



LEETON  
SHIRE COUNCIL

# WASTE MANAGEMENT STRATEGY

Reducing Waste and Increasing  
Resource Recovery  
October 2020

## DOCUMENT AUTHORISATION

<b>RESPONSIBLE OFFICER</b>	Manager Water & Waste				
<b>REVIEWED BY</b>	Director Operations/Senior Management Team				
<b>DATE ADOPTED:</b>	28 October 2020				
<b>ADOPTED BY:</b>	Council				
<b>RESOLUTION NO: (IF RELEVANT):</b>	20/163				
<b>REVIEW DUE DATE:</b>	October 2026				
<b>REVISION NUMBER:</b>					
<b>PREVIOUS VERSIONS:</b>	<b>DATE</b>	<b>DESCRIPTION OF AMENDMENTS</b>	<b>AUTHOR/EDITOR</b>	<b>REVIEW/SIGN OFF</b>	<b>MINUTE NO (IF RELEVANT)</b>

## REVIEW OF THIS STRATEGY

This Strategy will be reviewed every six years or as required in the event of legislative changes. The Strategy may also be changed as a result of other amendments that are to the advantage of Council. Any amendment to the Strategy must be by way of a Council Resolution or the approval of the General Manager.

Supported by:



# Glossary

<b>Combustion</b>	The combustion of waste materials involves the complete burning of waste materials in an oxygen-rich environment to create ash, flue gas and heat.
<b>Gasification</b>	Gasification occurs in low oxygen environment and involves long residence time. This is done through the presence of heat at temperatures of 760°C to 1,370°C without combustion and a controlled amount of oxygen and/or steam. The syngas produced is used as a fuel to generate energy.
<b>Organics</b>	Organic waste materials including paper and cardboard, food waste, green waste and timber.
<b>Pyrolysis</b>	Pyrolysis is similar to gasification, however, is undertaken in an oxygen free environment and at lower temperatures. Pyrolysis utilises an indirect, external heat source, typically at temperatures of 400°C to 900°C in the absence, or almost complete absence of oxygen, to thermally degrade carbon-based material
<b>Recovery</b>	Proportion of total waste diverted from landfill. Also referred to as Landfill Diversion Rate.
<b>Recyclables</b>	Waste materials able to be recycled including paper and cardboard, glass, plastics and metals.
<b>Recycling</b>	A set of processes (including biological) that converts solid waste into useful materials or products.
<b>Reuse</b>	Recovering value from a discarded resource in its original state without reprocessing or remanufacture
<b>Treatment</b>	Processing of waste materials that alters its physical and/or chemical form.
<b>Waste Management Hierarchy</b>	An internationally recognised concept which lists waste management hierarchy options in order of preference according to their sustainability and environmental impacts

# Table of Contents

<b>1</b>	<b>Introduction</b> .....	<b>1</b>
<b>2</b>	<b>Where are we today?</b> .....	<b>1</b>
2.1	Current Waste Management Services .....	1
2.2	Waste Data and Performance .....	2
2.2.1	Current Generation .....	2
2.2.2	Waste Streams and Composition .....	2
2.2.3	Diversion Rate .....	6
<b>3</b>	<b>Where do we want to get to?</b> .....	<b>7</b>
<b>4</b>	<b>How are we going to get there?</b> .....	<b>8</b>
	Priority 1 – Divert waste from landfill and increase resource recovery .....	8
	Priority 2 – Enhance service delivery and performance through improved data capture.....	10
	Priority 3 – Provide cost effective, equitable and long-term waste services to the community.....	10
<b>5</b>	<b>Action Plan Implementation Timeline</b> .....	<b>12</b>

## Tables

Table 2-1: Sources of waste (total)

Table 2-2: Source of waste received at Leeton Landfill & Recycling Centre

Table 2-3: Kerbside tonnages & resource recovery rate

Table 2-4: Kerbside Composition

Table 2-5: Self-hauled MSW composition

Table 2-6: Eligible material collected at Leeton Return and Earn collection point

Table 2-7: C&I waste composition

Table 2-8: C&D waste composition

Table 2-9: WARR Waste Diversion Targets

## Diagrams

Diagram 2-1: Council Diversion Rate

# 1 Introduction

The Local Government Act 1993 requires all councils in NSW to provide a residential waste collect service. In addition to providing residential services, Leeton Shire Council (Council) also provides public place litter bins, removes illegally dumped waste and provides waste and recycling collection services at special events. Council owns and operates the Leeton Landfill & Recycling Centre, which requires compliance in accordance with legislative requirements and the responsibilities under the POEO Act in operating this facility.

