



Plastic bags and general waste reduction

The community were asked if they would support the phase out of single-use plastic bags. This received huge support with 75% of respondents voting yes, 18% said no and 7% were unsure.

Council also posed the question 'Should Wangaratta Phase Out Plastic Bags?' and 'If single use plastic shopping bags were banned, what alternative bags would you prefer to use?' on the 'Our Say' section of the website on two separate occasions (after the announcement by State Government that it would be phasing out plastic bags).

This also received huge support with 88% of people 'liking' ideas that were supportive of phasing out plastic bags. The most popular ideas were: 'I completely support phasing out single use plastic shopping bags, it's working in other towns around Australia so let's get cracking on it!' and 'We have the wonderful volunteer project Boomerang Bags sewing cloth bags from recycled material in Wangaratta. Please support them and likeminded projects and don't allow supermarkets just to go to heavier plastic bag'. This is not a solution as these bags don't break down any better than the thinner ones. Encourage consumers into using and re-using cloth bags with a small discount. Force supermarkets to invest in the manufacture of strong, reinforced-based recycled paper bags rather than heavy plastic. No more plastic. People just need to break old habits and change their behaviour for the sake of our environment, otherwise be charged for recycled paper bags. Maybe signs in the car parks and in entrances - "Have you got your shopping bags?" might help?

Furthermore when the community were asked what they thought was the best way to reduce waste to landfill, the most popular response was increased education, improve recycling facilities and weekly collection of recycling bins.

Commercial Businesses

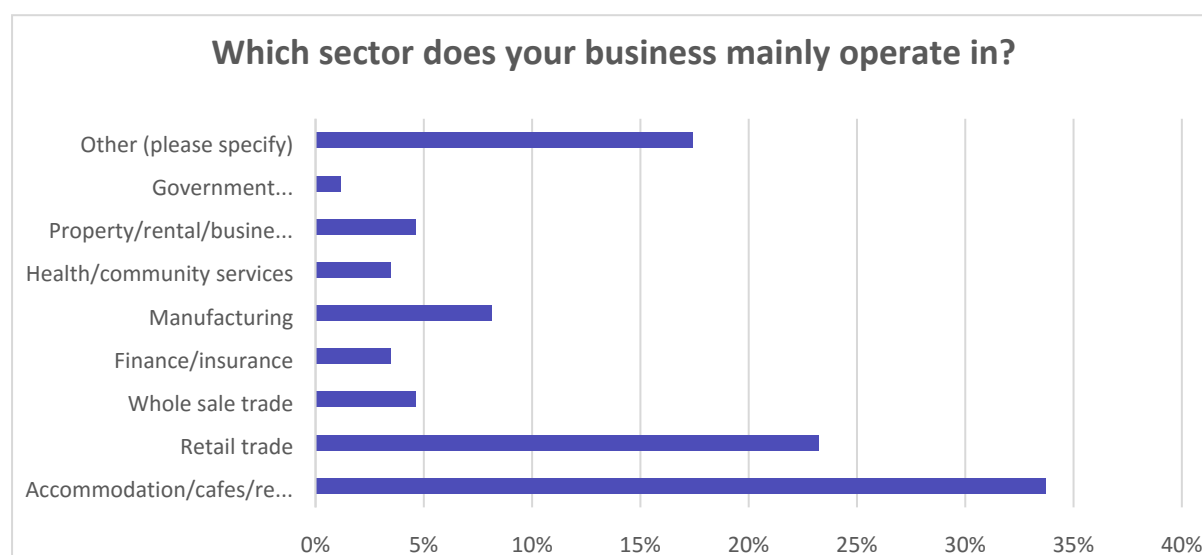
A dedicated waste survey was developed targeting small businesses in the Rural City of Wangaratta to assess small businesses waste needs. The results indicated that 119 businesses completed the online survey, with the majority of businesses completing the survey being located in urban Wangaratta (61%), while 39% were located rurally. The businesses completing the survey operate in a variety of different sectors. Most businesses completing the survey had between 5 and 20 full time employees.

Table 10 *Business survey results – Sector of operation*

Accommodation/cafes/restaurants	33.72%
Retail trade	23.26%
Wholesale trade	4.65%
Finance/insurance	3.49%
Manufacturing	8.14%
Health/community services	3.49%
Property/rental/business services	4.65%
Government	
administration/defence	1.16%
Other (please specify)	17.44%

According to the results 33.82 percent of business use the organics bin in urban Wangaratta, this result correlates to the number of people completing the survey on behalf of the accommodation/cafes/restaurant sector. This is not unusual given food organics recycling is compulsory to businesses operating under a food and handling licence under Council's Waste Charge Policy.

Figure 17 *Waste Survey Results – Business split between urban and rural*



Rural businesses were asked whether they compost their food and garden waste, with the results showing that 47.5% answered yes and 52.5% answered no. To further investigate this answer businesses were asked whether they would support a food and garden waste bin if it was available in the rural townships. With the results showing 52.5% indicating that they would support a food and garden waste bin, 10% were unsure and those already composting were decidedly against the idea answering no (37.5%).

Businesses were asked whether they currently recycled with a strong response of 97% businesses indicating yes. Businesses were also asked to define the other waste services they had, with a majority of businesses using Council services (see table below).

Table 11 *Business survey result – Waste services used by local businesses*

Answer Choices	Responses
Council's yellow lidded recycling bin	77.14%
Council's green lidded organics bin	19.05%
Council's red lidded garbage bin	73.33%
Other mixed recycling service through a recycling contractor (i.e. skip bin) or at the transfer station (i.e. glass bottles, aluminium cans, juice boxes, aluminium foil, plastic bottles and containers)	12.38%
Other garbage service through a waste contractor (i.e. skip bin)	26.67%
Office paper recycling through a recycling contractor or at the transfer station	23.81%

Cardboard recycling through a recycling contractor or at the transfer station	37.14%
Soft plastic recycling (i.e. plastic that can be scrunched into a ball such as film, cling wrap, bubble wrap, frozen food bags, plastic wrappers, plastic bags) at the transfer station	10.48%
Hard plastic recycling (i.e. plastic with recycling symbols 2, 4, 5 including buckets, garden pots, storage containers, milk crates, bread crates and soft drink crates) at the transfer station	5.71%
Food and garden recycling (i.e. compost bin, worm farm, take home and feed food scraps to animals)	27.62%
Glass recycling through a recycling contractor or at the transfer station	10.48%
Timber recycling through a recycling contractor or at the transfer station	9.52%
Metal recycling through a recycling contractor or at the transfer station	26.67%
Electronic items recycling through a recycling contractor or at the transfer station (i.e. anything with batteries or a plug/cable)	15.24%
Mixed recycling through a recycling contractor or at the transfer station (i.e. glass, paper, plastic, metal, cardboard)	6.67%
Baler	2.86%
Compactor	1.90%
Food waste dehydrator	0.95%
Composter	5.71%
None of the above	2.86%

Businesses were also asked if they had any materials that they didn't know what to do with. The majority (71%) said no, with a small percentage (17%) stating they did and an even smaller percentage (12%) saying they were unsure. Some of the items business were either unsure or had issues with are:

- ✓ Printer cartridges
- ✓ Soft plastics
- ✓ Used oil
- ✓ Styrofoam boxes
- ✓ Batteries
- ✓ Glass
- ✓ Hard plastic flower pots
- ✓ Large amounts of soft plastics
- ✓ Shredded paper
- ✓ Electronic waste
- ✓ Hard waste

When businesses were asked if they needed more information, advice and support on reducing waste and increasing recycling, 42% said yes, 48% said no and 10% were unsure. Upon further questioning on attitudes towards waste, it was clear that reducing waste and increasing their recycling and composting was important to the majority of businesses (75%). To gauge further understanding of the barriers that small businesses face they were supplied a variety of answers to choose from. The results showed that 40% of businesses have nothing stopping them recycling, followed by 30% stating the frequency of bin pickups is a barrier for them. 18% of businesses stated that lack of time/staff

resource to do better with their waste, while a further 18% stated that there is a lack of recycling services available to their business or in their area.

Businesses were asked for feedback how Council could improve waste services and resource recovery. A variety of different answers were received but in summary the suggestions equated to:

- ✓ Staff education/workshops
- ✓ Frequency of collections
- ✓ Polystyrene recycling option
- ✓ Convenient battery disposal
- ✓ Glass recycling
- ✓ Transfer station options
- ✓ Green bin to rural areas
- ✓ More information/consultation on waste

7.3 Waste Strategy Review Community Workshops Raw Data Report 2017



Rural City of Wangaratta

Waste Strategy Review – Community Workshops Raw Data Report





Report prepared by:



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8. Introduction

This Raw Data Report brings together the data gathered during the three community workshops developed by the Rural City of Wangaratta and facilitated by The Regional Development Company on the following dates:

- Tuesday 5th December 2017 (pm)
- Thursday 7th December 2017 (am)
- Thursday 7th December 2017 (pm)

Each workshop was conducted over two hours and the purpose of the workshops were to:

- Inform residents of the Waste Management Strategy 2013 and progress
- Ascertain perceptions of progress, what's worked, barriers/challenges, and ideas
- Seek input into the development of the new Waste Management Strategy – specifically six key themes
- Provide next steps in development and adoption of new Strategy 2018 - 2020

9. Perceptions of Progress

(Other strategies / themes / previous vision / mission from last plan)

