



Sustainability Advisory Committee

**Tuesday 4 April 2023
6.00pm
Council Chambers
209 Comur Street, Yass**

ATTACHMENTS TO REPORTS

Sustainability Advisory Committee

Attachments to Reports

Page No.

4.1	Draft Sustainability Policy & Sustainability Assessment Framework	
	Attachment A. Revised Sustainability Policy	3
4.3	Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan	
	Attachment A. Regional Waste & Sustainable Materials Strategy 2022-27	6
	Attachment B. Regional Waste & Sustainable Materials Strategy 2022-27 Action Plan	91
	Attachment C. Draft Yass Valley Waste Strategy 2017-2027	106
4.4	FOGO Threshold Questions Paper	
	Attachment A. FOGO Collection Service - Rationale, Case Studies and Threshold Questions	141
4.7	Town Power 2GW Regional Renewable Energy Projects	
	Attachment A. Town Power Proposal	147

Policy: Revised SUSTAINABILITY POLICY

SP-POL-06

Division: Planning

Responsible Officer: Strategic Planning Manager

1. INTRODUCTION

Council, Councillors and Council employees are required under s7(e) *Local Government Act 1993* to have regard to the principles of **ecologically sustainable development** in carrying out their responsibilities. It is also part of the legislative charter of a Council (i.e. s8(1)) to properly manage, develop, protect, restore, enhance and conserve the environment of the Yass Valley Local Government Area, in a manner that is consistent with and promotes the principles of ecologically sustainable development.

Council's Community Strategi Plan includes a Strategic Objective relating to sustainability i.e.

EN.2 Adopt environmental sustainability practices

To meet this Strategic Objective the Delivery Program 2022-2026 identifies a number of strategies and actions.

2. POLICY OBJECTIVES

To demonstrate leadership to the Yass Valley community through the implementation of sustainability initiatives.

3. POLICY SCOPE

This policy applies to all Councillors and Staff and is intended to integrate sustainability into Council's decision making to satisfy its statutory obligations under the *Local Government Act 1993*.

4. POLICY PROVISION

Council aims to achieve our sustainability Strategic Objectives by:

- EN2.1 Investing and implementing approaches to reduce out carbon footprint
- EN2.2Investigating and adopting environmentally sustainable practices and purchasing across the organisation
- EN2.3 Encouraging the community. Businesses, government and community support services to mitigate and adapt to the impacts of climate change and adopt sustainable practices

Council is committed to the following actions:

	Strategy	Action
EN2.1	Investigate and implement approaches to reduce our carbon footprint.	<ul style="list-style-type: none">• Install solar power generation as part of Crago Mill Precinct Development• Investigate and implement the use of electric and low emission powered vehicles as part of Council Commercial and Operational Fleet• Investigate and install solar power generation systems and energy reducing technologies on Council facilities.
EN2.2	We investigate and adopt environmentally sustainable practices and purchasing across the organisation.	<ul style="list-style-type: none">• Maintain procurement and contracting policies and documents addressing environmental sustainability.

		<ul style="list-style-type: none"> • Revolve Shed established at Yass Waste Transfer Station and supported by awareness campaign
EN2.3	Encourage the community, businesses, government and community support services to mitigate and adapt to the impact of climate change and adopt environmentally sustainable practices.	<ul style="list-style-type: none"> • Look for opportunities to encourage business to use environmentally friendly practices • Publish #SustainabilitySunday on Council's social media platform • Complete a Climate Change and Natural Disaster Action Plan • Complete three in-school workshops on waste reduction • Use the Yass Valley Eco Champs program to showcase sustainability efforts of our businesses

The Sustainability Advisory Committee have taken a broader view of sustainability to include environmental, economic and social sustainability. The Committee developed a Strategic Assessment Framework to assist with developing priorities for the Committee to undertake i.e.

- The design of a Food Organics and Garden Organics (FOGO) service
- A review of the current trends and approaches for Council to move to electric vehicles
- Engagement of other Advisory Committees on common interests
- A community led (Council supported) Climate Change Action Plan

The Committee will continue to use the Strategic Assessment Framework to reconsider priorities once the current priority projects have been completed.

5. REVIEW

The review of this policy will take account of relevant legislation and State Government policies, best practice guidelines and Council plans and priorities.

This policy will be reviewed following each general election of Council and the Director Planning & Environment is responsible for arranging the completion of the review.

6. LEGISLATION AND LEGAL FRAMEWORK

This policy is to be read in conjunction with the following:

- *Local Government Act 1993*
- *NSW Government Sustainability Policy 2008*
- *Yass Valley 2030 Community Strategic Plan*

7. DEFINITIONS

The implementation of a sustainability philosophy requires recognition that all decisions and actions have an impact on present and future generations.

Sustainability broadly includes:

- Living within the limits of what the environment can provide
- Understanding the many interconnections between economy, society and the environment
- The equal distribution of resources and opportunities

Environmental Sustainability involves:

- Making decisions and taking action that are in the interests of protecting the natural world, with particular emphasis on preserving the capability of the environment to support human life

Ecologically Sustainable Development (ESD) means:

- Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:
 - The precautionary principle**—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:
 - Careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment
 - An assessment of the risk-weighted consequences of various options
 - Inter-generational equity**—namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations
 - Conservation of biological diversity and ecological integrity**—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration
 - Improved valuation, pricing and incentive mechanisms**—namely, that environmental factors should be included in the valuation of assets and services, such as:
 - Polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
 - The users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
 - Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems

8. RESPONSIBILITIES

Council and all Staff undertaking decision making on behalf of Council are required to take into account the provisions of this policy in relation to any service or project being undertaken by Council.

9. HISTORY

EMT Review Date	Report to Council	Minute No.	Exhibition Period	Adoption	Rescission Date
12/06/2014	25/06/2014	122 131	26/6-31/7/2014	01/08/2014	
11/09/2019 Sustainability Advisory Committee Review	23/10/2019 4 April 2023	245	N/A	23/10/2019	



CANBERRA REGION
JOINT ORGANISATION

Regional Waste and Sustainable Materials Strategy

2022-27

9 December 2022

Acknowledgment of Country:

We acknowledge Country and pay respect to the Traditional Owners and Custodians of the land and waters across South East New South Wales. We recognise and honour their ancient cultures and their spiritual, cultural and physical connections with land, waters and community.

For over 70,000 year this Country has been inhabited and cared for by First Nations people from various mobs and dialects. We pay our respects and gratitude for their stewardship and for sustaining this land where we live, work, and visit. Their connection and understanding of the natural and cultural landscape is seen and heard through art, song, dance, and storytelling practices. We recognise the importance of these First stories, the contemporary stories of displacement, and the continued journey of self-determination in Australia.

Acknowledgement of the member councils:



Acknowledgement of associate members:



DOCUMENT CONTROL					
Version	Description	Date	Author	Reviewer	Approver
1.0	1 st Draft Release	8/09/2022	TA	AU	RM
2.0	2 nd Draft Release	20/10/2022	TA	AU	RM
3.0	Draft Final Release	23/11/2022	TA	AU	RM
4.0	Final Release	09/12/2022	-	-	RM

Table of Contents

Executive Summary	1
1 Introduction	4
1.1 Purpose	5
1.2 Document Structure	6
2 Policy Context	7
2.1 National Framework	7
2.2 State Framework	7
2.3 Regional Framework	9
2.4 Local Framework	9
3 Guiding Principles	11
3.1 Circular Economy & Waste Hierarchy	11
3.2 Net Zero Emissions	12
3.3 Sustainable Procurement	13
4 Where are we today?	14
4.1 Regional Profile	14
4.1.1 CRJO Member Infrastructure	17
4.1.2 Private Infrastructure	20
4.2 Regional Challenges	21
4.3 Past Performance	22
5 Where do we want to get to?	25
5.1 Opportunities for the Future	25
5.2 Strategic Direction	27
5.3 Strategic Vision	27
5.4 WaSM Priority Areas and Themes	27
5.5 Targets and KPIs	30
6 Strategic Objectives	33
7 How are we going to get there?	35

Tables

Table 4-1: Member Council FOGO Services.....	17
Table 4-2: Government Waste and Resource Recovery Infrastructure.....	18
Table 4-3: Known Private Waste and Resource Recovery Infrastructure	20
Table 4-4: CRJO Projects	23
Table 5-1: WaSM Priority Areas.....	28
Table 5-2: Targets and KPIs.....	30
Table 6-1: Strategic Objectives	33
Table 7-1: Actions Summary	37

Figures

Figure 1-1: Location CRJO Member Councils and Associate Members	4
Figure 2-1: NSW WaSM Targets.....	8
Figure 3-1: Circular Economy.....	11
Figure 3-2: Waste Management Hierarchy	12
Figure 4-1: CRJO Total Material Streams from 2017-18 to 2020-21	14
Figure 4-2: Material Projections to 2040-41	16

Appendices

APPENDIX A	: Policy Context
APPENDIX B	: Council Data
APPENDIX C	: Member Councils & Associate Member Profiles
APPENDIX D	: Known Private Infrastructure
APPENDIX E	: Council Challenges Workshop Results
APPENDIX F	: Bibliography