Like many communities across Australia, Council is seeking to deliver a scope and breadth of service that meets local needs and achieves agreed targets. Changes in policy nationally and internationally affect Council from time to time, as does changing community expectations for Council to manage waste in a more sustainable way.

Traditionally, waste management and resource recovery in rural and remote councils of Australia is extremely difficult due to small rate bases and large geographical areas. The tyranny of distance and diversity in operational scale amongst rural New South Wales (NSW) Councils equates to many waste related projects being unfeasible.

Council recognises the importance of sustainable waste management services for its communities and the requirement to have a clear plan for the future. Therefore, this Waste Management Strategy (the Strategy) has been prepared to identify further opportunities for improvement, whilst considering the specific challenges faced by rural communities.

The Strategy was developed following an options study in April 2020 which assessed Council's current approach to waste management and the implementation of various options to achieve the overall objective of this Waste Strategy, which is:

***“To create a waste management system that is working towards reducing waste to landfill and increasing resource recovery through waste avoidance, reuse, recycling and reprocessing”.***

The Strategy is required to detail the roadmap for how Council will achieve its objective in relation to the management of waste.

Strategic waste planning is a dynamic process and this Strategy should be reviewed every six years to ensure it is current and aligns with industry developments.

## 2 Where are we today?

### 2.1 Current Waste Management Services

Council currently provides a variety of waste management services and programs to its community including:

- Kerbside waste collection through:
  - Fortnightly collection of a 240L yellow-lidded recycling bin for dry recyclables; and
  - Weekly collection of a 240L red-lidded general waste bin for residual waste.
- Waste education at local primary schools;
- Community Recycling Centre;
- Waste disposal and resource recovery at the Leeton Landfill and Recycling Centre;
- Whitton Transfer Station;
- Collection point at Murrarni (skip bins)
- Public place litter management;
- Return and Earn; and

- Illegal dumping management and compliance.

The estimated lifespan of the landfill at Leeton Landfill and Recycling Centre (assuming current usage is sustained) is 80 plus years.

## 2.2 Waste Data and Performance

### 2.2.1 Current Generation

In 2018/19, a total of 22,062 tonnes of waste entered Council's waste management system, including material collected and processed at the kerbside and material received and managed at the Leeton Landfill & Recycling Centre. The sources of these materials are detailed in **Table 2-1** which include municipal waste, commercial and industrial (C&I) waste and construction and demolition (C&D) waste.

**Table 2-1: Sources of waste (total)**

	Tonnes Received	Tonnes Landfilled	Tonnes Recovered	Recovery Rate
Municipal	6,427	4,793	1,634	25%
C&I	10,556	7,023	3,534	33%
C&D	5,079	987	4,092	81%
<b>Total</b>	<b>22,062</b>	<b>12,803</b>	<b>9,260</b>	<b>42%</b>

Of the 22,062 tonnes of waste that entered Council's waste management system in 2018/19, 21,598 tonnes were managed at the Leeton Landfill & Recycling Centre. The sources of these materials are detailed in **Table 2-2**.

**Table 2-2: Source of waste received at Leeton Landfill & Recycling Centre**

	Tonnes Received	Tonnes Landfilled	Tonnes Recovered	Recovery Rate
Municipal				
Kerbside Residual Waste	2,588	2,588	0	0%
Dropoff	3,375	2,205	1,170	35%
C&I	10,556	7,023	3,534	33%
C&D	5,079	987	4,092	81%
<b>Total</b>	<b>21,598</b>	<b>12,803</b>	<b>8,795</b>	<b>41%</b>

Waste from C&I sources is the primary waste stream received at the Leeton Landfill & Recycling Centre (49%) followed by municipal sources (28%) and C&D sources (23%).

Municipal waste delivered to the Leeton Landfill & Recycling Centre in 2019/20 included 11,201 domestic waste loads and 6,246 garden organic loads.

### 2.2.2 Waste Streams and Composition

An understanding of the composition of the waste generated within Council is an important aspect in the consideration of potential resource recovery options to assist in the improvement of Council's waste management system.