9.1 Community education – especially waste reduction and diverting waste from landfill

What's worked

- Attitude of local media. Publicised complainers and wingers initially now seem supportive
 - Boomerang bags
 - Plastic free challenges
 - Boomerang bag promotion
 - New labels on bins – with up to date info eg. soft plastics
 - Visual picture very valuable “war on waste”
 - Rewarding good recycling habits was well received by the public
 - Positive reinforcement of good recycling eg. tags with compliments on waste bins
 - Free days of months targeting particular stream are great
-



Barriers / Challenges

- Better signage to streetscape
 - Recycle bins, eg. takeaway coffee cups vs lids
 - Confusion about different types of plastics (Council versus RedCycle) is a real issue to be overcome
 - Isn't there always going to be small percentage who will not recycle? How to impact their behaviours – more signage on their bins? Can we fine them?
 - Cynicism – it all goes into landfill anyway!
 - Apathy!
 - Willingness to engage (“not my problem”)
 - Laziness
 - People not sure of what is actually recyclable
 - Engage with the community and why aren't people recycling? How to?
 - Making it easy to understand and do
 - Many people don't know what can be taken to transfer station to be recovered
 - Lack of interest
-



Comments

- Use locals as your champions
- How do you address away from home / transient population? Events / tourism etc
- Better promotion of good work that has been done
- Tenants don't get the free transfer station vouchers
- Rubbish dumped at the op-shops at weekends is another issue
- A lot of people don't know it is "RedCycle" at Coles as it is not red
- Soft plastics – why is there no promotion of these new facilities? "I have never heard of this before"
- Education re environmental implications, Earth's limited resources and consumerism
- Community engagement, need to go to group ie. St Johns

Ideas / Suggestions

- Soft plastics
 - definition
 - sorting
 - signage / education
- Make greater use of national recycling week > need bigger Council 'event' budget so more engaging events can happen
- Bin liners? Education
- Also, should focus on waste avoidance
- Getting all local business on board
- More community education prizes
- Inter-organisational collaboration eg. RCOW and Northeast Health Wangaratta
- Auditing bins (man with torch) is a story that has been shared widely and appears to have had a deterrent effect
- Promote and support repair café – educate!
- Family involvement – education
- Take tours to landfill
- Is there still a Regional Education Officer at NevRwaste
- Could there be 'ambassadors' in businesses and offices and community facilities, eg. churches
- Replace sign on all public red bins – not 'waste' but landfill
- Regular articles in Chronicle outlining the how, where or when of recycling and landfill
- Name the bins like 'smoking' packaging ie. red bin land fill
- Reaching out to each house
- Grow the understanding of "adults" of their duty of care to children
- "Too hard" is not an excuse
- Education in workforces
- More bins available in public place
- Actively encourage community awareness and education to reduce land fill and waste to leave something for future generations
- Reaching out to each household
- More advertising of services available

9.2 Creation of Waste Recovery Centre at Bowser



What's worked

- Good idea!
- Leaders in soft plastic "let's build the infrastructure now to process softs" (not ship away)

Comments

- Recycling at transfer station in Wangaratta works well because staff there are particularly helpful
- Incentive for waste reduction eg. only put out red bin once every other month?
- Fantastic that have approval for organic waste at Bowser – well done!

Ideas / Suggestions

- Think this would make sense increase resource recovery
- More information about it
- More celebration in media about this
- Education excursions for schools
- Leaders in soft plastic "let's build the infrastructure now to process softs" (not ship away)

9.3 Rationalise transfer stations

What's worked?

- Financial benefits good increased resources to other sites
- Reduction in cost is beneficial for future investment

Barriers / Challenges?

- Closing rural transfer stations > have the main transfer stations been supported by having longer opening hours? How do rural residents get access?
- At Hamilton Park, we stockpile burn community green waste. Ideas for this?
- Rural people dumping or burning of waste because there is no other easy option
- Quality of green bags for caddies - number of people come back saying unable to use
- Smaller properties in rural areas need green bins. The red bins for green waste as well each fortnight is not adequate when burying is not possible

Comments

- Happy to go there. Costs less if the recyclables are separated at Wangaratta
-



- Getting soft plastics right
- Supplying commercial / tourist business with options
- Soft plastic recycling needs to be all inclusive at transfer station
- Has saved dollars
- Timber not properly recycled

Ideas / Suggestions

- How well is the soft plastics incentive being advertised?
- Rural towns need periodic pick-ups of recyclable materials such as hard plastics, e-waste etc
- Polystyrene disposal?
- Soft plastic at the transfer station – where to?
- Recycled back into Wangaratta, ie. benches
- Need more information on what can be taken / recycled at Wangaratta transfer station
- Able to apply for smaller bin discount
- Not all need such a large bin
- Are people willing to pay for bin liners?

9.4 Organics collection service – third bin for Wangaratta urban area

What's worked?

- Organics bin is very well used in my neighbourhood (evidence of take up of this initiative)
- Great yes!
- Fantastic initiative, many thanks
- Fantastic, recycle most of our waste back into our soil
- Has worked well
- People are using it
- Worked well – well done
- Large green bins are excellent
- Free green bin liners
- Kitchen planners
- Building in green bins to kitchen waste

Barriers / Challenges?

- Plastic bags still going in these bins. We won't stop this until we get rid of plastic bags
- Plenty of community education needed
- Getting everyone on board

Comments

- We are out of town and try to mulch / compost all green waste (no green bin)
 - Green bins for rural food businesses (ie. Milawa) and opt in for households
-



- Very good service
- Keep going and promoting
- Awesome introduction
- Brilliant but need more information regarding dog faeces collected – can it go in the garden?
- Grant initiative very positive
- Reduced waste significantly
- Good for environment to reuse organics
- Dog waste into organics bin? Or in compostable bags?

Ideas / Suggestions

- Educate people re composting
- Recognition that at home composting is the best option
- Other townships options for commercials particularly organics
- New compost facility to produce usable product for farmers, gardeners?
- Extend it to all residents in Rural City of Wangaratta

9.5 Increase life of Bowser landfill

What's worked?

- Reducing need to build a new one? Saving ratepayers dollars
- Waste going to landfill reduced by 33%
- Good initiative
- Initiative of staff at Rural City of Wangaratta

Barriers / Challenges?

- People not separating out plastic from green waste
- Are people going to use it as an excuse to keep producing waste?
- Ignorance

Comments

- Challenge is to provide greater life to landfill “zero” waste
 - I hope the extension of the life of our landfill doesn't stop further work being done to reduce waste
 - Still needed at the moment
 - Fines for incorrect waste in bin
 - Better use being made of recycled concrete etc
-



Ideas / Suggestions

- Moving transfer station to Bowser? Encourage further resource recovery
- Maybe could have a user pays model to encourage waste avoidance, ie. cheaper bin pick up if you have monthly pickups
- Build it higher to make more use of area
- Let people know what it looks like and how much it costs to bury rubbish
- Road side large waste pick up

9.6 360 litre (large) recycling bins for larger households

What's worked?

- Option 360L recycling bin (free) great initiative
- Encourages more recycling
- Works for larger families
- Has worked well but more organic bins are needed in public areas! Too many in CBD and showgrounds
- The large bin is great

Barriers / Challenges?

- Weight when full
- People not recycling properly
- Older and frail people taking out their bins
- Small households

Comments

- Interesting some initiatives re green bin I didn't know
- I think it encourages us to recycle more
- Good idea for those that need it
- The bin doesn't fit very well behind the car

Ideas / Suggestions

- Still very big – smaller bins might encourage waste avoidance
 - Where do we put aluminum / plastic tablet holders?
 - We need to know what should go in yellow bin and what is recycled at transfer stations
 - Reduce landfill bin size (rural areas were given bigger red bin – don't think that is necessary)
 - Polystyrene
 - Neighbourly help! System to make it easy to share when yellow bin full
 - Smaller bins for single households
-



- Education
- Fines for non-compliance
- Deposit back for cans and glass bottles

9.7 Zero waste – No waste to landfill by 2030

What's worked?

- Plastics free education organic bins
 - Organic bins
 - Organics collection
 - Soft plastics
 - Organics collection bins and tubs are excellent
-



Barriers / Challenges?

- Ignorance – certain percentage have to be regulated to act
- Technical aspects of recycling, eg. plastic types
- People confused
- Polystyrene needs to be collected and recycled
- Zero waste > is that realistic? There will always be some need for landfill to some extent
- Lack of clarity on packaging as to whether its recyclable or not
- People - do not believe recycling actually happens
- Community apathy – lack of understanding
- Limited ability of certain groups
- Unrecyclable packaging
- Supermarket packaging
- Laziness

Comments

- Encouraging consumers to support local businesses, rather than multinational supermarkets, gives us greater control over packaging
- Need to address waste quo, device could work in local businesses on waste avoidance issues
- Need to change attitudes to consumption, ie. people don't need so much "stuff"
- Great aim
- Review "red" bin charging system – including smaller bins
- Should be our aim! Reduce single use of plastic bottles
- Excellent aim!
- People need reminding that green liners for tubs are available and free. Good to have them available at the Library
- Woolworths / Safeway decision to ditch the free bag should help
- Community perception of costs associated with transfer station

Ideas / Suggestions

- Need more practical options for recycling to achieve this goal
 - It would be interesting to know what proportion of households don't put out bins of each type at each collection, ie. they don't have enough rubbish to do so
 - Educate at primary and again at school leavers year
 - Zero waste – state these programs in schools to educate the youth
 - Council has a unique position working with businesses, could you do more here?
 - Op-shops are big recyclers for the community. Does council liaise with these shops to address their issues and needs?
 - Use Chronicle to show timeline and successes towards 2020
 - Compostable liners for large bins
 - Lots of community education
 - Let's make everyone aware of this goal
 - Liners for larger bins
 - Need for more efficient and easier way to collect soft plastic at home
 - Organics for outlying towns, ie. Glenrowan
 - Education
-