Acronyms

ACCUs	Australian Carbon Credit Units
ACT	Australian Capital Territory
APCO	Australian Packaging Covenant Organisation
C&D	Construction and Demolition
C&I	Commercial and Industrial
CALD	Culturally, and linguistically diverse
CDS	Container Deposit Scheme
CE	Circular economy
CRC	Community Recycling Centre
CRJO	Canberra Region Joint Organisation
CSP	Community Strategic Plan
DA	Development Application
DPIE	Department of Planning, Industry and Environment
DWM	Domestic Waste Management
DWMC	Domestic Waste Charges
EPA	Environment Protection Authority
EPL	Environment Protection Licence
EVs	Electric Vehicles
FO	Food Organics
FOGO	Food Organics Garden Organics
GHG	Greenhouse Gas Emissions
GMAC	General Managers' Advisory Committee
GO	Garden Organics
Ha	Hectares
ICT	Information and Communications Technologies
IoT	Internet of Things
L	Litre
LF	Landfill
LGA	Local Government Area
LGNSW	Local Government NSW
MRF	Materials Recycling Facility
MSW	Municipal Solid Waste
MUDs	Multi-Unit Dwellings

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan

Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



NSW	New South Wales
ORF	Organics Recycling Facility
PEF	Processed Engineered Fuel
PV	Photovoltaic Solar panel
RCG	Recycled crushed glass
RDF	Refuse Derived Fuel
RENEW	Regional Network for Effective Waste Management
RRC	Resource Recovery Centre
RVM	Reverse vending machine
t	Tonnes
TBL	Triple Bottom Line
TfNSW	Transport for NSW
WARR	Waste Avoidance and Resource Recovery
WARR Strategy	Waste Avoidance and Resource Recovery Strategy 2017 – 2021
WaSM	NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027
WMF	Waste Management Facility
WTS	Waste Transfer Station

Executive Summary

Canberra Region Joint Organisation (CRJO) works in partnership with a voluntary group of ten councils (member councils) and two associate members. The CRJO Regional Waste and Sustainable Materials Strategy 2022-27 (the Strategy) and the Action Plan aligns with the goals and strategic direction of the NSW Waste and Sustainable Materials Strategy 2041- Stage 1: 2021-2027 (WaSM) and replaces the CRJO Regional Waste Strategy (2018-2023). It seeks to further improve regional waste management and encourage sustainable use of materials into the future.

The Strategy approaches resource recovery and an emerging circular economy (CE) by offering a dynamic, and adaptive framework which is responsive to changes at the regional, State and national level and beyond. It will guide and align the region with the NSW WaSM Strategy whilst retaining as much of the social, economic, and skills-based benefits of local transformation of waste as possible.

Key to delivering optimal regional outcomes and aligning with government policy objectives and funding initiatives is the identification of opportunities for improved regional outcomes. The Strategy considers how the region can:

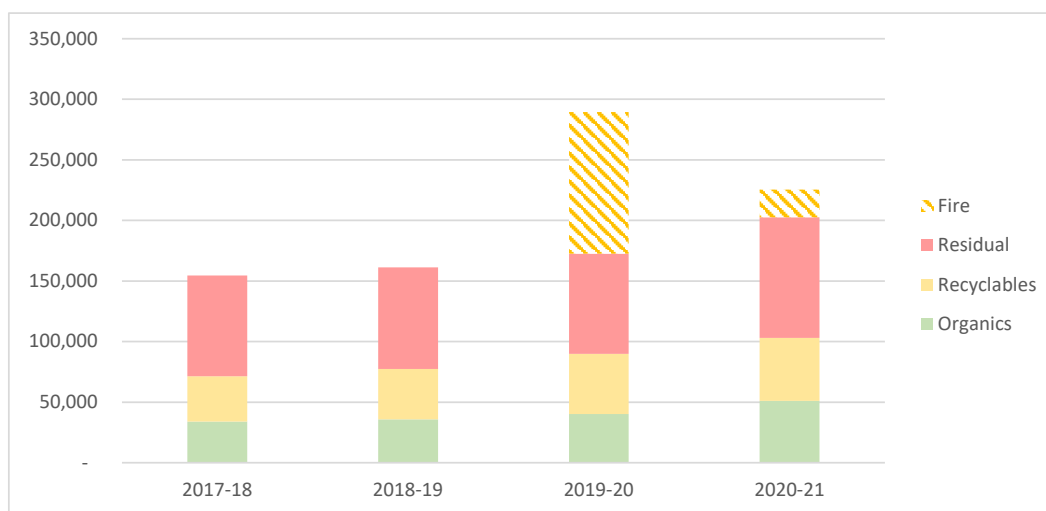
- Identify opportunities to provide existing waste services more efficiently and consider the viability of services provided by member councils in the region;
- Identify opportunities for member councils to utilise waste assets and resources in the most efficient manner to maximise waste avoidance, reduction and resource recovery;
- Review existing regional co-operation and co-ordination activities;
- Identify opportunities to deal with problem wastes in the area;
- Consider regional community education strategies; and
- Explore emerging or innovative waste management developments.

The guiding principles presented in the Strategy provide the basis for driving change within the waste management and resource recovery industry. The principles addressed here influence the approaches to facilitate greater diversion of waste from landfill, guide better practices and improve performance. The principles include the internationally recognised circular economy and waste hierarchy, along with state-based initiatives of net zero emissions and sustainable procurement.

The CRJO region lies in South-Eastern NSW and surrounds the ACT. It encompasses a total area of 63,000km² with a total population of 305,000 and approximately 125,000 households

(CRJO Profile.id). The population increased approximately to 810,000 with a total area of 70,000km² if inclusive of the associated CRJO members (ACT and Wagga Wagga City Council).

Like many other parts of the State, current trends and projected material generation is anticipated to increase for the foreseeable future. To slow, or reverse, this increase, CRJO will actively pursue projects that strive to achieve the NSW State WaSM Targets as outlined within this Strategy. However, at this stage, across the three main material streams within the region; recyclables, organics and residual waste, that overall generation of material continues to increase.



CRJO Total Material Streams from 2017-18 to 2020-21

(Source: NSW EPA WARR Data, excluding ACT and Wagga Wagga City Council)

Across the period shown above, organics and residual (red-lid bin) waste has continued to increase while kerbside recycling remained relatively consistent. It is anticipated that with the mandated introduction of Food Organics and Garden Organics (FOGO), residual waste volumes will slightly decline as organics are captured within the new system. Furthermore, the significant waste related impact of the 2019-20 bushfires caused at least 150,000 tonnes of additional waste which was managed by the impacted member councils.

The direction of this Strategy has been formed through engagement and consultation with all member councils to facilitate and deliver opportunities for local and/or regional improvement across the CRJO. The member councils believe that improvements can be gained in the future from:

- A collaborative approach to education, planning, strategy development, delivery and funding assistance;
- A collaborative approach to procurement of services and infrastructure;
- Utilising innovative and realistic technologies to create environmental, social and economic benefits and efficiencies;
- A collaborative approach to infrastructure and services needs analysis such as infrastructure capacity, emissions reductions and risk mitigation;
- Transitioning to a more circular economy;
- Planning for a more resilient emergency and disaster waste management on a regional scale;
- Understanding material flow and having greater data accuracy, accountability and transparency; and
- Continue to facilitate a regional advocacy role on regulatory changes and funding opportunities.

Based on the strategic direction, the following vision is adopted for the Strategy:

To protect our regional communities and optimise economic development through better resource recovery and waste management.

Delivering the Strategy will be achieved through the implementation of the Action Plan. The Action Plan outlines the projects and initiatives required to improve waste management, resource recovery and circular performance within the CRJO region. The Action Plan is a standalone document which is supported by the Strategy and demonstrates alignment with the NSW WaSM Priorities while also presenting opportunities for funding across the next 5 years.

1 Introduction

Canberra Region Joint Organisation (CRJO) works in partnership with a voluntary group of ten councils (member councils) and associate members the ACT Government, Wagga Wagga City Council and Canberra Airport. CRJO member councils are:

- Bega Valley Shire Council;
- Eurobodalla Shire Council;
- Goulburn Mulwaree Council;
- Hilltops Council;
- Queanbeyan-Palerang Regional Council;
- Snowy Monaro Regional Council;
- Snowy Valleys Council;
- Upper Lachlan Shire Council;
- Wingecarribee Shire Council;
- Yass Valley Council.



Figure 1-1: Location CRJO Member Councils and Associate Members

CRJO membership provides a unique platform for the local councils to collectively pursue regional benefits and improve outcomes within these locales, including facilitating close regional cooperation, resource sharing, and cultivating shared investment and infrastructure development opportunities.

The CRJO Regional Waste and Sustainable Materials Strategy 2022-27 (The Strategy) and the implementation plan (Implementation Plan) aligns with the goals and strategic direction of the NSW Waste and Sustainable Materials Strategy 2041- Stage 1: 2021-2027 (WaSM) and replaces the CRJO Regional Waste Strategy (2018-2023). It seeks to further improve regional waste management and encourage sustainable use of materials into the future.

During the development of the Strategy, the member councils were engaged and consulted through a variety of means including one-on-one online meetings, face-to-face and online workshops, and presentations. The member councils provided valuable local input to assist in the preparation of a Strategy that addresses both regional and local needs relevant to the CRJO region.

1.1 Purpose

The Strategy approaches resource recovery and an emerging circular economy (CE) by offering a dynamic, and adaptive framework which is responsive to changes at the regional, State and national level and beyond. It will guide and align the region with the NSW WaSM Strategy whilst retaining as much of the social, economic, and skills-based benefits of local transformation of waste as possible.