#### 2.2.2.1 Municipal Solid Waste (MSW)

MSW is solid waste from households and local government operations, including waste placed at the kerbside for council collection and waste collected by councils from municipal parks and gardens, street sweepings,

council engineering works and public council bins. MSW can be categorised into two waste sub-streams, kerbside and self-hauled. Kerbside waste is waste that is presented at the kerbside by residents for the collection and processing by Council. Self-hauled waste is waste that is transported to a facility by residents for processing or landfilling and is of a municipal nature.

### Kerbside Waste

In 2018/19 a total of 3,035 tonnes of material was collected at the kerbside as part of Council’s kerbside collection service. The kerbside collection service consists of fortnightly collection of dry recyclables in a 240L yellow-lidded bin and weekly collection of waste in a 240L red-lidded bin.

Although Council does not currently offer residents a kerbside organics service, residents have access to disposal options at the Leeton Landfill & Recycling Centre. In 2018/19 a total of 773 tonnes of organic material was delivered to Leeton Landfill & Recycling Centre for reprocessing.

The current kerbside collection system, including self-hauled organics, results in a resource recovery rate of 32%, as shown in **Table 2-3**.

**Table 2-3: Kerbside tonnages & resource recovery rate**

	Tonnes Collected	Tonnes Landfilled	Tonnes Recovered	Diversion Rate
Red-lidded waste bin	2,588	2,588	0	
Yellow-lidded recycling bin	464	22	442	
Self-hauled organics	773	0	773	
<b>Total</b>	<b>3,825</b>	<b>2,643</b>	<b>1,215</b>	<b>32%</b>

If self-hauled organics tonnes were excluded, the resource recovery rate would drop from 32% to 15%.

To obtain a typical composition of kerbside waste within the LGA, it has been necessary to use data from a kerbside audit conducted in 2019 from another rural council within NSW, as no comprehensive kerbside audits have been undertaken by Council. This council provides its residents with the same kerbside collection services as Council. The typical composition of kerbside waste and recycling for Council, is outlined in **Table 2-4**.

**Table 2-4: Kerbside Composition**

Residual Waste Composition		Recycling Composition	
Material Type	Percentage	Material Type	Percentage
Garden & other Organics	33	Paper & Paper Products	46
Food/Kitchen Organics	23	Glass	27
Other	19	Plastics	16
Plastics	12	Ferrous	4
Paper & Paper Products	7	Organics	3
Glass	3	Non-Ferrous	2
Ferrous	2	Other	2
Non-Ferrous	1		

As shown in **Table 2-4**, the kerbside residual waste stream (red-lidded bin) within the LGA is likely to contain mainly food/kitchen organics, garden and other organics and paper and cardboard which represents approximately 63% of the kerbside residual waste stream.

Other<sup>1</sup> (19%) waste materials and plastics<sup>2</sup> (12%) also comprise a significant portion of the kerbside residual waste stream.

Paper and paper products, and glass contribute largely to the composition of kerbside recycling (yellow lidded bin) with 46% and 27% recorded respectively.

### Self-hauled Waste

In 2018/19 2,601 tonnes<sup>3</sup> of self-hauled MSW was received at the Leeton Landfill & Recycling Centre. Of this, 396 tonnes (15%) was recovered for recycling or reprocessing. The remaining 2,205 tonnes (85%) was landfilled, resulting in a diversion rate of 15% for this waste stream. **Table 2-5** details the composition of self-hauled MSW received at the Leeton Landfill & Recycling Centre. The category “Other” includes batteries, commingled recycling, mattresses, paper/cardboard, residues or rejects, tyres, veterinary waste and wood, trees or timber.

**Table 2-5: Self-hauled MSW composition**

Material Type	Percentage
Mixed Waste	85
Brick or Concrete	7
Ferrous	6
Soil (not contaminated or VENM)	1
Other	1

1 Other waste materials include e-waste, hazardous material and material classified as other.

2 Plastics include; compliant plastics, plastic films (soft plastics) and other plastics (hard plastics).

3 These tonnes exclude the 774 tonnes of self-hauled vegetation and garden organics. Those tonnages have been included as part of the kerbside stream, therefore tonnages and recovery rates will differ from Table 2-2.

## Container Deposit Scheme

The *WARR Amendment (Container Deposit Scheme) Act 2016* established the Container Deposit Scheme (CDS) to reduce litter and recover, reuse and recycle drink containers. The CDS “Return and Earn” was introduced in 2017 facilitating a 10-cent refund for eligible containers when presented to a collection point. In NSW, eligible containers in kerbside recycling bins are also redeemable by councils through an agreement with the Materials Recovery Facility (MRF) operator providing councils with a source of revenue.