- Soft plastics – increase easy and multiple collection points
- Green waste collections not everyone can get it to transfer station
- “US style” three bins system for public spaces
- Influence the commercial production of white goods to increase the life of the product to reduce hard waste land fill
- Education
- Mars Petcare “compactors
- A machine that strips cans and labels
- The man (Mark?) who spoke to us doesn’t train his workplace to Zero
- Support job creation project which encourages repair and recycling production rather than disposing and increasing land fill

9.8 Other

- CDL is not an answer
- Council and Community pressure on Government to introduce cash for cans / bottle system. Best way to do it?
- Incentivize waste avoidance – stop cross subsidy for waste services
- Will there be room enough / capacity / equipment to handle bottle / can collection and processing if cash for cans gets up and running?
- Wangaratta City has nowhere near enough recycling bins in public places – and no organics (or almost). Always full!
- I rent, and I have never had a voucher for the transfer station – how to fix this?
- Litter - dog waste
- Households need to be “hand fed” – they won’t take their rubbish to relevant sites, eg. transfer station
- Recycle bag dispensers in parks for dog waste – they do this in Melbourne for those who forget their bags
- No charge to locals to discourage illegal dumping
- Dog waste bags and stations
- Building site waste is a problem

10. Key Theme Discussion

10.1 Three Bin System

- Education will never reach all so people need telling
 - Greater efficiency relates to knowledge
 - People need to have back up plan when bins full
 - Users need to be accountable for use
 - Users need to understand the process and value to them and to the community of following this process
 - Users need to understand the limitations eg. cost of collection to rural and isolated areas
 - Formalise bin sharing eg. a sticker on a bin indicates you don’t mind others using
-



- Extension of three bins particularly green bins to commercial premises outside home city
- Recognition of “champion” recyclers particularly for businesses. A great advertiser for them.
- Nappies wash-vs-disposable? I’m not certain of which is better environmentally but assuming cloth nappies better. Then how about some education to decrease use of disposables
- Tourists in town have to feel they are entering an area that cares about its environment. Achieve this by signing at entry to North East, signing at venues, signing at town (big and small) entries. All material dealing with Wangaratta and district to carry environmental message and responsibility
- Bins at tourist points emptied and maintained more often
- Could there be an option for paying for a second red lid bin for big users?
- Incentives for people who don’t fill every fortnight
- Education / education!!
- Too hard to recycle for some people
- Community engagement
- Community connections – reaching out to minority groups / individuals, eg those with mental health issues, need support to engage in this sort of stuff
- Need the three-bin system in public places
- Clear pictures and words to show what goes in each bin – on the bin, on all bins eg. stickers
- Support continuing community education and enforcement if needed. Start focusing on how we could phase out the red bin
- Do we need smaller bins for small households (easy to manage for elderly) S, M, L
- Could introduce financial incentives (eg. smaller red bins with reduce cost)
- Let’s recycle more and use less
 - polystyrene
 - computers / electronics
 - coated cardboard
 - nappies
- Bigger red bins in rural areas does not encourage recycling
- Where do biodegradable nappies go?
- Are there biodegradable dog waste bags?
- Encourage more home composting
- Options on where to purchase unpackaged items
- Education on content
 - generic information
 - confusion around “plastic”
 - easy read collateral
 - ↵↶ # system education
 - more publicity to “Good News”
- Stories ie. Mars Petcare
 - options for “safe” disposal, ie. farms: scraps to animals; fire places
- Timing
 - general awareness around the types of waste ie. Prawns, smell factor
 - “penalties” for “low wasters”
- Public Options
 - bins matching the household system
- Better quality of plastic bags supplied for caddies
- Hard waste days
 - “re-use factor” when people collect it instead of at landfill;
 - more “free waste voucher / days”



10.2 Organic waste in rural areas

- Run education programs on recycling – composting organic waste. Other than taking all to transfer stations – mulch / composting
- Offer green bin system to small satellite communities (after survey / consultation) or a giant green bin in strategic places
- Quarterly large mulcher to smaller communities to mulch green waste to discourage burning or green waste in red bins
- Encourage “shared composting / worm farms”
- Have communal large worm farms / compost bins in smaller communities
- Our Hamilton Park Community have a “green waste” pile which is burnt once a year – this resource could go to compost / mulch
- Any larger wood could also go to a community free firewood point – anything too large to mulch
- My problem is noxious / seedy weeds that can be compost
- Engaging “hard to reach” residents (the ones who wouldn’t return the survey) by finding out first hand (door knocking) what they would use
- Definition needs to be made between farming families in rural areas and residential families in rural areas
- Is it possible to just do “in town” areas, ie. residential Glenrowan, Oxley, Milawa etc., for residents to opt in for green bin
- Have two options
 - green 360L recycling bin and 240L red bin and organics
 - green 360L recycling bin and 360L red bin
- Phase in 240L bin with weekly collection
- Why are bins full or overflowing? What is going in these bins (if green waste then this is an easy fix – organic bin)
- Smaller properties
- Access
 - green bins – same principles
 - greater consumption of organic product
 - weeding / pruning in spring etc
 - more space taken up in green bins than in red bins
 - lack of ability to incinerate
- Commercial waste mulching
 - encourage an entity to do this
 - ie. tree loppers being available to visit consumers to offer mulching services
 - Hire of mulching equipment owned by community. Insurance??

10.3 Plastic pollution

- Stop it at the source
 - Repair cafe – fix cheap appliances rather than throw away
 - Container deposit / return scheme > great idea
 - Ban plastic bags – shops levy bags
 - Paper bags in supermarket vegetables / fruit > need to encourage recycling
 - Plastic packaging can be replaced with paper
 - Coffee pods – what happens with them?
-



- Confusion re what it is
 - Lobby politicians, businesses, state/national Government
 - Wangaratta Council lead a movement to reduce packaging
 - People must feel Council is a leader and cares
 - Manufacturers must be responsible
 - State Government legislation to take goods from manufacturing to sale to use – collective to recycle
 - Soft plastics
 - loose plastic
 - bags
 - packaging
 - Red ReCycling
 - supermarkets are doing it
 - should be council / government initiatives
 - lots of drop off spots
 - Soft plastics
 - 4th bin longer periods for collection
 - products wrapped in plastic – federal government lobbying to ban
 - organic food needs a different way to identify and separate it from non-organic eg. string bags
 - Government needs to introduce initiatives
 - Community and school projects to get more people involved
 - Better labelling options
 - Polystyrene – local / regional recycling plant
 - Problems
 - bad smelling items eg. fish wrapping – cannot stay in bins for a long time
 - discarded rubbish on footpaths and along roadsides
 - education
 - work for the dole scheme???
 - Suggestions:
 - household soft plastic collection bin
 - public soft plastic bins
 - Federal Government intervention into packaging
 - raise the packaging problem with Local / State / Federal politicians
 - new petition – “scrap the wrap” – unwrap your packaging before you leave the supermarket
 - promote bulk buying and BYO containers
 - Shopping bag replacement
 - not offering bin
 - byo bag
 - offering boxes
 - Packaging
 - consumer (and business) refusal
 - education to achieve this
 - bulk food stores leading to decreased dollars for own container
 - Places to recycle soft plastics increase convenience of this eg. Coles / Woolworths
 - educate where and why
 - Bin liners?
 - Bin washing service?
 - Soft plastics - ignorance of how it works or that it exists
 - More education on soft plastics is required
-



10.4 Transfer Stations

- Fridges
 - free
 - used for raised garden beds etc
 - tip shop
- Alternative education, eg. don't own a printer, go to a local business who can print
- Accessibility – if you don't own a car / trailer
- Transfer station staffing – currently one - more staff could
 - ensure succession / retention
 - expand services eg. outreach and hard plastic collection
- Education
- Incentives – refund of bottles / cans
- Expanding the services transfer station
 - people love op shops / garage sales
 - tip shop
- Transfer stations are a resource which Council could use more, ie. support repair café which could be at transfer station
- Could there be a tip shop?
- Consider a social enterprise at the transfer station – could fix products and resell
- What next – strategy for next five years
- Signs at transfer stations to show what happens to waste resource eg. hard plastics to create benches. Could even have example(s) of the benches
- Further education about what happens with other waste resources
- Positive, “thank you”, gratitude messages for people using transfer stations, eg. reducing landfill
- ‘Pop up’ transfer stations in localities (where transfer stations have been closed, plus others, say twice per year, well promoted, so that waste can be dropped off at an appropriate facility or truck coming in
- Videos on social media, and at Victorian Government Centre
- Regular (twice per year) tours of transfer of stations and landfill sites (say at same time as ‘pop up’ above
- Add free drop off for timber
- If resources taken to transfer station are to be re-used, it should be made available for re-use
- Reduction in cost is beneficial for future investment
- Soft plastics – lots of people don't know how this works - more education on this
- Electronic vouchers for transfer stations, rather than papers
- Notification on the rates notice is too small
- Pickup of items from rural properties to avoid dumping
- One voucher per household (for renters) in addition to that with rates notice to owners
- Open free recycling days for larger items, electronic, white goods
- More actively advertise free waste disposal opportunities