The desired future vision, objectives and challenges of individual member councils underpins development of the Draft Strategic Direction and Vision for the Strategy. This includes identification of State waste management priorities including WaSM, regional strategic directions and regional / local priorities, funding, and resource availability.

The Strategy aligns with key WaSM-associated plans and frameworks including the *NSW Plastics Action Plan*, *Guide to Future Infrastructure Needs*, aligns with the National Waste Policy and Packaging Targets and addresses best-available, evidence-based regional and local data, plans and strategies.

Key to delivering optimal regional outcomes and aligning with government policy objectives and funding initiatives is the identification of opportunities for improved regional outcomes based on an evidence-based approach to improved regional infrastructure needs assessment and delivery and advancing these to support growth of a regional circular economy. The Strategy considers how the region can:

- Identify opportunities to provide existing waste services more efficiently and consider the viability of services provided by member councils in the region;
- Identify opportunities for member councils to utilise waste assets and resources in the most efficient manner to maximise waste avoidance, reduction and resource recovery;
- Review existing regional co-operation and co-ordination activities;
- Identify opportunities to deal with problem wastes in the area;
- Consider regional community education strategies; and
- Explore emerging or innovative waste management developments.

1.2 Document Structure

The Strategy document describes the policy setting, at a national, state, regional and local level. It then has a more detailed look at the current state of waste and resource recovery in the CRJO region, describing the strategic objectives of the new Strategy and how this will be delivered with specific actions over the next 5-year period.



Source: CRJO

2 Policy Context

The frameworks of regulations, policies, and guidelines, at the local, regional, state and national level, relevant to waste management, resource recovery and circular economy are presented in the following sections.

2.1 National Framework

The National Waste Policy – *Less Waste, More Resources* was released by the Department of the Environment and Energy in 2018 and provides a framework for collective action by businesses, governments, communities, and individuals until 2030. The policy identifies the following seven targets:

1. Ban the export of waste plastic, paper, glass and tyres, commencing in the second half of 2020;
2. Reduce total waste generated in Australia by 10% per person by 2030;
3. 80% average resource recovery rate from all waste streams following the waste hierarchy by 2030;
4. Significantly increase the use of recycled content by governments and industry;
5. Phase out problematic and unnecessary plastics by 2025;
6. Halve the amount of organic waste sent to landfill by 2030; and
7. Make comprehensive, economy-wide and timely data publicly available to support better consumer, investment and policy decisions.

2.2 State Framework

The NSW government released the *NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027* (WaSM) as the first stage in a 20-year plan that focuses on the environmental benefits and economic opportunities to reduce waste, improve waste management, and increase material recycling.

The WaSM Strategy aims to reduce waste generated and increase recycling through adoption of the Targets outlined in Figure 2-1.

To achieve the WaSM targets of halving food waste to landfill and achieving net zero emissions from organics in landfill by 2030, the government will require the separate collection of:

- Food and garden organics from all NSW households by 2030; and
- Food waste from businesses that generate the highest volumes, including large supermarkets and hospitality businesses, by 2025.

Based on an assessment of waste and circular economy infrastructure needs over the next decade and beyond the government has identified three key areas to focus on – residual waste, organics, and plastics. Recovery and recycling infrastructure will need to keep pace with demand and to support this there will need to be investment in new and upgraded facilities from now to 2030 to prevent any shortfall in capacity.

Getting the right infrastructure in the right place will be critical to recover, reuse and extend the life of most materials. The *WaSM Guide to Future Infrastructure Needs 2021* reviews the waste infrastructure requirements in NSW to underpin change.



Figure 2-1: NSW WaSM Targets

(Source: NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027)

The *NSW Plastics Action Plan* supports the NSW Waste and Sustainable Materials Strategy 2041. The *NSW Plastics Action Plan* will assist in delivering the following targets from the WaSM Strategy:

- Phase out problematic and unnecessary plastics by 2025;
- Reduce the total waste generated by 10% per person by 2030;
- Achieve an average 80% recovery rate of resources from all waste streams by 2030;
- Significantly increase the use of recycled content by government and industry;
- Reduce plastic litter items by 30% by 2025;
- Reduce the overall litter by 60% by 2030; and
- Triple the plastics recycling rate by 2030.

2.3 Regional Framework

There are 14 regional organisations across NSW which each supporting councils through better planning, economic development and service delivery. CRJO has several working groups including the Resource Recovery Working Group and Waste Education Working Group which are represented by the Waste Managers or Waste Education Officers respectively.

Resource Recovery and Waste Education Working Groups meet periodically to discuss operations, infrastructure and services all with an aim to boost regional collaboration, knowledge sharing and improve the resource recovery system within the region. The working groups, along with the preparation of this Strategy form the conduit between the member councils and CRJO, providing a voice to State and Federal Government and access to regionally supported grant funding programs.

2.4 Local Framework

The *Local Government Act 1993* sets out the legal framework, governance, powers, and responsibilities of councils in New South Wales. The Act sets out the functions of councils, including its service functions such as, providing community health, recreation, education & information services, environmental protection, and waste removal & disposal.

A *Community Strategic Plan* (CSP) is a key element within the integrated planning and reporting framework which all councils in NSW have a legislative obligation to adhere to. The CSP addresses four key questions for the community:

- Where are we now?
- Where do we want to be in ten years time?
- How will we get there?

- How will we know when we have arrived?

Along with a CSP, each of the member councils have a Waste and Resource Recovery Strategy which outlines the strategic and operational direction for waste management within its council. Where possible these framework documents for each member council were considered and utilised to inform and support the development of this regional Strategy.

A more detailed review of the policy context is provided within Appendix A.



3 Guiding Principles

The guiding principles presented in the Strategy provide the basis for driving change within the waste management and resource recovery industry. The principles addressed here influence the approaches to facilitate greater diversion of waste from landfill, guide better practices and improve performance. The principles include the internationally recognised circular economy and waste hierarchy, along with state-based initiatives of net zero emissions and sustainable procurement.

3.1 Circular Economy & Waste Hierarchy

NSW is transitioning to a circular economy over the next 20 years. A circular economy aims to 'close the loop on waste' by minimising what we throw away and using and reusing our resources efficiently, making them as productive as possible. It is an alternative to the traditional linear economy (take, make, use, dispose), which refers to taking resources, making goods that are then bought and used to then be disposed of as waste (Figure 3-1).

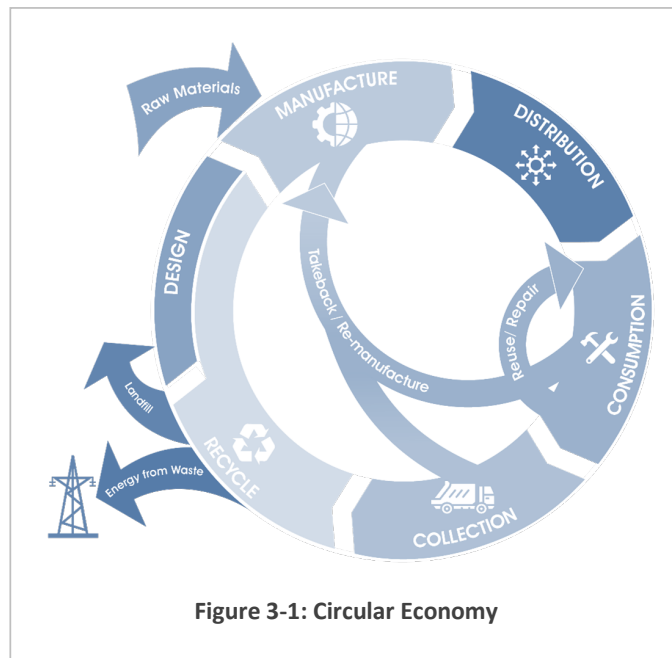


Figure 3-1: Circular Economy

The *NSW Circular Economy Policy Statement* (NSW EPA, 2019) guides the ambition and approach to a circular economy and establishes seven principles to maximise the use and value of resources including:

- Sustainable management of all resources;
- Valuing resource productivity;
- Design out waste and pollution;
- Maintain the value of products and materials;
- Innovate new solutions for resource efficiency;
- Create new circular economy jobs; and
- Foster behaviour change through education and engagement.

Benefits of implementing a circular economy concept include job creation, reduction in carbon emissions and improved resource efficiency.



Figure 3-2: Waste Management Hierarchy

The Waste Management Hierarchy is an internationally adopted principle and concept which lists waste management options in order of preference according to their sustainability and environmental impacts.

The Waste Management Hierarchy has been adopted within the Strategy as the basis for classifying and assessing the various resource recovery options which are being considered to assist CRJO to improve waste management across the region. As shown in Figure 3-2, options which achieve outcomes higher up the

Waste Management Hierarchy are preferred over those located further down the Hierarchy.

3.2 Net Zero Emissions

Climate change is affecting communities across Australia and across the globe. The NSW Government's *Net Zero Plan Stage 1: 2020-2030* is the foundation for the State's action on climate change and its goal to reach net zero emissions by 2050. It outlines the NSW Government's plan to act and protect our future in collaboration with industry, communities, and households. Delivery of the Plan is aimed at growing the economy, creating jobs, and reducing emissions to ensure New South Wales is well placed to prosper in a low carbon world.

The Plan aims to deliver a 50% cut in emissions by 2030 compared to 2005 levels as the first stage to achieving net zero emissions by 2050. By reducing emissions, local councils can help to increase the resilience of their communities and act as a catalyst for NSW to meet its net zero emissions goals.