Table 2-6 details the number and weight of eligible containers collected at the Return and Earn collection point located in the Leeton Woolworths carpark.

**Table 2-6: Eligible material collected at Leeton Return and Earn collection point**

	Units	Tonnes
1 December 2017 – 24 June 2018	2,471,236	161
2018/2019	5,594,675	343
2019/2020	5,217,727	309
<b>Total</b>	<b>13,283,637</b>	<b>814</b>

### 2.2.2.2 C&I Waste

C&I waste is solid waste generated by business, industries (including shopping centres, restaurants and offices) and institutions (such as schools, hospitals and government offices), but not C&D waste or municipal waste.

In 2018/19, 10,556 tonnes of C&I waste was received at the Leeton Landfill & Recycling Centre. Of this, 3,534 tonnes (33%) was recovered for recycling or reprocessing. The remaining 7,023 tonnes (67%) was landfilled, resulting in a diversion rate of 33% for this waste stream. **Table 2-7** details the composition of C&I waste received at the Leeton Landfill & Recycling Centre. The category “Other” includes batteries, bricks/concrete, ferrous, paper/cardboard and tyres.

**Table 2-7: C&I waste composition**

Material Type	Percentage
Mixed Waste	63
Soil (not contaminated or VENM)	31
Liquid Waste	3
Vegetation	2
Other	1

### 2.2.2.3 C&D Waste

C&D waste is solid waste sources from construction and demolition works, including building and demolition waste, asphalt waste and excavated natural material.

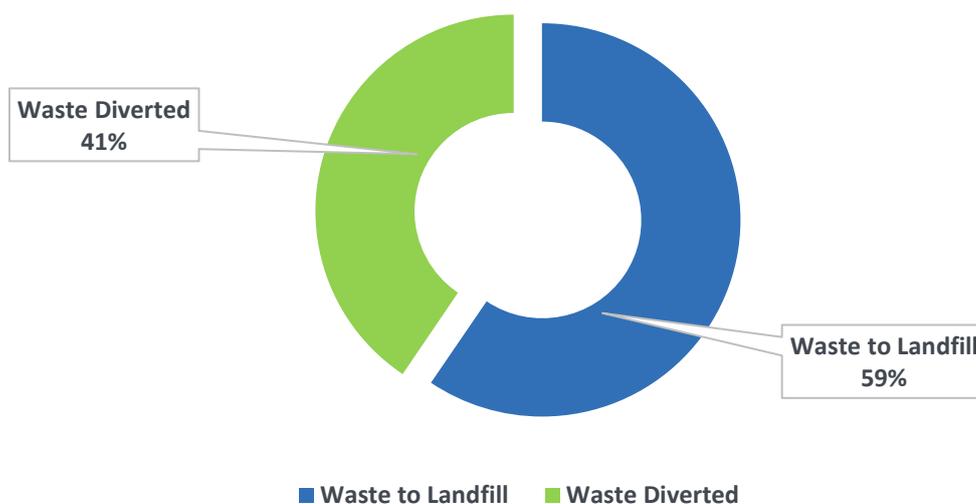
In 2018/19, 5,079 tonnes of C&D waste was received at the Leeton Landfill & Recycling Centre. Of this, 4,092 tonnes (81%) was recovered for recycling or reprocessing. The remaining 987 tonnes (19%) was landfilled, resulting in a diversion rate of 81% for this waste stream. **Table 2-8** details the composition of C&D waste received at the Leeton Landfill & Recycling Centre.

**Table 2-8: C&D waste composition**

Material Type	Percentage
Brick or Concrete	42
Soil (not contaminated or VENM)	32
Asbestos	10
Mixed Waste	7
Vegetation	6
Woods, trees or timber	2
Ferrous	1

### 2.2.3 Diversion Rate

Diversion rate is defined as the proportion of total waste generated that is recovered, either through reuse, recycling or treatment, and is therefore diverted from landfill. Council’s current diversion rate, across its entire waste management system is shown in **Diagram 2-1**.



**Diagram 2-1: Council Diversion Rate**

Council currently recovers approximately 41% of the waste materials that are generated by its residents at the kerbside and material that is received at the Leeton Landfill & Recycling Centre from municipal, C&I and C&D sources.