10.5 Landfill



- Consider cost recovery
- Consider the tradeoff between cross-subsidies
- Incentivize recycling ie. “present” drop off at Christmas
- Quarterly / Biannual “E-waste / hard to recycle events” for rural areas
 - would reduce these items ending up in landfill
 - support zero waste
- Education – to bring the ‘waste story’
 - what happens to your rubbish journey to people
 - open peoples’ eyes to the impacts
- Need to be aware that the best way to reduce waste to landfill is waste avoidance
- Issues if rubbish has to be transported a greater distance – cost / pollution / etc
- Separate out polystyrene from landfill. This occurs at Wodonga Waste Station. The company that does this is “SUEZ”
- Organic bins a big plus
- More general advertising as to what can and can’t go in red bin
- Possible label on the red bin as to what can and cannot go in red bin
- Home collection of soft plastics
- Should be recycling bins alongside red bins in the community
- We need to accommodate all the recycling etc at the home site
- Aim for red bin to shrink gradually, and red bin is recycled by 2029
- Compostable liners for big red bins
- Three bin system excellent start
- Green liners excellent start
- Transparency as to where all the rubbish goes
- Community apathy
- Soft plastic collection from houses
- Education re contamination issues
- Innovative staff
- Fines – incorrect waste
- Ignorance
- Road side large waste
- Staff incentive to ensure waste is sorted
- Cost of visiting transfer station deters people, so this is why we see dumping
- Fines for garbage in incorrect bins
- Create job creation options for recycling
- Bring back “fix it skills”
- Actively lobby for white goods and electronic goods to have longer life – give incentive
- Deposit on cans and bottle return to be paid back increasing incentive to return recyclable waste – could be fund raising venture

10.6 Waste education

- Opt in waste audit – personalised at the household
- Tip shop – could double as education space
- Make better use of “events” budget in Council to promote recycling
- Recycle week excursions – utilise existing community groups
- All Council events (eg. La Dolce Vita) need to set a high standard, eg. only book food vendors that do not use disposable plastic utensils, plenty of biodegradable options are out there
- Repair Café – support and promote; run workshops for recyclables alongside repairing



- Stories from SA individuals and their recycling of bottles / cans
- Working with local businesses to provide correct bins for customers
- Educating staff
- Waste / recycling facts / tips printed onto paper bags at supermarkets as effort to decrease plastic bags
- Bin labels
- Visual impact “war on waste”
- Three bins
- Lack of understanding eg. plastic -vs- complex combinations
- Items can be multidimensional
- Transfer station
 - limited soft plastics
 - takes extra effort
- How do you engage with community?
 - just ask / door knock
 - community events
- Example Totally Renewable Yackandandah – good at engaging community
- Name on red public bin – “landfill” not “waste”
- Ambassador in businesses community groups
- Tours of tips, transfer stations, recycling centre
- Newspaper articles re how, when, where to sort rubbish
- Education re “big picture”
 - schools
 - home practices
- Incentives
 - community pride
 - family heroes
- Schools – Primary and Secondary – support our schools to recycle
- Bin labels with photos / pictures of what goes in / doesn’t go in
- Use music / drama to engage our community eg. Recycled String Band
- Movies / You Tube clips about how to recycle
 - can be made by students (Youth Council)
- Also educate about where landfill goes (why we recycle)
- Schools – taking interested schools to recycling centre / landfill / transfer station
- Workplace (waste job role) Sustainability Officer – advocate, in charge
- No waste days / recycling days – make it a competition (small prizes)
- Consequences of actions, eg. In _____ years it will look like _____
- Post on social media
 - video
 - photos
 - radio
 - local paper
 - advertisements
 - television
 - fines
 - cameras
- Needs balance in positive way eg. the sort of world we want to leave for future generations
- Council websites / easy access
 - easy English and multi-languages
 - personal contact available for one on one if needed
- Council could get education waste volunteers to



- go to workplaces / schools
 - events eg. PAC, Library
 - CBD (letter box dropping)
 - door knockers (disagreement with this one)
- Give examples of what happens to recycled waste – stories – pathways of product then relate to Wangaratta

11. Reflection

- Inspired – Council role to be a leader, eg. tourists to the area must get the feeling that environment is the key thing for the area “this is what we care about”
- “Caring” message to all in community (including rental tenants)
- Success breeds success inspired by current action / performance
- Celebration and spreading the message
- Motivational messages / boards of celebration
- Community connectedness and cohesion including all groups including in the Community (including minority groups)
- Support services eg. churches schools etc
- Plastic bags – function / purpose of bags at larger supermarkets can increase spontaneous purchases
- How to overcome supermarket and capitalise on boomerang bag success
- Need to think about actions / not taking plastic bags
- Good grounds for optimism with ideas raised
- Waste avoidance number one. Whole issue is bigger than Council but not beyond us as a Community.
- Look to other positive initiatives elsewhere people driven > influence councils
- Councils can act well above / to fund / source more responsively than other information levels of Government
- Needs to be easy for the average person to do things well eg. E-waste deposit at certain rural transfer stations
- A long way to go and people who are here are interested. How do we get the message out and encourage others?
- “War on waste” was such a change moment – community needs to see what’s really happening at the big picture level. What is the real pathway for all of our recycled products? Build confidence in home based efforts
- Worth getting community on board and celebrating achievements. Things are working.
- We should say well done Wangaratta using figures and savings
- Really like “Total Renewable Yackandandah” and how they are superb at community messaging
- Public bins need to be more visible, especially access to recycle bins
- “Ambassadors” in businesses and community groups to celebrate, share tips, making it easy for people to do their best
- What could be the role of Business Wangaratta?
- Question about small businesses and their habits – still room for engagement more efforts could be made with organics and recycling at major facilities, eg. Northeast Health Wangaratta and McDonalds
- Rural City of Wangaratta are doing a lot of great things eg. soft plastics at transfer station. So really important to spell out what is available. Good for community to have “Open Day”



/ sausage sizzle etc to let people know about the cycle, cells in Bowser, what happens to waste. Major community event!

- Red bin is the default bin so more education required
- Where Councils reduced red bin space and introduced green bin, there was a significant behaviour change, so it works. Is very much improved as people sort waste better. Change is happening
- Is there an option for smaller red bin and dollar reduction?
- Could be looked at in five years when current collection trucks are replaced (trucks currently designed for 240L bin)
- Could it be possible to provide incentive for reduced “lifts” per bin / household
- Governments to be serious about multiple packaging / wrapping. Packaging Covenant to be followed up
- Some of the positive rewarding things have been extremely valuable eg. thank you notes for great sorting of the bins
- “A caring attitude rather than punitive is important” could be the best slant for marketing
- To encourage young people, give them incentives to look at recycling as possible job options eg. matching with skilled tradies; skills to contribute back to the environment ie. turning recycling into income
- Whatever happens needs to be easy as possible and accessible as possible to do the right thing
- Educate on end products from recycling / reuse – positive message increasing care
- More advertising linked to major promotions eg. green waste month, Mens’ Sheds, Service Clubs to assist elderly people to move hard waste / electronic waste etc
- Would like to encourage trip to recycling centre
- Letter boxing for tenants and real estate agent kits for new tenants
- Shoes / clothing – where could these textiles go?
- Reused and repaired and recycled good opportunity to promote reuse
- Encourage sewing groups / putting together fabrics to make new products could be a project in the community, ie. create boomerang bags
- Leadership is key



12. Appendices

12.1 Appendix One: Agenda Sample

Rural City of Wangaratta



Waste Management Review

Date: 5 December 2017

Time: 6.00 pm – 8.00 pm

Venue: Wangaratta Library (Community Room), 21 Docker Street, Wangaratta

Purpose:

- Inform residents of the Waste Management Strategy 2013 and progress
- Ascertain perceptions of progress, what's worked, barriers/challenges, and ideas
- Seek input into the development of the new Waste Management Strategy – specifically six key themes
- Provide next steps in development and adoption of new Strategy 2018 - 2020

Agenda

Time	Topic	Facilitator/Activity
6.00 pm	Welcome Introduction to the purpose of the session and Facilitator	Council representative Facilitator
6.05 pm	Council to present: <i>Purpose of the Waste Management Strategy Review</i> <i>Key elements of the 2013 strategy and achievements, progress</i>	Courtney
6.20 pm	Q & A (facilitated)	Facilitator
6.35 pm	Perceptions of progress <i>Sticky note exercise – A3 sheets on wall</i> <i>Whole group conversation</i>	Facilitator Sticky notes Group summary/sort and theme



Time	Topic	Facilitator/Activity
6.50 pm	Key theme discussion <i>Findings in the research/review so far</i> <i>Ideas and themes for the 2018 waste management strategy</i> <ul style="list-style-type: none">▪ <i>Three bin system</i>▪ <i>Organic waste in rural areas</i>▪ <i>Plastic pollution</i>▪ <i>Transfer stations</i>▪ <i>Landfill</i>▪ <i>Waste education</i>	<i>Facilitator</i> <i>Three rounds</i>
7.50 pm	Summary and next steps	<i>Facilitator</i>
8.00 pm	Thanks, and close	<i>Council representative</i>



12.2 Appendix Two: Raw Data

Waste Strategy Review – 6 pm, 5 December 2017

Rural City of Wangaratta (RCOW)

15 attendees

Session 1 (of 3 Community sessions)

PERCEPTIONS OF PROGRESS

(Other strategies / themes / previous vision / mission from last plan)

Community education – especially waste reduction and diverting waste from landfill

What's worked

- Attitude of local media. Publicised complainers and wingers initially now seem supportive
- Boomerang bags
- Plastic free challenges
- Boomerang bag promotion

Barriers / Challenges

- Better signage to streetscape
- Recycle bins, eg. takeaway coffee cups vs lids
- Confusion about different types of plastics (Council versus RedCycle) is a real issue to be overcome
- Isn't there always going to be small percentage who will not recycle? How to impact their behaviours – more signage on their bins? Can we fine them?
- Cynicism – it all goes into landfill anyway!
- Apathy!
- Willingness to engage ("not my problem")
- Laziness
- People not sure of what is actually recyclable

Comments

- Use locals as your champions
- How do you address away from home / transient population? Events / tourism etc
- Better promotion of good work that has been done
- Tenants don't get the free transfer station vouchers
- Rubbish dumped at the op-shops at weekends is another issue
- A lot of people don't know it is "RedCycle" at Coles as it is not red
- Soft plastics – why is there no promotion of these new facilities? "I have never heard of this before"

Ideas / Suggestions

- Soft plastics
 - definition
 - sorting
 - signage / education



- Make greater use of national recycling week > need bigger Council 'event' budget so more engaging events can happen
- Bin liners? Education
- Also, should focus on waste avoidance
- Getting all local business on board
- More community education prizes
- Inter-organisational collaboration eg. RCOW and Northeast Health Wangaratta
- Auditing bins (man with torch) is a story that has been shared widely and appears to have had a deterrent effect
- Promote and support repair café – educate!