NSW councils have a key role in the shift to net zero emissions as leaders, place makers and through their connection to local communities. Local councils can support the transition through reducing their own emissions across their operations and through the provision of essential services such as waste management, transport, planning and infrastructure for their residents and businesses.

3.3 Sustainable Procurement

Sustainable procurement takes into consideration the economic, environmental, social and governance impacts of any purchase with the four factors referred to as the quadruple bottom line and relate to a total purchase cost, and not just the upfront dollar expense (LGNSW, Sustainable Procurement Guide).

In terms of the sustainable procurement practices, the following emphasise the entire life cycle of the product or service:

- Devising strategies that reduce demand and extend the life of the product;
- Planning what happens with a product at the end of the contract – i.e. how will it be reused, recycled, treated or disposed;
- Considering costs over the life of the product or service and policies in the planning process;
- Encouraging sustainable solutions and innovation in tenders; and
- Measuring and improving sustainability throughout the life of the procurement.

Approaching procurement sustainably allows councils and the waste management and resource recovery industry to meet economic, environmental, social and governance requirements, while improving opportunities for a more circular system across the entire supply chain.



Source: CRJO

4 Where are we today?

CRJO has active member councils who collaborate and participate in knowledge sharing, initiatives and activities to improve overall waste and resource recovery performance within the region. Since the development of the former regional strategy, CRJO has implemented a variety of projects with success and provided strong waste related advocacy and guidance to member councils. The following section outlines the regional profile for CRJO, the challenges that have recently been faced by the member councils and a summary of key successes delivered within the group.

4.1 Regional Profile

The CRJO region lies in South-Eastern NSW and surrounds the ACT. It encompasses a total area of 63,000km² with a total population of 305,000 and approximately 125,000 households (CRJO Profile.id). The population increased approximately to 810,000 with a total area of 70,000km² if inclusive of the associated CRJO members, ACT and Wagga Wagga City Council.

Like many other parts of the State, current trends and projected material generation is anticipated to increase for the foreseeable future. To slow, or reverse, this increase, CRJO will actively pursue projects that strive to achieve the State WaSM Targets as outlined within this Strategy. However, at this stage, across the three main material streams within the region; recyclables, organics and residual waste, it can be seen from Figure 4-1 that overall generation of material continues to increase.

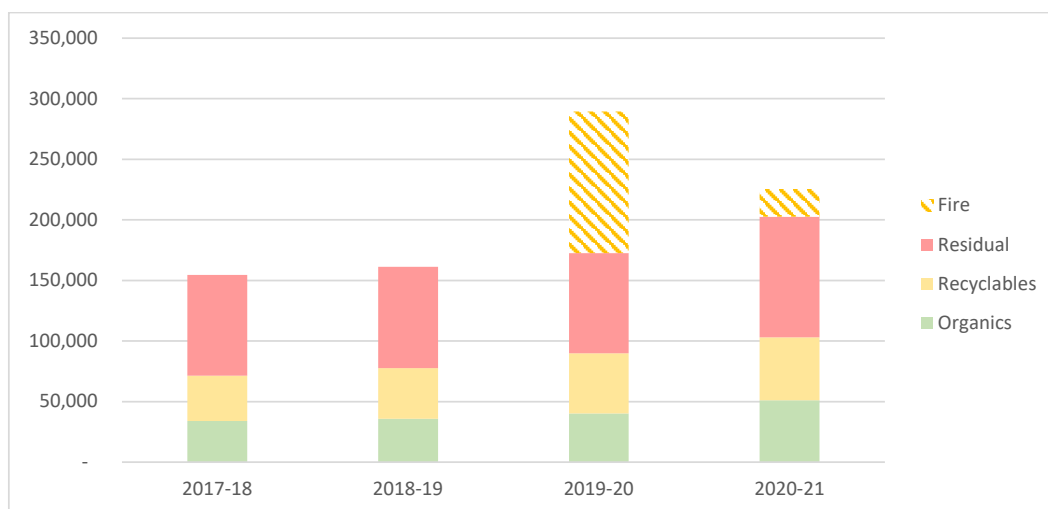


Figure 4-1: CRJO Total Material Streams from 2017-18 to 2020-21

(Source: NSW EPA WARR Data, excluding ACT and Wagga Wagga City Council)

Across the period shown in Figure 4-1, organics has continued to increase. The increase in this stream is expected to continue with the introduction of the mandate for FOGO collections across the State. Recycling remained relatively consistent however, had a significant increase in 2020-21 which may have been a result of the recycling efforts following the disasters in the region. Since 2018-19, the residual waste stream, which comprises more than 50% of the total material generated, has steadily increased resulting in a significant amount of waste being landfilled within the region. It is anticipated that with the widespread introduction of FOGO, residual waste volumes will slightly decline as organics are captured within the new system. At a more granular level, most member councils mirror these trends across all three streams as shown in more detail in Appendix B.

Furthermore, the significant waste related impact of the 2019-20 bushfires caused at least 150,000 tonnes of additional waste which was managed by 6 of the impacted member councils. As a result, this nearly doubled the amount of waste that had to be managed within the region during that period. Moreover, the impact on waste management services and infrastructure was likely greater, since not all impacted Councils had bushfire waste data available.

To obtain an understanding of the potential growth in material volumes into the future and to ensure that sufficient capacity exists within the region to manage this material, projections of the material streams were produced. The projections considered several factors including *Profile.id* population forecasts, the Department of Planning and Environment's (DPE's) population growth and the average growth in material generation for each member council based on recent material data trends.

For the three material streams (recycling, organics and residual waste), the mandated implementation of FOGO kerbside collections by 2030 was considered when developing the projections. However, it should be noted that several member councils already provide this service so the impact on the forecast is not as dramatic as expected. Figure 4-2 shows the material projections using the material trends average growth where FOGO is implemented by all remaining member councils in 2030. It is anticipated that some councils may implement the FOGO services prior to 2030, however, this presents the results if it was implemented as late as possible.

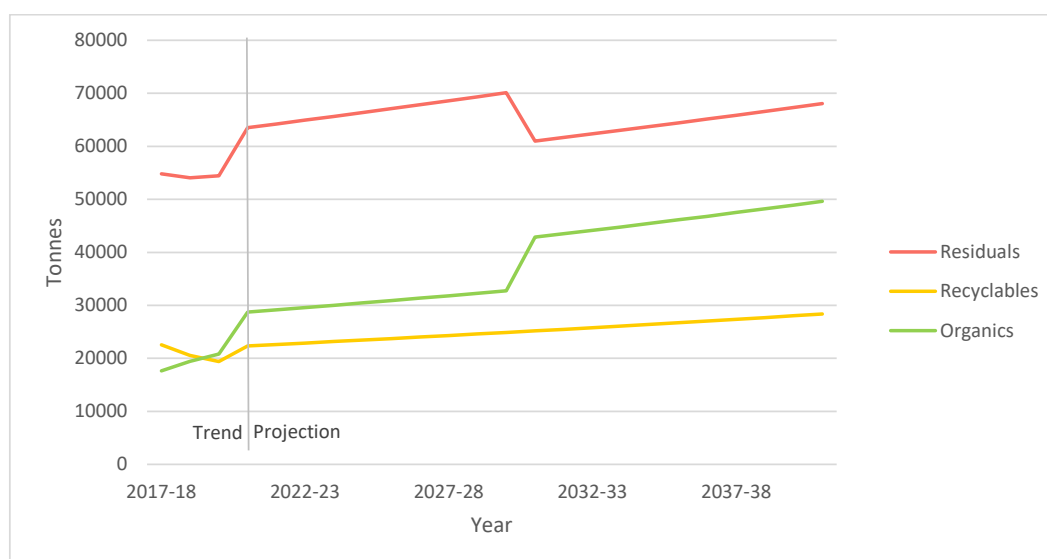


Figure 4-2: Material Projections to 2040-41

It can be seen from Figure 4-2 that the residual waste stream continues to be the largest of the three streams. Notably, this stream has the most potential to cause environmental harm, given its mixed composition. The residual stream should be the focus of several programs targeting it holistically, applying both waste hierarchy and circular economy principles.

The increase in FOGO tonnes is based on sourcing it from the residual stream, and this is reflected in Figure 4-2 which shows a mirrored decrease in residuals. The modelling assumed that 50% of organic material from the residual bin was captured, with residual bins containing approximately half organics across most member councils. Therefore, the increase in organics across the next 10 years will require strategic planning to ensure the region can efficiently and effectively manage this growing stream, noting that some capacity already exists.

The following table provides an indication of those member councils who have, and those yet to introduce, a three bin FOGO kerbside service along with the percentage of households serviced within the LGA. Please note data is from 2020/21 and household FOGO collection services may have increased for some member councils and households that do not have a kerbside collection service may have access to FOGO drop-off and processing services through resource recovery centres within their respective council area.

Table 4-1: Member Council FOGO Services

Member Council	FOGO Services (Y/N)	Households with service (2020/21)*
Bega Valley Shire Council	Y	51.8%
Eurobodalla Shire Council	N	-
Goulburn Mulwaree Council	Y	62%
Hilltops Council	N	-
Queanbeyan-Palerang Regional Council	Y	3.7%
Snowy Monaro Regional Council	Y	13.2%
Snowy Valleys Council	Y	Service available after 2020/21 WARR Data
Upper Lachlan Shire Council	N	-
Wingecarribee Shire Council	N	-
Yass Valley Council	N	

*Source WARR Data (2020/2021)

Each of the member councils play their part in contributing to the region's performance, with further details regarding each council's waste management services, infrastructure, challenges and aspirations detailed in Appendix C along with a summary of each member councils waste and resource recovery strategies. In addition, there is a brief profile summary regarding the CRJO Associate Members also within Appendix C.