In 2014 the NSW EPA released the NSW Waste and Resource Recovery Strategy 2014-2021 (WARR Strategy). The WARR Strategy provides a framework for waste management until 2021 and aligns with the NSW Government’s waste reforms in NSW 2021: A plan to make NSW number one. The WARR Strategy sets to minimise waste, alter public behaviour through education and increase investment, innovation and improvement of environmental practices.

Council’s performance against the Waste Diversion Targets set by the NSW EPA in the WARR Strategy are provided in **Table 2-9**.

**Table 2-9: WARR Waste Diversion Targets**

Waste Type	Council Diversion Rate	2022 Diversion Target
MSW	35%	70%
C&I	33%	70%
C&D	81%	80%
Overall Diversion from Landfill	41%	75%

Council currently exceeds the C&D NSW EPA diversion target, however, is significantly below the MSW and C&I targets. The overall diversion rate is heavily influenced by C&I waste, which represents 49% of the waste stream and which has a diversion of 33%. Increasing diversion from this stream can be difficult due to the lack of influence Council has over this stream. Increasing the diversion of MSW from landfill should be a focus of Council as this stream can be most influenced by Council.

### 2.3 Riverina & Murray Joint Organisation

The Riverina and Murry Joint Organisation (RAMJO) is a voluntary Local Government group comprised of two large sub-regional areas namely; the Riverina and Murry Waste Groups. These two groups are separately funded; however, both operate under the RAMJO banner. Council sits within the Riverina Waste Group.

RAMJO has prepared a Regional Waste Avoidance and Resource Recovery Strategy which sets the direction for the implementation of an efficient and sustainable waste management system across the region. The key objectives of the regional strategy include:

- Engage with the community through education and activities related to best practice waste management;
- Provide leadership and facilitate information exchange and skills development;
- Make a significant contribution towards the achievement of NSW’s WARR Strategy targets;
- Reduce the amount of waste that is being directed to landfill;
- Improve successful funding application opportunities;
- Improve and increase current services for household recycling and organics collection; and
- Provide a sustainable and healthy environment through reducing the incidences of litter, illegal dumping and number of landfills across the region.

### 3 Where do we want to get to?

This Strategy details a series of actions that can assist Council to progress towards the 2021/2022 diversion targets set by the NSW EPA and those targets formally endorsed by RAMJO in the 2017-2021 Regional Strategy.

**Council seeks to improve from 41% to 50% diversion from landfill by 2026.**

### 4 How are we going to get there?

This Strategy is a roadmap that highlights the key priorities and activities that will be undertaken by Council to divert waste from landfill and deliver sustainable waste management outcomes for the region. This section details three priority areas and key actions to be undertaken within those priority areas.

The priority areas and subsequent actions were developed through the *Leeton Shire Council – Waste Management Options Paper April 2020*, which included an assessment of potential actions based on the waste management hierarchy, a strengths, weaknesses, opportunities and threats (SWOT) assessment, financial assessment and the development of a preferred waste management system.

#### Priority 1 – Divert waste from landfill and increase resource recovery

##### Action 1.1 Undertake a review of the Leeton Landfill and Recycling Centre Fees and Charges

Council currently provides residents free disposal of domestic waste and garden organics (up to 1 tonne per load), whilst charges are imposed for the disposal of recyclable items such as tyres, mattresses and refrigerators. This fee structure places no value on domestic waste material, as it is disposed of free of charge by the resident, whilst implying to residents that recycling is expensive. However, when residents are not directly impacted by the cost of landfilling because they dispose of their waste free of charge, there is the belief that recycling is more expensive.

The implementation of a charge for the disposal of all domestic waste would ensure a fair and equitable user-pays system, as the cost of the current free disposal system is being funded via an alternative source, and not directly by those that are disposing of the waste.

Consideration should be given to the review of existing fees and charges at the Leeton Landfill & Recycling Centre to ensure all costs are incorporated into the charges, including the availability of adequate funds for future works such as the closure of the landfill facility at the end of its useful life. Consideration should also be given to the way fees are applied to the disposal of waste and recyclable material to assist with resource recovery and diversion of waste from landfill. Providing a financial incentive to recycle or source separate material prior to disposal will assist in achieving this.