Creation of Waste Recovery Centre at Bowser

Comments

- Recycling at transfer station in Wangaratta works well because staff there are particularly helpful
- Incentive for waste reduction eg. only put out red bin once every other month?

Ideas / Suggestions

- Think this would make sense increase resource recovery

Rationalise transfer stations

Barriers / Challenges?

- Closing rural transfer stations > have the main transfer stations been supported by having longer opening hours? How do rural residents get access?
- At Hamilton Park, we stockpile burn community green waste. Ideas for this?
- Rural people dumping or burning of waste because there is no other easy option

Comments

- Happy to go there. Costs less if the recyclables are separated at Wangaratta
- Getting soft plastics right
- Supplying commercial / tourist business with options
- Soft plastic recycling needs to be all inclusive at transfer station

Ideas / Suggestions

- How well is the soft plastics incentive being advertised?
- Rural towns need periodic pick-ups of recyclable materials such as hard plastics, e-waste etc
- Polystyrene disposal?

Organics collection service – third bin for Wangaratta urban area

What's worked?

- Organics bin is very well used in my neighbourhood (evidence of take up of this initiative)

Barriers / Challenges?

- Plastic bags still going in these bins. We won't stop this until we get rid of plastic bags
-



Comments

- We are out of town and try to mulch / compost all green waste (no green bin)
- Green bins for rural food businesses (ie. Milawa) and opt in for households

Ideas / Suggestions

- Educate people re composting
- Recognition that at home composting is the best option
- Other townships options for commercials particularly organics

Increase life of Bowser landfill

What's worked?

- Reducing need to build a new one? Saving ratepayers dollars
- Waste going to landfill reduced by 33%

Barriers / Challenges?

- People not separating out plastic from green waste

Comments

- Challenge is to provide greater life to landfill "zero" waste
- I hope the extension of the life of our landfill doesn't stop further work being done to reduce waste

Ideas / Suggestions

- Moving transfer station to Bowser? Encourage further resource recovery
- Maybe could have a user pays model to encourage waste avoidance, ie. cheaper bin pick up if you have monthly pickups

360 litre (large) recycling bins for larger households

What's worked?

- Option 360L recycling bin (free) great initiative

Barriers / Challenges?

- Weight when full

Comments

- Interesting some initiatives re green bin I didn't know
- I think it encourages us to recycle more

Ideas / Suggestions

- Still very big – smaller bins might encourage waste avoidance

Zero waste – No waste to landfill by 2030



Barriers / Challenges?

- Ignorance – certain percentage have to be regulated to act
- Technical aspects of recycling, eg. plastic types
- People confused
- Polystyrene needs to be collected and recycled
- Zero waste > is that realistic? There will always be some need for landfill to some extent
- Lack of clarity on packaging as to whether its recyclable or not

Comments

- Encouraging consumers to support local businesses, rather than multinational supermarkets, gives us greater control over packaging
- Need to address waste quo, device could work in local businesses on waste avoidance issues
- Need to change attitudes to consumption, ie. people don't need so much "stuff"

Ideas / Suggestions

- Need more practical options for recycling to achieve this goal
- It would be interesting to know what proportion of households don't put out bins of each type at each collection, ie. they don't have enough rubbish to do so
- Educate at primary and again at school leavers year
- Zero waste – state these programs in schools to educate the youth
- Council has a unique position working with businesses, could you do more here?
- Op-shops are big recyclers for the community. Does council liaise with these shops to address their issues and needs?

Other

- CDL is not an answer
- Council and Community pressure on Government to introduce cash for cans / bottle system. Best way to do it?
- Incentive waste avoidance – stop cross subsidy for waste services
- Will there be room enough / capacity / equipment to handle bottle / can collection and processing if cash for cans gets up and running?
- Wangaratta City has nowhere near enough recycling bins in public places – and no organics (or almost). Always full!
- I rent, and I have never had a voucher for the transfer station – how to fix this?

KEY THEME DISCUSSION

Three Bin System

- Education will never reach all so people need telling
 - Greater efficiency relates to knowledge
 - People need to have back up plan when bins full
 - Users need to be accountable for use
 - Users need to understand the process and the value to them and to the community of following this process
 - Users need to understand the limitations eg. cost of collection to rural and isolated areas
 - Formalise bin sharing eg. a sticker on a bin indicates you don't mind others using
 - Extension of three bins particularly green bins to commercial premises outside home city
 - Recognition of "champion" recyclers particularly for businesses. A great advertiser for them.
 - Nappies wash-vs-disposable? I'm not certain of which is better environmentally but assuming clothe nappies better. Then how about some education to decrease use of disposables
 - Tourists in town have to feel they are entering an area that cares about its environment. Achieve this by signing at entry to North East, signing at venues, signing at town (big and small) entries. All material dealing with Wangaratta and district to carry environmental message and responsibility
 - Bins at tourist points emptied and maintained more often
 - Could there be an option for paying for a second red lid bin for big users?
-



- Incentives for people who don't fill every fortnight
- Education / education!!
- Too hard to recycle for some people
- Community engagement
- Community connections – reaching out to minority groups / individuals, eg those with mental health issues, need support to engage in this sort of stuff

Organic waste in rural areas

- Run education programs on recycling – composting organic waste. Other than taking all to transfer stations – mulch / composting
- Offer green bin system to small satellite communities (after survey / consultation) or a giant green bin in strategic places
- Quarterly large mulcher to smaller communities to mulch green waste to discourage burning or green waste in red bins
- Encourage “shared composting / worm farms”
- Have communal large worm farms / compost bins in smaller communities
- Our Hamilton Park Community have a “green waste” pile which is burnt once a year – this resource could go to compost / mulch
- Any larger wood could also go to a community free firewood point – anything too large to mulch
- My problem is noxious / seedy weeds that can be compost

Plastic pollution

- Stop it at the source
- Repair cafe – fix cheap appliances rather than throw away
- Container deposit / return scheme > great idea
- Ban plastic bags – shops levy bags
- Paper bags in supermarket vegetables / fruit > need to encourage recycling
- Plastic packaging can be replaced with paper
- Coffee pods – what happens with them?
- Confusion re what it is
- Lobby politicians, businesses, state/national Government
- Wangaratta Council lead a movement to reduce packaging
- People must feel Council is a leader and cares
- Manufacturers must be responsible
- State Government legislation to take goods from manufacturing to sale to use – collective to recycle

Transfer Stations

- Fridges
 - free
 - used for raised garden beds etc
 - tip shop
 - Alternative education, eg. don't own a printer, go to a local business who can print
 - Accessibility – if you don't own a car / trailer
 - Transfer station staffing – currently one - more staff could
 - ensure succession / retention
 - expand services eg. outreach and hard plastic collection
 - Education
 - Incentives – refund of bottles / cans
 - Expanding the services transfer station
 - people love op shops / garage sales
 - tip shop
 - Transfer stations are a resource which Council could use more, ie. support repair café which could be at transfer station
 - Could there be a tip shop?
 - Consider a social enterprise at the transfer station – could fix products and resell
-



Landfill

- Consider cost recovery
- Consider the tradeoff between cross-subsidies
- Incentive recycling ie. “present” drop off at Christmas
- Quarterly / Biannual “E-waste / hard to recycle events” for rural areas
 - would reduce these items ending up in landfill
 - support zero waste
- Education – to bring the ‘waste story’
 - what happens to your rubbish journey to people
 - open peoples’ eyes to the impacts
- Need to be aware that the best way to reduce waste to landfill is waste avoidance
- Issues if rubbish has to be transported a greater distance – cost / pollution / etc
- Separate out polystyrene from landfill. This occurs at Wodonga Waste Station. The company that does this is “SUEZ”

Waste education

- Opt in waste audit – personalised at the household
- Tip shop – could double as education space
- Make better use of “events” budget in Council to promote recycling
- Recycle week excursions – utilise existing community groups
- All Council events (eg. La Dolce Vita) need to set a high standard, eg. only book food vendors that do not use disposable plastic utensils, plenty of biodegradable options are out there
- Repair Café – support and promote; run workshops for recyclables alongside repairing
- Stories from SA individuals and their recycling of bottles / cans
- Working with local businesses to provide correct bins for customers
- Educating staff
- Waste / recycling facts / tips printed onto paper bags at supermarkets as effort to decrease plastic bags