4.1.1 CRJO Member Infrastructure

Table 4-2 provides a summary of the waste and resource recovery infrastructure managed by the member councils and the Associate Members. Further details can be found in Appendix C.

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan
Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



Table 4-2: Government Waste and Resource Recovery Infrastructure

CRJO	Government Entity	Waste and Resource Recovery Infrastructure	Landfill	RRC	Organic Processing	Tip Shop	CRC
Members	Bega Valley Shire Council	Central Waste Facility (near Bega)	✓				
		Merimbula Community Recycling Centre		✓	✓	✓	✓
		Bemboka		✓			
		Bermagui		✓		✓	
		Candelo		✓		✓	
		Eden		✓		✓	
		Wallagoot		✓		✓	
	Eurobodalla Shire Council	Surf Beach Facility	✓			✓	✓
		Moruya		✓		✓	
		Brou	✓			✓	
	Goulburn Mulwaree Council	Goulburn	✓		✓	✓	✓
		Marulan	✓				
		Tarago		✓			
	Hilltops Council	Victoria Street Facility		✓			
		Redhill Road Facility (Young)	✓				
		Boorowa		✓			
		Murrumburrah		✓			
		Galong		✓			
		Jugiong		✓			
		Bendick Murrell	✓				
		Bribbaree	✓				
		Frogmore		✓			
		Koorawatha	✓				
		Milvale	✓				
		Monteagle		✓			
		Murringo		✓			
		Reids Flat	✓				
		Rugby		✓			
		Rye Park	✓				
		Wyangala		✓			
	Queanbeyan-Palerang Regional Council	Nerriga		✓			
		Braidwood		✓		✓	
		Bungendore		✓		✓	✓
		Bywong		✓			
		Captain Flats		✓			
		Queanbeyan		✓			✓
Members	Snowy Monaro Regional Council	Bombala	✓				
		Cooma	✓		✓	✓	✓
		Jindabyne	✓			✓	
		Adaminaby		✓			

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan

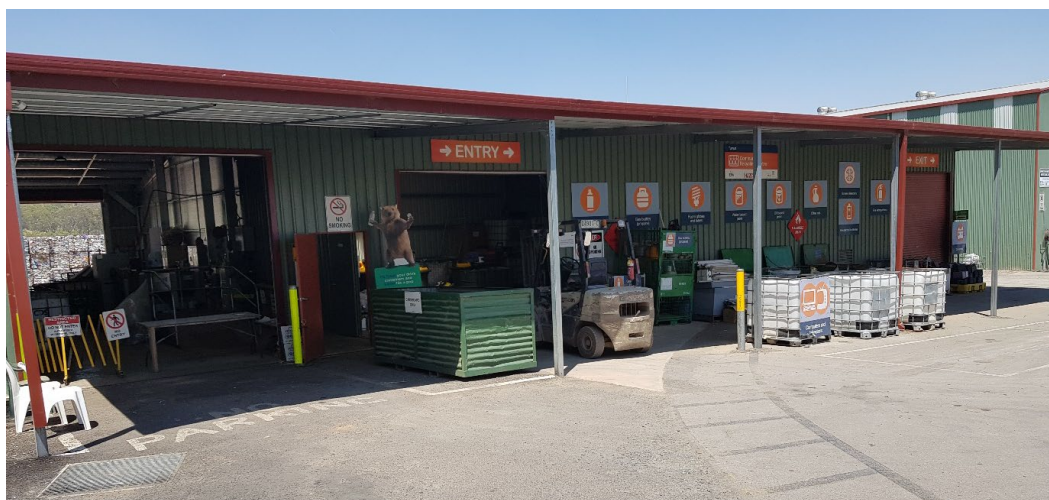
Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



CRJO	Government Entity	Waste and Resource Recovery Infrastructure	Landfill	RRC	Organic Processing	Tip Shop	CRC
		Berridale		✓			
		Bredbo		✓			
		Delegate		✓			
		Nimmitabel		✓			
		Numeralla		✓			
Members	Snowy Valleys Council	Adelong		✓			
		Batlow		✓			
		Khancoban		✓			
		Talbingo		✓			
		Tumbarumba		✓			✓
		Tumut		✓	✓*		✓
	Upper Lachlan Shire Council	Waste and recycling centres at Crookwell		✓			
		Gunning		✓			
		Collector		✓			
		Taralga		✓			
		Bigga		✓			
		Tuena		✓			
	Wingecarribee Shire Council	Resource Recovery Centre (Moss Vale)		✓		✓	✓
	Yass Valley Council	Binalong transfer stations		✓			
		Bookham transfer stations		✓			
		Bowning transfer stations		✓			
		Gundaroo transfer stations		✓			
		Murrumbateman Landfill	✓	✓			
		Wee Jasper transfer stations		✓			
		Yass transfer stations		✓			
Associate Members	ACT	Landfill at Mugga Lane (Symonston)	✓				
		MRF at Hume		✓	✓*		
		Organics recovery facility constructed by 2025			✓*		
	Wagga Wagga City Council	Gregadoo	✓	✓		✓	
		Collingullie		✓			
		Currawarna		✓			
		Galore		✓			
		Humula		✓			
		Mangoplah		✓			
		Tarcutta		✓			
		Uranquinty		✓			

*Under Construction



Source: CRJO

4.1.2 Private Infrastructure

The following table outlines the relevant known recycling, organics or landfilling infrastructure operated within the region by private businesses. Further detail is provided in Appendix D.

Table 4-3: Known Private Waste and Resource Recovery Infrastructure

Material Activity	Type /	Known Infrastructure
Commingled or single stream dry recycling		<ul style="list-style-type: none"> • Endeavour Industries (Goulburn) • Kurrajong Recycling (Wagga Wagga) • Pact Group Holdings, Cleanaway Waste Management and Asahi Beverages (Albury) • Eloura Association (Young)
Organics processing		<ul style="list-style-type: none"> • Veolia Woodlawn (Tarago) • Martin Fertilizers (Yass) • Blue Ridge Quarry - Eurobodalla (Bodalla) • Landtasia (Mulloon) • Corkhill Bothers (Symonston, ACT)
Landfilling		<ul style="list-style-type: none"> • Bowral Waste Centre - Inert Landfill (Bowral) • Bellette's Bulk Bins - Landfill (Tumut) • Bald Hill Regional Quarry - Landfill (Jugiong) • Veolia Woodlawn - Landfill (Tarago) • Hi-Quality Waste Management - Landfill (Windellama)

In addition to the infrastructure listed above, it is suggested that CRJO approach and engage with large companies within the region such as Bega Cheese (Bega), Visy (Tumut) and others such as large universities and hospitals to commence discussion regarding a circular economy and how governments and private enterprise can work collaboratively to deliver circular objectives.

4.2 Regional Challenges

The CRJO region (excluding its Associate Members) encompasses 63,000km² of varying lands, mountains and coastline presenting a number of opportunities, along with a number of challenges. The member councils are faced with significant geographical and transport challenges due to dispersed decentralised localities, towns and cities which culminates in significant operational and service delivery costs to provide a suitable, sustainable waste and resource recovery service to the community.

During the preparation of this Strategy, the member councils were engaged and consulted to understand their challenges. The key challenges facing the member councils included the following:

- The cost of transport and/or the lack of economies of scale;
- The introduction of the FOGO mandate to all households including rural and remote areas;
- The financial and environmental risks associated with legacy landfills;
- The cost to service rural / remote communities with sustainable services and infrastructure;
- Uncertainty regarding long-term landfill capacity and alternatives/contingencies;
- Uncertainty regarding long-term processing capacity and contingencies;
- Lack of problem/hazardous Community Recycling Centre (CRC) services;
- Lack of local or regional level disaster and resilience planning;
- Difficulties in impacting or influencing construction and demolition (C&D) and/or commercial and industrial (C&I) behaviour change or landfill diversion;
- Inconsistent data accuracy and reporting requirements along with poor visibility of material produced within the private sector restricts circular projects; and
- Opposition to the development of Energy from Waste (EfW) by some councils within their local jurisdictions.

It can be seen that the member councils were in alignment with most of the challenges raised. The alignment between member councils demonstrates that the challenges are common and present several opportunities for this Strategy to identify solutions. Alignment on projects and programs will continue to facilitate collaboration between member councils which in turn can

create broader benefits. A workshop was held with member councils which raised these challenges and are summarised in Appendix E.

However, it should be noted that CRJO has member councils with a variety of waste and resource recovery capability, capacity and resources, and this often presents difficulties in identifying initiatives that suit everyone's needs and desires. The Strategy is therefore more flexible than past iterations and applicable to a range of specific council challenges and/or opportunities.

4.3 Past Performance

CRJO has been active in the last 5 years delivering a number of projects funded by State and Federal governments and supported by the member and associate members. Projects undertaken by CRJO have involved a variety of stakeholders and collaborators and have resulted in significant waste and resource capacity, improvements and performance within the region.