##### Action 1.2 Investigate the option of undertaking a trial for the kerbside collection of garden organics

The average NSW red-lidded waste bin contains 40% organic material (food organics and garden organics) that is sent to landfill instead of being recovered and processed into a valuable resource. The primary objective of source separated organics collection is to generate clean streams to divert these materials from landfill and facilitate a greater end use for the organics via composting or similar.

The recovery of organic material from the red-lidded general waste bin is considered a key approach to increase recycling, which is Key Result Area 2 of the NSW Waste Avoidance and Resource Recovery Strategy 2014 – 21 and is supported by over 80 councils across NSW. Of the 130 councils in NSW, 40 offer a garden organics (GO)

service and 41 offer a Food Organics Garden Organics (FOGO) service with the remaining 49 councils not offering an organics service (as of March 2020).

The implementation of a third kerbside bin for the separation of either garden organics or FOGO provides an improved level of waste management services provided to the community, whilst diverting organic material from landfill and reducing greenhouse gas emissions. It is considered part of a best practice kerbside collection service and would demonstrate Council leadership in meeting state government waste diversion targets and combating climate change through reducing greenhouse gas emissions.

### **Action 1.3 Investigate increase education to focus on C&I waste streams received at the Leeton Landfill and Recycling Centre**

Education is a key factor in the success of a waste management system and the role of an education service is paramount in the facilitation and delivery of any integrated education program. An Education Officer could provide the means for Council to present a consistent education message across all the towns within the LGA and develop closer partnerships between industry, towns and communities.

The education campaign would be responsible for gaining community acceptance and support for new waste management services to assist Council to move towards a more sustainable waste management approach, including Commercial Waste Minimisation Practices. It is important that engagement with the community is undertaken early to increase the chances of increasing waste diversion from landfill.

Consideration should be given to cooperating with surrounding councils and/or Riverina and Murray Joint Organisation (RAMJO) to implement a coordinated regional waste education program. This could include using common messages, resources and potentially shared Education Officers.

### **Action 1.4 Continue and consider the expansion of existing community education programs**

The best performing waste management systems are supported by strong waste education programs. Whilst several waste education programs are currently offered to local schools, these programs could be expanded into the broader community.

The expansion of these programs could focus on the correct use of services as well other programs on waste minimisation and reuse, which could be facilitated from the Reuse Shop. Community education can result in improved participation in and compliance with waste management services. This can lead to increased levels of resource recovery as well as reductions in contamination levels at the kerbside and overall changes in behaviour towards waste management.

### **Action 1.5 Investigate the installation of public place recycling bins**

The primary use of public bins is waste collection however, their public presence allows for the dual purpose of promotion and education of sustainable waste management. It is best practice for public recycling bins to accept the same materials as is collected in kerbside recycling in order to create cleaner streams and standardise recycling practices, be paired with a residual bin and be accessible from all sides.

Public place recycling can assist with the recovery of resources from the street litter waste stream. Bin placement, signage and enclosure type is critical to reduce the impact of contamination, as is community education and engagement pre and post installation and during peak tourist seasons.

### **Action 1.6 Consider regional collaboration on alternative processes for managing waste**

Thermal waste treatment processes, also known as energy from waste (EfW) technologies, are able to process all wastes except for non-combustible materials such as inert wastes and some forms of hazardous wastes. Thermal processes can be used to recover the energy content of the waste stream to produce electricity, heat or fuel. Thermal treatment is able to reduce the volume of waste by up to 95%, thereby significantly reducing the quantity of waste disposed to landfill.

The three main types of thermal waste treatment include gasification, pyrolysis and combustion. These types of technologies rely on reasonably high volumes of waste to be financially viable. Council may wish to consider thermal treatment technologies in the future however, due to the low volumes of waste currently generated or received within the LGA, it is unlikely that these types of waste management processes would be suitable in the near to mid-term, unless developed on a regional scale.

## **Priority 2 – Enhance service delivery and performance through improved data capture**

### **Action 2.1 Assess the viability of installing a second weighbridge at the Leeton Landfill and Recycling Centre to enable accurate capture of tonnages entering and exiting the facility**

The Leeton Landfill & Recycling Centre currently has one weighbridge that is used to weigh in and weigh out commercial customers, or those domestic loads that are greater than one tonne in weight. Residents that deliver loads that are less than one tonne in weight, are entered as an item as opposed to a weighed transaction. This results in a significant portion of the transactions being calculated on an assumed weight which reduces the accuracy of data obtained through the weighbridge. If the Waste Levy is introduced in the future and data was captured in the same manner, payments would be made based on assumed weights for these transactions.