REFLECTION

- Inspired – Council role to be a leader, eg. tourists to the area must get the feeling that environment is the key thing for the area “this is what we care about”
- “Caring” message to all in community (including rental tenants)
- Success breeds success inspired by current action / performance
- Celebration and spreading the message
- Motivational messages / boards of celebration
- Community connectedness and cohesion including all groups including in the Community (including minority groups)
- Support services eg. churches schools etc
- Plastic bags – function / purpose of bags at larger supermarkets can increase spontaneous purchases
- How to overcome supermarket and capitalise on boomerang bag success
- Need to think about actions / not taking plastic bags
- Good grounds for optimism with ideas raised
- Waste avoidance number one. Whole issue is bigger than Council but not beyond us as a Community.
- Look to other positive initiatives elsewhere people driven > influence councils
- Councils can act well above / to fund / source more responsively than other information levels of Government
- Needs to be easy for the average person to do things well eg. E-waste deposit at certain rural transfer stations



Waste Strategy Review – 10 am, 7 December 2017

14 attendees

Rural City of Wangaratta (RCOW)

Session 2 (of 3 Community sessions)

PERCEPTIONS OF PROGRESS

(Other strategies / themes / previous vision / mission from last plan)

Community education – especially waste reduction and diverting waste from landfill

What's worked

- New labels on bins – with up to date info eg. soft plastics
- Visual picture very valuable “war on waste”

Barriers / Challenges

- Engage with the community and why aren't people recycling? How to?
- Making it easy to understand and do

Comments

- Education re environmental implications, Earth's limited resources and consumerism
- Community engagement, need to go to group ie. St Johns

Ideas / Suggestions

- Family involvement – education
- Take tours to landfill
- Is there still a Regional Education Officer at NevRwaste
- Could there be 'ambassadors' in businesses and offices and community facilities, eg. churches
- Replace sign on all public red bins – not 'waste' but landfill
- Regular articles in Chronicle outlining the how, where or when of recycling and landfill
- Name the bins like 'smoking' packaging ie. red bin land fill

Creation of Waste Recovery Centre at Bowser

What's worked

- Good idea!

Comments

- Fantastic that have approval for organic waste at Bowser – well done!

Ideas / Suggestions

- More information about it
 - More celebration in media about this
-



- Education excursions for schools

Rationalise transfer stations

What's worked?

- Financial benefits good increased resources to other sites

Comments

- Has saved dollars
- Timber not properly recycled



Ideas / Suggestions

- Soft plastic at the transfer station – where to?
- Recycled back into Wangaratta, ie. benches
- Need more information on what can be taken / recycled at Wangaratta transfer station

Organics collection service – third bin for Wangaratta urban area

What's worked?

- Great yes!
- Fantastic initiative, many thanks
- Fantastic, recycle most of our waste back into our soil
- Has worked well
- People are using it
- Worked well – well done
- Large green bins are excellent
- Free green bin liners
- Kitchen planners
- Building in green bins to kitchen waste

Barriers / Challenges?

- Plenty of community education needed
- Getting everyone on board

Comments

- Very good service
- Keep going and promoting
- Awesome introduction
- Brilliant but need more information regarding dog faeces collected – can it go in the garden?
- Grant initiative very positive
- Reduced waste significantly
- Good for environment to reuse organics
- Dog waste into organics bin? Or in compostable bags?

Ideas / Suggestions

- New compost facility to produce usable product for farmers, gardeners?
- Extend it to all residents in Rural City of Wangaratta

Increase life of Bowser landfill

What's worked?

- Good initiative

Barriers / Challenges?

- Are people going to use it as an excuse to keep producing waste?

Comments

- Still needed at the moment
-



Ideas / Suggestions

- Build it higher to make more use of area
- Let people know what it looks like and how much it costs to bury rubbish



360 litre (large) recycling bins for larger households

What's worked?

- Encourages more recycling
- Works for larger families
- Has worked well but more organic bins are needed in public areas! Too many in CBD and showgrounds

Barriers / Challenges?

- People not recycling properly
- Older and frail people taking out their bins
- Small households

Comments

- Good idea for those that need it

Ideas / Suggestions

- Where do we put aluminium / plastic tablet holders?
- We need to know what should go in yellow bin and what is recycled at transfer stations
- Reduce landfill bin size (rural areas were given bigger red bin – don't think that is necessary)
- Polystyrene

Zero waste – No waste to landfill by 2030

What's worked?

- Plastics free education organic bins
- Organic bins
- Organics collection
- Soft plastics
- Organics collection bins and tubs are excellent

Barriers / Challenges

- People - do not believe recycling actually happens
- Community apathy – lack of understanding
- Limited ability of certain groups
- Unrecyclable packaging

Comments

- Great aim
- Review "red" bin charging system – including smaller bins
- Should be our aim! Reduce single use of plastic bottles
- Excellent aim!
- People need reminding that green liners for tubs are available and free. Good to have them available at the Library

Ideas / Suggestions

- Use Chronicle to show timeline and successes towards 2020
 - Compostable liners for large bins
 - Lots of community education
 - Let's make everyone aware of this goal
-



- Liners for larger bins
- Need for more efficient and easier way to collect soft plastic at home
- Organics for outlying towns, ie. Glenrowan
- Education
- Soft plastics – increase easy and multiple collection points

Other

- Litter - dog waste
 - Households need to be “hand fed” – they won’t take their rubbish to relevant sites, eg. transfer station
 - Recycle bag dispensers in parks for dog waste – they do this in Melbourne for those who forget their bags
-



KEY THEME DISCUSSION

Three Bin System

- Need the three-bin system in public places
- Clear pictures and words to show what goes in each bin – on the bin, on all bins eg. stickers
- Support continuing community education and enforcement if needed. Start focusing on how we could phase out the red bin
- Do we need smaller bins for small households (easy to manage for elderly) S, M, L
- Could introduce financial incentives (eg. smaller red bins with reduce cost)
- Let's recycle more and use less
 - polystyrene
 - computers / electronics
 - coated cardboard
 - nappies
- Bigger red bins in rural areas does not encourage recycling
- Where do biodegradable nappies go?
- Are there biodegradable dog waste bags?
- Encourage more home composting
- Options on where to purchase unpackaged items

Organic waste in rural areas

- Engaging “hard to reach” residents (the ones who wouldn't return the survey) by finding out first hand (door knocking) what they would use
- Definition needs to be made between farming families in rural areas and residential families in rural areas
- Is it possible to just do “in town” areas, ie. residential Glenrowan, Oxley, Milawa etc., for residents to opt in for green bin
- Have two options
 - green 360L recycling bin and 240L red bin and organics
 - green 360L recycling bin and 360L red bin
- Phase in 240L bin with weekly collection
- Why are bins full or overflowing? What is going in these bins (if green waste then this is an easy fix – organic bin)

Plastic pollution

- Soft plastics
 - loose plastic
 - bags
 - packaging
 - Red ReCycling
 - supermarkets are doing it
 - should be council / government initiatives
 - lots of drop off spots
 - Soft plastics
 - 4th bin longer periods for collection
 - products wrapped in plastic – federal government lobbying to ban
 - organic food needs a different way to identify and separate it from non-organic eg. string bags
 - Government needs to introduce initiatives
 - Community and school projects to get more people involved
 - Better labelling options
 - Polystyrene – local / regional recycling plant
 - Problems
 - bad smelling items eg. fish wrapping – cannot stay in bins for a long time
 - discarded rubbish on footpaths and along roadsides
 - education
 - work for the dole scheme???
 - Suggestions:
 - household soft plastic collection bin
-



- public soft plastic bins
- Federal Government intervention into packaging
- raise the packaging problem with Local / State / Federal politicians
- new petition – “scrap the wrap” – unwrap your packaging before you leave the supermarket
- promote bulk buying and BYO containers

Transfer Stations

- What next – strategy for next five years
- Signs at transfer stations to show what happens to waste resource eg. hard plastics to create benches. Could even have example(s) of the benches
- Further education about what happens with other waste resources
- Positive, “thank you”, gratitude messages for people using transfer stations, eg. reducing landfill
- ‘Pop up’ transfer stations in localities (where transfer stations have been closed, plus others, say twice per year, well promoted, so that waste can be dropped off at an appropriate facility or truck coming in
- Videos on social media, and at Victorian Government Centre
- Regular (twice per year) tours of transfer of stations and landfill sites (say at same time as ‘pop up’ above
- Add free drop off for timber
- If resources taken to transfer station are to be re-used, it should be made available for re-use

Landfill

- Organic bins a big plus
- More general advertising as to what can and can’t go in red bin
- Possible label on the red bin as to what can and cannot go in red bin
- Home collection of soft plastics
- Should be recycling bins alongside red bins in the community
- We need to accommodate all the recycling etc at the home site
- Aim for red bin to shrink gradually, and red bin is recycled by 2029
- Compostable liners for big red bins
- Three bin system excellent start
- Green liners excellent start
- Transparency as to where all the rubbish goes
- Community apathy
- Soft plastic collection from houses
- Education re contamination issues

Waste education

What worked

- Bin labels
- Visual impact “war on waste”
- Three bins

Barriers / Challenges

- Lack of understanding eg. plastic -vs- complex combinations
- Items can be multidimensional
- Transfer station
 - limited soft plastics
 - takes extra effort
- How do you engage with community?
 - just ask / door knock
 - community events

Ideas



- Example Totally Renewable Yackandandah – good at engaging community
 - Name on red public bin – “landfill” not “waste”
 - Ambassador in businesses community groups
 - Tours of tips, transfer stations, recycling centre
 - Newspaper articles re how, when, where to sort rubbish
 - Education re “big picture”
 - schools
 - home practices
 - Incentives
 - community pride
 - family heroes
 - Schools – Primary and Secondary – support our schools to recycle
 - Bin labels with photos / pictures of what goes in / doesn’t go in
 - Use music / drama to engage our community eg. Recycled String Band
 - Movies / You Tube clips about how to recycle
 - can be made by students (Youth Council)
 - Also educate about where landfill goes (why we recycle)
-