CRJO has been successful in attracting a range of grants which provided opportunities to run regional or sub-regional waste and resource recovery related projects. Table 4-4 outlines the recent programs that were run by the CRJO as part of the previous regional waste strategy.

Table 4-4: CRJO Projects

Project	Description	Funding (ex GST)
Household Chemical Cleanout events- yearly	Organise yearly household chemical cleanout events, +17 events/year	\$150,000/year covering 50% of costs
CRC Education funding	Promotional activities CRC- inclusive implementation of new CRC small drop off stations in 2021	\$60,000/year
CDS funding- one off fund	CDS promotion- providing free bins/signage etc to councils/charities/schools	\$50,000
School Waste Education	Assisting councils to provide waste education in schools throughout the region	\$40,000/year
Bin Trim Grant	Worked with a consultant to assess 400 businesses to increase diversion of waste from landfill→ to more recycling	\$240,000
Food Donation Grant	Food Donation Officer improved regional networks of food donation charities and potential donors to increase food donation in the region and improve/strengthen the network in CRJO region	\$106,410
Bushfire Green Waste Assessment Grant	Assessing 2020 bushfire green waste volumes in 5 CRJO councils	\$50,000
Illegal Dumping Grant	Improve illegal dumping data: 4 councils (QPRC, HT, UL, Yass)	\$20,000
Litter Project Snowy Monaro	Improve infrastructure at rest stops along the Monaro Hwy to reduce litter	\$75,000
Workshops/training organised by CRJO	Landfill management training, litter enforcement, social media, community based social media, workplace chemistry, etc.	Funded from Regional Waste funding

Another key project was the development of the Regional Waste Prospectus 2020.

Regional Waste Prospectus 2020:

In partnership with the ACT government, CRJO drafted the Regional Waste Prospectus 2020, advocating for the needs of entire region to the Commonwealth to enable successful implementation of the Council of Australian Governments (COAG) waste export ban. The Prospectus sort to identify recycling projects, potential plant sites and seek funding from the Commonwealth to develop them, particularly facilities to sort mixed plastic materials, paper and cardboard and glass, and turn them into usable products.

Building on the successes of recent regional projects and feedback received from CRJO member councils together with the ACT, there is a strong desire to continue and increase performance through collaboration. This is designed to protect regional communities and optimise economic development opportunities through better resource recovery, waste management and circular approaches into the future.



Source: CRJO

5 Where do we want to get to?

The direction of this Strategy has been formed through engagement and consultation with all member councils to facilitate and deliver opportunities for local and/or regional improvement across the CRJO. This section presents the opportunities that were identified by the member councils, the Strategic Direction and Strategic Vision that were adopted based on the opportunities, along with acknowledging the Strategy's alignment with WaSM Priority Areas, Themes and Targets.

5.1 Opportunities for the Future

When consulted during the formulation of this Strategy, the member councils conceptualised several potential opportunities that would assist and improve waste and resource recovery services and infrastructure within the region. In particular, the following opportunities were raised:

- Consistent messaging and/or support from CRJO regarding waste and resource recovery across regional or sub-regional areas to promote the correct use of services, infrastructure and/or the implementation of FOGO;
- Undertake regional or sub-regional procurement projects to promote greater economies of scale and support the implementation, or improve existing services and/or infrastructure;
- Investigate options to share or collaborate in establishing waste management infrastructure on a sub-regional basis including landfills, MRFs or organics facilities and understand regional capacity to cater for future demands;
- Investigate possibilities to install landfill gas capture systems at landfills across the region to reduce emissions and alleviate amenity concerns;
- Monitor regulatory activities and seek guidance from the EPA regarding legacy landfill closure requirements and funding arrangements to support this;
- Explore the use of innovative technology, smart systems and artificial intelligence to generate greater efficiencies in services, infrastructure and/or data accuracy/capture;
- Commence planning and building resilience for emergency and disaster waste management by developing a database of temporary waste handling sites where material can be temporarily stored to facilitate sorting in order to preserve landfill airspace. There is a strong regional commitment to put in place better regional emergency arrangements and formal agreements on alternative disposal sites for resilient waste management during disasters;
- Investigate and map material flows across the region to assist in developing circular economy projects while also obtaining greater data accuracy, ensuring accountability and proving transparency to assist in making informed decisions while also simplifying any data reporting obligations;

- Commence planning for the development of a regional circular economy strategy and explore opportunities to implement sub-regional circular economy pilot projects that can be utilised to create new markets or inform future projects.

Furthermore, grant funding opportunities were seen as critical to improvement within the region as the cost to provide improved services and infrastructure was highlighted as a significant impediment by member councils.

These opportunities set the strategic outlook and guided the creation of the Strategic Direction and Vision for the Strategy.



Source: CRJO

5.2 Strategic Direction

The strategic direction shapes the vision of the regional Strategy. Through consultation with member councils, it is believed that improvements can be gained in the future from:

- A collaborative approach to education, planning, strategy development, delivery and funding assistance;
- A collaborative approach to procurement of services and infrastructure;
- Utilising innovative and realistic technologies to create environmental, social and economic benefits and efficiencies;
- A collaborative approach to infrastructure and services needs analysis such as infrastructure capacity, emissions reductions and risk mitigation;
- Transitioning to a more circular economy;
- Planning for a more resilient emergency and disaster waste management on a regional scale;
- Understanding material flow and having greater data accuracy, accountability and transparency; and
- Continue to facilitate a regional advocacy role on regulatory changes and funding opportunities.

5.3 Strategic Vision

Based on the Strategic Direction, the following vision is adopted for the Strategy:

To protect our regional communities and optimise economic development through better resource recovery and waste management.

5.4 WaSM Priority Areas and Themes

The Strategy has a 20-year horizon and aligns the Action Plan with the five year 'Stage 1' of WaSM from 2022 to 2027. The Strategy supports and aligns with the WaSM priority areas. By developing and implementing Strategic Objectives and Actions which successfully deliver outcomes sought by each priority area, CRJO will build capacity, reduce emissions and protect the environment. The Priority Areas are detailed in Table 5-1.

Table 5-1: WaSM Priority Areas

Priority Area	Context
Meeting future infrastructure and service needs	As waste volumes continue to grow, infrastructure and services will need to keep pace. We need to ensure we have the capacity to meet our critical future needs, such as residual waste capacity, as well as stimulating investment in a pipeline of innovation
Reducing carbon-to-atmosphere emissions from waste and its management	Transitioning to a circular economy means increasing our resource efficiency and reducing our carbon footprint. If we can make our materials more productive by improving their durability through design, reusing or repairing them, recycling and remanufacturing them or extracting their embodied energy, we can reduce our reliance on emissions-intensive virgin materials
Protection of the environment and human health	If poorly managed, waste can cause enormous damage to our natural environment and threaten the health and well-being of our community. Pollution from waste can be caused by littering, illegal dumping and mishandling of hazardous wastes, and it costs NSW millions of dollars each year. Maintaining strong regulations will help to stop this waste pollution, while engaging with businesses and consumers will help to drive positive behaviour change

(Source: NSW EPA Waste Delivery Plan)

In addition to the priority areas, the EPA nominated the categorisation of the regional strategies into the following four themes which encompass a broader scope for initiatives to deliver improvements across the State:

- Avoid or reduce;
- Recover resources;
- Protect the environment; and
- Strategic collaboration.

The Strategic Objectives (Section 6) and Action Plan summary (Section 7) are presented demonstrating alignment with the WaSM Priority Areas and/or Themes.

To provide further guidance for actions within the CRJO region, the following sub-theme were utilised to prepare a comprehensive Action Plan that addressed a wide variety of initiatives to assist all member councils deliver performance improvement across the region:

- CRJO Sub-Themes:

- Disaster resilience and waste management planning;
- Strategic planning for future waste and resource recovery infrastructure needs;
- Support for Aboriginal communities waste management;
- Managing plastic waste and pollution;
- Managing illegal dumping/asbestos contaminated materials;
- Local Government procurement actions to support a circular economy;
- Climate change and low carbon economies; and
- Regional waste education.

Utilising the Strategic Direction and Vision, while aligning with the WaSM priority areas and themes, will ensure the CRJO Regional Waste and Sustainable Materials Strategy is comprehensive and caters for all member councils needs and desires now and into the future.



Source: CRJO

5.5 Targets and KPIs

CRJO and its member councils fully support the targets within the WaSM Strategy. The targets are, however, often aspirational for regional/rural areas yet CRJO will strive to achieve the targets over the next 10 years. To support this notion, CRJO commits to the following targets and reporting against the associated key performance indicator (KPIs).

Table 5-2: Targets and KPIs

Target	KPI	#	Source Data
Advocate for the reduction of total waste generated by 10% per person by 2030	Annual reduction in waste generated per person	1	EPA WARR Reports
Advocate for an average recovery rate of 80% for residual waste, recycling and organics by 2030	Annual increase in recovery rate for residual waste, recycling and organics	2	EPA WARR Reports
Significantly increase the use of recycled content by governments and industry	Annual increase in the use of recycled content	3	Councils
Support the phase out of problematic and unnecessary plastics by 2025	Annual decrease in use of problematic and unnecessary plastics	4	Compositional Audits
Halve the amount of organics waste sent to landfill by 2030	Annual reduction in organics sent to landfill	5	Compositional Audits + EPA WARR Reports
Reduce plastic litter items by 30% by 2025	Annual reduction in plastic litter	6	EPA Litter Audits
Reduce the overall litter by 60% by 2030	Annual reduction in litter	7	EPA Litter Audits
Triple the plastic recycling rate by 2030	Annual increase in plastic recycling	8	Compositional Audits + EPA WARR Reports
Net Zero Emissions by 2050	Annual decrease in emissions	9	Councils

These targets provide clear guidance for the CRJO member councils to support and contribute to the WaSM targets and deliver reduced waste generation and improved recycling and resource recovery. The KPIs provide a metric to report against on an annual basis which demonstrates an ongoing contribution to the targets. The KPI reference number is utilised within the Action Plan.