The utilisation of a weighbridge enables the accurate recording of waste tonnages entering the site and thus the accurate calculation of the cost to disposal. Furthermore, it enables landfill engineers to accurately calculate remaining landfill volume and the remaining life of the landfill. This information is beneficial when planning for future development.

### **Action 2.2 Undertake a kerbside compositional audit**

Council currently has no data relating to the composition of kerbside bins presented by residents. Obtaining compositional data plays a vital role in preparing and delivering education, reducing contamination and implementing modifications and improvements to the current service. Waste disposal habits can vary between councils, even when a similar service is provided. To enable community specific education and service modifications and improvements to be implemented, community specific data is needed.

## **Priority 3 – Provide cost effective, equitable and long-term waste services to the community**

### **Action 3.1 Undertake a review of the Domestic Waste Management Charge**

Under Section 496 of the *Local Government Act 1993*, all councils must levy an annual charge against all rateable land for which a domestic waste management service is available. This charge must be calculated so as not to exceed the reasonable cost of providing the service. The costs associated with the provision of a domestic waste service includes short term, recurrent and operational costs, such as collection and processing costs, longer term

capital costs, such as construction of future landfill cells or other relevant waste infrastructure and future replacement costs, such as replacement of kerbside bins.

A review of the Domestic Waste Management Charge will provide a level of confidence for Council that all costs are being covered appropriately and that adequate funds will be available for future works.

### **Action 3.2 Prepare and implement a Kerbside Collection Policy that includes clearly defined collection areas**

Council covers an area of 1,167km<sup>2</sup>, with residential properties located within the townships of Leeton, Yanco and Whitton and the villages of Murrami and Wamoon. The delivery of cost-effective kerbside collection services partly relies on travel distances between services, that is, the closer collection services are, the cheaper the lift rate due to reduced travel distances. If collection vehicles are required to travel significant distances between services, to service rural properties outside of the main residential centres for example, lift rates increase.

In order to provide a cost effective and equitable kerbside collection service Council should establish a kerbside collection service area. This service area would provide a boundary within the LGA that determines the extent to which a kerbside collection service is provided. For those properties that fall outside of the service area a cost effective and equitable alternative should be available. This alternative could include:

- Provision of vouchers to dispose of domestic waste at the Leeton Landfill & Recycling Centre; or
- Upfront payment for the disposal of an agreed amount over a 12-month period.

### **Action 3.3 Facilitate the Long-Term use of the Leeton Landfill and Recycling Centre**

In an effort to secure a long-term strategy for the management of waste, landfilling activities will be expanded into the western portion of the Leeton Landfill and Recycling Centre. Council currently landfills material in a series of trenches, which is an outdated approach and is not part of current best practice waste management standards. It is estimated that the utilisation of the landfill will provide 1.3M m<sup>3</sup> of airspace and a landfill lifespan of approximately 64 years. These estimates are based on an annual landfill consumption rate of approximately 21,700m<sup>3</sup> and a compaction rate of 0.6 tonnes/m<sup>3</sup>.

The expansion will not only secure a community asset and prevent reliance on a third party for the disposal of waste, it will enable Council to adopt best practice waste management and environmental standards into the future.

### **Action 3.4 Ensure the implementation and development of Closure Plans for closed landfills**

The NSW EPA requires closed landfills to be managed in accordance with an aftercare or closure plan which includes regular cap maintenance, environmental monitoring and reporting and requires significant expenditure. Council currently manages two closed landfills at Brobenah and Yanco. A closure plan needs to be developed for the Yanco facility, which will require additional funding to develop and implement.

The implementation and development of closure plans for closed landfills under Council's control will ensure these sites are managed to a standard accepted by the NSW EPA.

## 5 Action Plan Implementation Timeline

Action	Task	2020/2021	2021/2022	2022/23	2023/2024	2024/2025
1.1	Review of Fees and Charges at Leeton Landfill & Recycling Centre					
1.2	Trial Kerbside GO Collection Service					
1.3	Education Officer – Resource Recovery					
1.4	Community Education					
1.5	Public Place Recycling					
1.6	Regional Collaboration on Alternative Waste Processing					
2.1	Weighbridge					
2.2	Compositional Kerbside Audit					
3.1	Review of Domestic Waste Management Charge					
3.2	Service Area					
3.3	Implement Landfill Closure Plan					