REFLECTION

- A long way to go and people who are here are interested. How do we get the message out and encourage others?
 - “War on waste” was such a change moment – community needs to see what’s really happening at the big picture level. What is the real pathway for all of our recycled products? Build confidence in home based efforts
 - Worth getting community on board and celebrating achievements. Things are working.
 - We should say well done Wangaratta using figures and savings
 - Really like “Total Renewable Yackandandah” and how they are superb at community messaging
 - Public bins need to be more visible, especially access to recycle bins
 - “Ambassadors” in businesses and community groups to celebrate, share tips, making it easy for people to do their best
 - What could be the role of Business Wangaratta?
 - Question about small businesses and their habits – still room for engagement more efforts could be made with organics and recycling at major facilities, eg. Northeast Health Wangaratta and McDonalds
 - Rural City of Wangaratta are doing a lot of great things eg. soft plastics at transfer station. So really important to spell out what is available. Good for community to have “Open Day” / sausage sizzle etc to let people know about the cycle, cells in Bowser, what happens to waste. Major community event!
 - Red bin is the default bin so more education required
 - Where Councils reduced red bin space and introduced green bin, there was a significant behaviour change, so it works. Is very much improved as people sort waste better. Change is happening
 - Is there an option for smaller red bin and dollar reduction?
 - Could be looked at in five years when current collection trucks are replaced (trucks currently designed for 240L bin)
 - Could it be possible to provide incentive for reduced “lifts” per bin / household
 - Governments to be serious about multiple packaging / wrapping. Packaging Covenant to be followed up
-



Waste Strategy Review – 6 pm, 7 December 2017

Rural City of Wangaratta (RCOW)

10 attendees

Session 3 (of 3 Community sessions)

PERCEPTIONS OF PROGRESS

(Other strategies / themes / previous vision / mission from last plan)

Community education – especially waste reduction and diverting waste from landfill

What's worked

- Rewarding good recycling habits was well received by the public
- Positive reinforcement of good recycling eg. tags with compliments on waste bins
- Free days of months targeting particular stream are great

Barriers / Challenges

- Many people don't know what can be taken to transfer station to be recovered
- Lack of interest

Ideas / Suggestions

- Reaching out to each house
- Grow the understanding of "adults" of their duty of care to children
- "Too hard" is not an excuse
- Education in workforces
- More bins available in public place
- Actively encourage community awareness and education to reduce land fill and waste to leave something for future generations
- Reaching out to each household
- More advertising of services available

Creation of Waste Recovery Centre at Bowser

Ideas / Suggestions

- Leaders in soft plastic "let's build the infrastructure now to process softs" (not ship away)

Rationalise transfer stations

What's worked

- Reduction in cost is beneficial for future investment

Comments

- Soft plastics – a lot of people don't know how it works or that it exists. Markets?
-



- More education on soft plastic

Organics collection service – third bin for Wangaratta urban area

What's worked?

- Great to have an organics collection and now a local facility to deal with it
- Good to get "free" compostable bags from Council
- More towns connected to organic waste

Barriers / Challenges?

- Quality of green bags for caddies - number of people come back saying unable to use
- Smaller properties in rural areas need green bins. The red bins for green waste as well each fortnight is not adequate when burying is not possible

Ideas / Suggestions

- Able to apply for smaller bin discount
- Not all need such a large bin
- Are people willing to pay for bin liners?

Increase life of Bowser landfill

What's worked?

- Initiative of staff at Rural City of Wangaratta

Barriers / Challenges?

- Ignorance

Comments

- Fines for incorrect waste in bin
- Better use being made of recycled concrete etc

Ideas / Suggestions

- Road side large waste pick up

360 litre (large) recycling bins for larger households

What's worked?

- The large bin is great

Comments

- The bin doesn't fit very well behind the car
-



Ideas / Suggestions

- Neighbourly help! System to make it easy to share when yellow bin full
- Smaller bins for single households
- Education
- Fines for non-compliance
- Deposit back for cans and glass bottles

Zero waste – No waste to landfill by 2030

Barriers / Challenges

- Supermarket packaging
- Laziness

Comments

- Woollies / Safeway decision to ditch the free bag should help
- Community perception of costs associated with transfer station

Ideas / Suggestions

- Green waste collections not everyone can get it to transfer station
 - “US style” three bins system for public spaces
 - Influence the commercial production of white goods to increase the life of the product to reduce hard waste land fill
 - Education
 - Mars Petcare compactors
 - A machine that strips cans and labels
- The man (Mark?) who spoke to us doesn’t train his workplace to Zero
- Support job creation project which encourages repair and recycling production rather than disposing and increasing land fill

Other

- No charge to locals to discourage illegal dumping
- Dog waste bags and stations
- Building site waste is a problem

KEY THEME DISCUSSION

Three Bin System

- Education on content
 - generic information
 - confusion around “plastic”
 - easy read collateral
 - ↩️ ↪️ # system education
 - more publicity to “Good News”
 - Stories ie. Mars Petcare
 - options for “safe” disposal, ie. farms: scraps to animals; fire places
 - Timing
 - general awareness around the types of waste ie. Prawns, smell factor
 - “penalties” for “low wasters”
 - Public Options
-



- bins matching the household system
- Better quality of plastic bags supplied for caddies
- Hard waste days
 - “re-use factor” when people collect it instead of at landfill;
 - more “free waste voucher / days”

Organic waste in rural areas

- Smaller properties
- Access
 - green bins – same principles
 - greater consumption of organic product
 - weeding / pruning in spring etc
 - more space taken up in green bins than in red bins
 - lack of ability to incinerate
- Commercial waste mulching
 - encourage an entity to do this
 - ie. tree loppers being available to visit consumers to offer mulching services
- Hire of mulching equipment owned by community. Insurance??

Plastic pollution

- Shopping bag replacement
 - not offering bin
 - byo bag
 - offering boxes
- Packaging
 - consumer (and business) refusal
 - education to achieve this
 - bulk food stores leading to decreased dollars for own container
- Places to recycle soft plastics increase convenience of this eg. Coles / Woolworths
 - educate where and why
- Bin liners?
- Bin washing service?
- Soft plastics - ignorance of how it works or that it exists
- More education on soft plastics is required

Transfer Stations

- Reduction in cost is beneficial for future investment
- Soft plastics – lots of people don’t know how this works - more education on this
- Electronic vouchers for transfer stations, rather than papers
- Notification on the rates notice is too small
- Pickup of items from rural properties to avoid dumping
- One voucher per household (for renters) in addition to that with rates notice to owners
- Open free recycling days for larger items, electronic, white goods
- More actively advertise free waste disposal opportunities

Landfill

- Innovative staff
- Fines – incorrect waste
- Ignorance
- Road side large waste
- Staff incentive to ensure waste is sorted
- Cost of visiting transfer station deters people, so this is why we see dumping
- Fines for garbage in incorrect bins
- Create job creation options for recycling
- Bring back “fix it skills”
- Actively lobby for white goods and electronic goods to have longer life – give incentive



- Deposit on cans and bottle return to be paid back increasing incentive to return recyclable waste – could be fund raising venture

Waste education

- Schools – taking interested schools to recycling centre / landfill / transfer station
- Workplace (waste job role) Sustainability Officer – advocate, in charge
- No waste days / recycling days – make it a competition (small prizes)
- Consequences of actions, eg. In _____ years it will look like _____
- Post on social media
 - video
 - photos
 - radio
 - local paper
 - advertisements
 - television
 - fines
 - cameras
- Needs balance in positive way eg. the sort of world we want to leave for future generations
- Council websites / easy access
 - easy English and multi-languages
 - personal contact available for one on one if needed
- Council could get education waste volunteers to
 - go to workplaces / schools
 - events eg. PAC, Library
 - CBD (letter box dropping)
 - door knockers (disagreement with this one)
- Give examples of what happens to recycled waste – stories – pathways of product then relate to Wangaratta

REFLECTION

- Some of the positive rewarding things have been extremely valuable eg. thank you notes for great sorting of the bins
 - “A caring attitude rather than punitive is important” could be the best slant for marketing
 - To encourage young people, give them incentives to look at recycling as possible job options eg. matching with skilled tradies; skills to contribute back to the environment ie. turning recycling into income
 - Whatever happens needs to be easy as possible and accessible as possible to do the right thing
 - Educate on end products from recycling / reuse – positive message increasing care
 - More advertising linked to major promotions eg. green waste month, Mens’ Sheds, Service Clubs to assist elderly people to move hard waste / electronic waste etc
 - Would like to encourage trip to recycling centre
 - Letter boxing for tenants and real estate agent kits for new tenants
 - Shoes / clothing – where could these textiles go?
 - Reused and repaired and recycled good opportunity to promote reuse
 - Encourage sewing groups / putting together fabrics to make new products could be a project in the community, ie. create boomerang bags
 - Leadership is key
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List of abbreviations

C&D	Commercial and Demolition
C&I	Commercial and industrial
DELWP	Department of Environment, Land, Water and Planning
EPA	Environment Protection Authority
EP Act	Environment Protection Act 1970
EPS	Expanded polystyrene
MRF	Materials recovery facility
MSW	Municipal solid waste
NEWRRG	North East Waste and Resource Recovery Group
RRCs	Resource Recovery Centres
SV	Sustainability Victoria
State infrastructure plan	Statewide Waste and Resource Recovery Infrastructure Plan
Treatment	To process or handle material to remove contamination or reduce harm to the environment or public health
WMS	Waste Management Strategy
MSW	Municipal Solid Waste
WRRG	Waste and Resource Recovery Group

Glossary

Airspace – See Landfill airspace.