To facilitate CRJO in getting where its wants to, Strategic Objectives and Actions were prepared based on input from the member councils who identified opportunities within the region to improve waste management and resource recovery services and infrastructure while aspiring to be leaders in the circular economy. The Objectives are detailed within the following section, while the Actions are detailed within the Action Plan, and demonstrate how the CRJO will achieve its objectives for the future.



Source: CRJO

6 Strategic Objectives

Regional groups across NSW are seeking to more actively collaborate through the WaSM Strategy and funding opportunities to streamline reporting requirements and create funding application synergies. In particular, the regional groups continue to collaborate by forming an aligned set of objectives. The following table (Table 6-1) presents the CRJO's amended version of the Objectives that the Regional Groups composed as part of a demonstration of collaboration and alignment of regional strategies across the State. The Objectives align with other Regional Groups while also relating more specifically to the CRJO region based on feedback from the member councils.

Table 6-1: Strategic Objectives

WaSM Themes				Strategic Objectives	WaSM Priority Areas		
Avoid Reduce	Recover Resources	Protect The Environment	Strategic Collaboration		Meeting our future infrastructure and service needs	Reducing carbon emissions through better waste and materials management	Building on our work to protect the environment and human health from waste pollution
✓	✓			Advocate for the reduction of total waste generated by 10% per person by 2030		✓	✓
✓	✓			Actively work to reduce FOGO sent to landfill	✓	✓	✓
✓	✓			Investigate and support innovative circular solutions to regional waste management	✓	✓	✓
✓	✓		✓	Assist in building equity in waste and resource recovery programs	✓		✓
	✓			Advocate for an average recovery rate of 80% for residual waste, recycling and organics by 2030	✓	✓	✓
	✓	✓		Support the implementation of the NSW Plastics Plan		✓	✓
	✓	✓		Assist councils to achieve sustainable procurement outcomes		✓	✓
	✓		✓	Support future waste and resource recovery infrastructure needs	✓		✓

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan
Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



WaSM Themes				Strategic Objectives	WaSM Priority Areas		
Avoid Reduce	Recover Resources	Protect The Environment	Strategic Collaboration		Meeting our future infrastructure and service needs	Reducing carbon emissions through better waste and materials management	Building on our work to protect the environment and human health from waste pollution
		✓		Regionally collaborate to support the reduction of litter and/or Illegal dumping on the environment			✓
		✓		Support the NSW Govt to meet their target of net Zero emissions by 2050 through better waste and materials management	✓	✓	✓
		✓		Engage and educate the community to correctly dispose of problem and hazardous waste			✓
		✓	✓	Facilitate regional collaboration to improve, engage and educate regarding disaster resilience	✓		✓
			✓	Facilitate regional collaboration to plan new waste management initiatives and to improve current waste management practices	✓	✓	✓
			✓	Continue to foster effective communication and collaboration with all stakeholders	✓	✓	✓
			✓	Continue to advocate and contribute to policy decisions on behalf of the region	✓	✓	✓
			✓	Advocate for a user pays, waste management and resource recovery system	✓	✓	✓

The regional groups, CRJO and its member councils have developed a set of Strategic Objectives that are comprehensive across all waste, resource recovery and circular aspects while also aligning with the WaSM Themes and Priority Areas proposed by the State government. The Strategic Objectives for the CRJO, set the foundation for improvement across the region through the delivery of this Strategy and its associated Action Plan.

7 How are we going to get there?

Delivering the Strategy will be achieved through the implementation of the Action Plan. The Action Plan outlines the projects and initiatives required to improve waste management, resource recovery and circular performance within the CRJO region. The Action Plan is a standalone document which is supported by the Strategy.



Source: Stock

The Action Plan contains a variety of actions that address each of the WaSM Priority Areas and Themes, along with CRJO's sub-themes and assist the region to strive towards the WaSM Targets. The WaSM Themes have been utilised to structure the Action Plan.

Several actions address more than one WaSM Theme and therefore are shown more than once within the Action Plan summaries in the following sections. To provide clarity regarding duplicate actions across multiple Themes, the Actions have been numbered individually from 1 to 51, with the same reference number allocated to each action no matter which Theme it addresses.

The Action Plan provides an indication of the timeline for project delivery via a priority allocated to each action by the member councils. However, the timeline for delivery is a guide and can be altered where necessary if a relevant funding program becomes available. The timeline for delivery of each action is split into the following three phases:

- Year 1 (2022 - 2023);
- Years 2 to 3 (2024 - 2025); and
- Years 4 to 5 (2026 - 2027).

Each Action is listed a responsible entity. In most cases this is CRJO and the Regional Coordinator however, in other instances, a member council or group of member councils may be responsible. Distributing who is responsible places greater ownership on the projects while providing greater capacity to achieve more. Responsibility is largely influenced by the type of project or action, in particular, whether it's a local, sub-regional or regional initiative. However, collaboration will be critical and utilising the human and financial resources of the CRJO members will ensure greater success.

KPIs align with the WaSM targets and have been referenced 1 to 9 as outlined in Table 5-2. Each action within the Action Plan is allocated a KPI reference number. In some instances, actions may contribute towards more than one KPI and therefore, will reference several KPIs. CRJO is committed to reporting against the KPIs on an annual basis.

CRJO is committed to reviewing the Action Plan on an annual basis to adjust for changes to projects or timelines as funding, policy and/or industry changes occur, or to reevaluate targets and KPIs if necessary.

The Action Plan is a separate supporting document. The following table provides a summary of the Actions within the plan and how each action aligns with the WaSM Priority Areas and Themes.

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



Table 7-1: Actions Summary

WaSM Themes				#	Actions	WaSM Priorities		
Avoid Reduce	Recover Resources	Protect The Environment	Strategic Collaboration			Meeting our future infrastructure and service needs	Reducing carbon emissions through better waste and materials management	Building on our work to protect the environment and human health from waste pollution
✓			✓	1	Develop regional waste education guidance accessible to all councils, to support the correct use of recycling and organics.	✓		
✓			✓	2	Develop regional media accessible to all councils, to support the correct use of recycling and organics.	✓		
✓			✓	3	Facilitate the use of a shared resource for waste education.	✓		
✓			✓	4	Develop an interactive digital program for waste education.	✓		
✓			✓	5	Facilitate knowledge sharing/projects/lessons learnt within the region through online and face-to-face workshop/webinars supported by an online data portal/library.	✓		
✓			✓	6	Develop a regional waste education program in collaboration with ACT	✓		
			✓	7	Develop a procurement principles guideline (including ACCC requirements for regional projects)	✓		
			✓	8	Undertake composition audits.	✓		

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



			✓	9	Investigate Regional Waste Collection Software	✓		
			✓	10	Facilitate the use of a shared resource for procurement.	✓		
	✓		✓	11	Investigate and implement a regional procurement for metal collection, organics processing, concrete crushing, solar panel collection, kerbside collections and/or mattresses or any other key material stream identified.	✓		
			✓	12	Update CRJO Regional Waste Infrastructure Prospectus based on a waste perspective	✓		
	✓		✓	13	Develop a regional solution for FOGO processing.	✓	✓	
	✓	✓	✓	14	Establish a mobile CRC for Yass, Hilltops and Upper Lachlan	✓		✓
		✓	✓	15	Develop a business case for a regional landfill gas capture procurement	✓	✓	✓
		✓	✓	16	Implement a regional procurement for landfill gas capture	✓	✓	✓
		✓	✓	17	Investigate and map closed legacy landfills across the region.	✓		
			✓	18	Engage with EPA and advocate for an appropriately funded legacy landfill grant program	✓		✓
			✓	19	Investigate the feasibility of 'real time' waste reporting.	✓		
			✓	20	Investigate an online regional information and data collection, dashboard and hosting platform/portal.	✓		
			✓	21	Improve data capture and accuracy at WMFs without a weighbridge.	✓		

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



			✓	22	Conduct a 'lessons learnt' activity from recent natural disasters and develop a guidance document.	✓		✓
			✓	23	Develop an emergency Waste Management Plan Template for councils	✓		
			✓	24	Develop a Regional emergency Waste Management Plan	✓		✓
✓			✓	25	Collaborate with research institutions to develop circular economy opportunities via Think Tanks or similar	✓		
			✓	26	Undertake a regional material flow analysis	✓		
✓			✓	27	Develop a scoping study for circular economy projects	✓		
✓			✓	28	Develop a regional circular economy strategy	✓		
		✓		29	Alternative fuel collection vehicle study and trial.	✓	✓	
	✓	✓		30	Support the consolidation of landfills and closure or conversion into resource recovery centres.	✓		✓
			✓	31	Establish a proactive cross-jurisdictional committee with ACT NoWaste and Wagga	✓		
			✓	32	Establish a MoU with ACT NoWaste for joint funding and collaboration	✓		
	✓	✓		33	Regional Aboriginal communities waste management Strategy	✓		✓
				34	Fees, Charges & Landfill Levy Study - Comparison of member councils, explore harmonisation and impact the levy would have on the region.	✓		