Anaerobic Composting – The controlled biological decomposition of organic materials under anaerobic (in the absence of oxygen) conditions, accomplished in enclosed vessels producing combustible methane gas and compost.

Avoidance – The first step in the waste hierarchy. Indicates practices whereby waste generation is circumvented.

Capping – See landfill capping.

Clean fill – Material that has no harmful effects on the environment. A natural soil material that does not contain any chemicals or other materials such as concrete rubble. Also called fill material.

Closed landfill – Landfill that is no longer accepting waste. If a licensed landfill, it should have received a post closure pollution abatement notice (PAN) from the EPA. If exempt from licensing, there should be reassurance that the closure process has commenced or is in place.

Collection system – System for collecting materials from the kerbside, including bin type and collection frequency.

Commercial and industrial (C&I) waste – Solid inert waste generated from trade, commercial and industrial activities including the government sector. Includes waste, for example, food waste, from offices, manufacturing, factories, schools, universities, state and government operations and small to medium enterprises.

Commingled recyclables – Materials combined generally for the purposes of collection, mainly through municipal collection services. Includes plastic bottles, other plastics, paper, glass and metal containers. Commingled recyclable materials require sorting after collection before they can be reprocessed. Can also be called commingled materials.

Composting – The controlled breakdown or decomposition of organic materials under aerobic (that is with air) or anaerobic (that is without air) conditions.

Construction and demolition (C&D) waste – Solid inert waste, for example, bricks and concrete generated from residential and commercial construction and demolition activities.

DELWP – The Department of Environment, Land, Water and Planning. A Victorian government department tasked with creating liveable, inclusive and sustainable communities. DELWP forms part of the Waste and Resource Recovery Portfolio of state government.

E-waste – Electronic equipment with a plug or battery that requires a current to operate and that has reached end of life. Includes televisions, computers, monitors and whitegoods such as fridges and washing machines.

Environment Protection Authority Victoria (EPA) – Established under the Environment Protection Act 1970. The environmental regulator and an influential authority on environmental impacts.

Feedstock – Raw material used to manufacture products. Material varies depending on what is being produced.

Food organics – Food waste from households or industry, including food processing waste, out-of-date or off-specification food, meat, fruit and vegetable scraps. Excludes liquid wastes.

Garden organics – Organics derived from garden sources, for example, grass clippings, tree prunings. Also known as green organics.

Hard waste – Household garbage that is not usually accepted into kerbside garbage bins by local governments, for example, old fridges and mattresses.

Hubs – The concentration of reprocessing facilities where there is sufficient waste derived feedstock to support viable reprocessing options. Location of hubs varies for individual material streams.

Illegal dumping – The deliberate and unauthorised dumping, tipping or burying of waste on land that is not licensed or fit to accept that waste.

Kerbside Collection – A regular, containerised collection services (often using a wheelie bin) where the waste or recycling is collected from outside a resident's dwelling. Can apply to recycling (yellow lid), food and garden organics waste (green lid) or general waste (red lid).

Landfill – Discharge or deposit of solid wastes onto land that cannot be practically removed from the waste stream.

Landfill available airspace – The estimated amount of available airspace and the amount of works approved airspace. (Calculating landfill airspace is based on information from the WRRG region landfill owners, local governments and EPA.)

Landfill Capping – An impermeable geo-membrane and/or clay materials with, possibly a further layer of soil placed over the capping. Capping allows greenhouse gases to be captured and creates a 'dry tomb', protecting groundwater. (Once a landfill cell is filled, the waste matter must be covered with landfill capping.)

Landfill Levy – A levy applied at differential rates to municipal, C&I and prescribed wastes disposed of at licensed landfills in Victoria. (Levies are an incentive to minimise the generation of waste, sending a signal to industry that the government supports efforts to develop alternatives to disposal to landfill).

Landfill likely closure dates – An estimate of the likely year of closure of the landfill based on consideration of modelled tonnage projections and land available under current EPA works approval, planning and permit requirements and potential void space that may eventuate at quarry-based landfill sites as identified by owners and operators.

Leachate – Contaminated water that has percolated through or drained from a landfill.

Litter – Any small, medium or large item placed inappropriately.

Materials Recovery Facility (MRF) – A centre for the receipt, sorting and transfer of materials recovered from the waste stream prior to transport to another facility for recovery and management. At a MRF materials may undergo mechanical treatment for sorting by characteristics such as weight, size, magnetism and optical density and may include cleaning and compression. Materials may be received as mixed streams such as commingled recyclables from households and businesses or single streams such as metals.

Municipal solid waste (MSW) – Solid waste generated from municipal and residential activities, and including waste collected by, or on behalf of, a municipal council. (In the north east implementation plan, MSW does not refer to waste delivered to municipal disposal sites by commercial operators or waste from municipal demolition projects.)

Organic material – Plant or animal matter, for example, grass clippings, tree prunings and food waste, originating from domestic or industrial sources.

Organic waste – Separated food and/or green/garden waste, for example, grass clippings or vegetation prunings.

Pollution Abatement Notice - Pollution abatement notices are issued under section 31A of the Environment Protection Act 1970 (EP Act). They aim to prevent further occurrence of pollution or potential environmental risk through installation of risk controls and changes to on-site processes and practices.

Prescribed waste and prescribed industrial waste (PIW) – These wastes are defined in the Environment Protection (Industrial Waste Resource) Regulations 2009. (EPA closely regulates these wastes because of their potential adverse impacts on human health and the environment. There are special handling, storage, transport and often licensing requirements for prescribed wastes which attract substantially higher disposal levies than non-prescribed solid wastes. Also known as hazardous waste.)

Processing facilities – Facilities that either receive materials directly from collection systems or from recovery facilities for further sorting and/or processing to provide material for use in the generation of new products.

Product stewardship – A concept of shared responsibility by all sectors involved in the manufacture, distribution, use and disposal of products, which seeks to ensure value is recovered from products at the end of life.

Public place recycling – Recycling facilities in public areas, such as parks, reserves, transport hubs, shopping centres and sport and entertainment venues, that allow the community to recycle waste when away from home.

Putrescible waste – Waste capable of decomposition such as food organics, garden organics, manures, paper and cardboard.

Re-use – Recovering value from a discarded resource without processing or remanufacture, for example, garments sold through opportunity shops.

Recovered tonnages – Unless stated otherwise, tonnes of materials entering reprocessing facilities. No direct correlation to how much was reprocessed as there is no data on tonnes stockpiled by re-

processors or tonnes landfilled by re-processors. Therefore, referred to as 'recovered', rather than 'reprocessed'.

Recovery – In the context of the waste hierarchy, recovery means energy recovery, typically via a waste to energy facility.

Recovery Rate(s) – Used generally to describe material recovery, that is recycling, and energy recovery.

Recyclables – All materials that may be reprocessed. However, in the north east implementation plan generally used to refer to the recyclable containers and paper/cardboard component of kerbside waste and excludes garden organics.

Recyclable Materials – Waste collected separately and sent for recycling. For the purposes of the north east implementation plan incorporates container glass, plastic, ferrous and non-ferrous metals, paper, cardboard and garden organics.

Recycling – A set of processes (including biological) that converts solid waste into useful materials or products.

Refuse derived fuel (RDF) – A fuel produced after basic processing to increase the calorific value and remove recyclable materials and contaminants.

Reprocessing – Changing the physical structure and properties of a waste material that would otherwise have been sent to landfill to add financial value to the processed material. (Without reprocessing, the beneficial use of waste materials would be lost.)

Resource Recovery Centre/transfer station (RRC/TS) – A facility whose primary purpose is to aggregate, sort, and consolidate reusable and recyclable materials prior to transport to another facility for recovery or management. It may include a resale centres. They may be designed to receive specific material streams such as metals or organics or to receive multiple streams such as those from households including residual waste.

Reuse – Recovering value from a discarded resource in its original state without reprocessing or remanufacture (for example, clean sand moved from one construction site to another). Can also apply to the replacement of a disposable item with a more durable item. Residences and businesses in a rural or industrial zone are not classified as sensitive land uses.

Sustainability Victoria (SV) – Statutory authority established in October 2005 under the Sustainability Victoria Act 2005 with the key objective of 'facilitating and promoting environmental sustainability in the use of resources'. Works across the areas of energy, waste and water with communities, industries and government to enable change in environmental practices.

Transfer Station (TS) – Facilities where collection vehicles deposit waste and/or recyclables collected from elsewhere. (Waste or recyclables are then put into larger transfer vehicles for transport to a landfill site, MRF or resource recovery facility.) Transfer stations may be used by both individuals and vehicles and may include recycling facilities and facilities for compacting and baling waste and recyclable materials.

Waste – Any discarded, rejected, unwanted, surplus or abandoned matter including material intended for recycling, reprocessing, recovery, purification or sale. In this document, the term ‘solid waste’ refers to non-hazardous, non-prescribed, solid waste materials ranging from municipal garbage to industrial waste.

Waste and Resource Recovery Group (WRRG) – Statutory authority established under the Environment Protection Act 1970 responsible for preparing the regional implementation plan for their region.

Waste generation – The sum of products and materials that are reprocessed, recovered for energy or disposed to landfill.

Waste hierarchy – A concept promoting waste avoidance ahead of recycling and disposal. Recognised as promoting management of waste in the order of preference: avoidance, reduce, reuse, recycle and disposal.

Waste minimisation – Concept of, and strategies for, waste generation to be kept to a minimum level to reduce the requirement for waste collection, handling and disposal to landfill. Also referred to as waste avoidance.