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



		✓		35	True cost of Landfill study	✓		✓
				36	Solar public place compactor bin study and trials	✓		
		✓	✓	37	Cross Jurisdictional Illegal Dumping Awareness and Prevention Campaign	✓		✓
		✓	✓	38	Cross Jurisdictional Regional Illegal Dumping Strategy	✓		✓
		✓	✓	39	Cross Jurisdictional Regional Litter Prevention Strategy	✓		✓
	✓		✓	40	Facilitate and support the transition to, or improvement of, FOGO collections and processing programs.	✓		
		✓		41	Explore options for onsite collections from MUDs including residual, recycling and organics	✓		
✓		✓	✓	42	Support delivery of Single Use Plastic Ban through educational campaigns and advocate for plastic waste prevention			✓
	✓		✓	43	Explore opportunities to participate in a Textile Recycling Program.	✓		✓
	✓		✓	44	Investigate Microfactories and establish a trial facility within the region.	✓		
✓		✓	✓	45	Implement an asbestos awareness campaign and/or provide training/guidance regarding its correct management.			✓
✓	✓	✓		46	Explore plastic reduction and/or innovative processing opportunities.	✓		✓
	✓			47	Continue to investigate new recyclable material streams for councils and/or industry to develop markets and manage.		✓	

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



	✓		✓	48	Support councils to actively inform residents what happens with recycling streams and ensure evidence is publicly available through communications and education programs.		✓	
	✓	✓		49	Support the establishment, improvement and/or expansion of resource recovery centres and landfills to include Reuse/Buy Back (tip) Shops.		✓	✓
	✓	✓		50	Support the improvement of existing resource recovery centres and landfills to facilitate greater resource recovery and protection of the environment.		✓	✓
	✓	✓	✓	51	Monitor and assist in developing Extended Producer Responsibility (EPR) and/or Product Stewardship schemes.		✓	✓

APPENDIX A: Policy Context

A.1 National Framework

The Commonwealth Government has limited constitutional powers to engage directly in domestic waste management issues. This responsibility largely rests with State, territory, and local governments. The role of the Commonwealth Government has evolved in recent years as it has taken an increasingly strategic involvement in waste policy development.

National Waste Policy

The National Waste Policy – *Less Waste, More Resources* was released by the Department of the Environment and Energy in 2018 and provides a framework for collective action by businesses, governments, communities, and individuals until 2030.

The policy identifies five overarching principles underpinning waste management in a circular economy, including:

- Avoid waste;
- Improve resource recovery;
- Increase use of recycled material and build demand and markets for recycled products;
- Better manage material flows to benefit human health, the environment, and the economy; and
- Improve information to support innovation, guide investment and enable informed consumer decisions.

The policy guides continuing collaboration between all Australian governments, businesses, and industry. It does not remove the need for governments, businesses, and industries to implement tailored solutions in response to local and regional circumstances.

National Plastics Plan

Australia's *National Plastics Plan*, released on 4th March 2021 aims to drive a closed loop supply chain on plastics and address plastic waste in a multi-pronged way, proposing wide-ranging initiatives such as plastic-free beaches, new labelling guidelines, eliminating expanded polystyrene consumer packaging fill and food and beverage containers, and greater consistency in kerbside bin collections.

Actions to achieve these goals under the plan will:

- Phase out the most problematic plastics between July and December 2022 and introduce National Packaging Targets by 2025;
- Work to make beaches and oceans free of plastic;
- Introduce legislation to ensure Australia takes responsibility for its plastic waste;
- Invest to increase recycling capacity;
- Research to find new recycling technologies and alternatives to unneeded plastic; and

- Support the community to help Australia's recycling efforts.

(Australian Government, 2021)

Australian Packaging Covenant Organisation (APCO) – 2025 Targets

The Australian Packaging Covenant Organisation (APCO) is the entity in charge of managing and administering the Australian Packaging Covenant (the Covenant), which is a document that sets out how governments and businesses share responsibility for managing the environmental impacts of packaging in Australia.

The Covenant is agreed between the APCO, representing industry participants in the packaging supply chain, and commonwealth, State, and territory governments, and endorsed by environment ministers.

In 2018 Australia established the 2025 National Packaging Targets. These targets have been established to create a new sustainable pathway for the way packaging is managed in Australia.

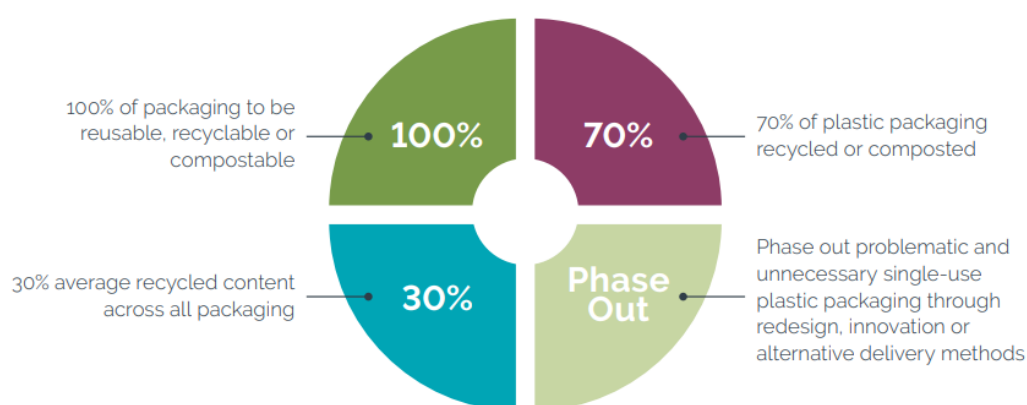


Figure: 2025 National Packaging Targets

Australian Packaging Covenant - National Waste Policy (environment.gov.au)

These targets will require a complete and systematic change in the way we create, collect, and recover product packaging. Targets will apply to all packaging that is made, used, and sold in Australia and are in line with broader sustainable packaging shifts that are taking place globally. These shifts are aiming to reduce the volume of material entering landfill, improve recycling rates, and increase the use of recycled material in future packaging.

The *Australian packaging consumption and recycling data 2018–19* report (APCO, 2021) shows improvements to packaging sustainability in a range of areas including a reduction in the volume of plastic (-6 percent) and an increase in the volume of recyclable packaging on market. Challenges continue to be the recycling rate of plastics, as whilst the recovery rate increased from 16 percent to 18 percent, significant progress is still required to meet the 2025 Target of 70 percent.

Emissions Reduction Fund

The Emissions Reduction Fund aims to reduce emissions by providing incentives for businesses, landowners, State and local governments, community organisations and individuals to adopt new practices and technologies. Legislation to implement the Emissions Reduction Fund came into effect on 13 December 2014.

There are many activities which are eligible to earn Australian Carbon Credit Units (ACCUs) under the scheme. One ACCU is earned for each tonne of carbon dioxide equivalent (tCO₂-e) stored or avoided by a project. ACCUs can be sold to generate income, either to the Government through a carbon abatement contract, or on the secondary market. The potential waste management activities that may earn ACCUs include the introduction of a new or expanded purpose-built facility for processing solid waste that would have otherwise gone to landfill, to process commercial, industrial, construction, demolition and/or Class I or II municipal solid waste or utilize an enclosed composting facility. Councils and/or private industry that undertake these types of projects in accordance with the approved emissions reduction methods can then sell the resulting ACCUs to the Clean Energy Regulator or an alternate buyer on the secondary market. Council may consider the benefits of this approach within its longer-term strategic direction.

Waste Export Ban

In March 2020, the Australian, State and territory governments, and the Australian Local Government Association agreed to regulate the export of waste glass, plastic, tyres, and paper while building Australia's capacity to generate high value recycled commodities and associated demand. The *Recycling and Waste Reduction Act 2020* and new rules made under the Act set out the export controls for each type of regulated waste material. Exporters need to hold a waste export licence and declare each export in line with the phased implementation dates below:

- All waste glass banned by 1 January 2021;
- Waste plastics banned between July 2021 and July 2022;
- All whole tyres including baled tyres banned by December 2021; and
- Mixed paper and cardboard banned by 2024.

Waste glass, regulated since January 2021 is either that recovered from an industrial, commercial, or domestic activity or a by-product of an industrial, commercial, or domestic activity. Phase one of the plastic exports rules, operational since July 2021, limit the export of waste plastics to that sorted into single resin or polymer type or processed with other materials into processed engineered fuel. From 1 July 2022 you cannot export plastic that has only been sorted - all plastics will need to be sorted and processed.

A.2 State Framework

The NSW State framework provide the objectives, requirements, and directions for the management of waste. The legislation describes the requirements for transporting, storing, processing, managing, recovering, and disposing of waste and recyclable material.

NSW Waste and Sustainable Materials Strategy 2041

In June 2021, the NSW government released the *NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027* (WaSM) as the first stage in a 20-year plan that focuses on the environmental benefits and economic opportunities to reduce waste, improve its management, and increase material recycling. The NSW WaSM 2041 sets a long-term vision for managing waste, planning for infrastructure, reducing carbon emissions, and refocusing the way NSW produces, consumes, and recycles products and materials. The WaSM updates NSW's priorities for waste and resource recovery to reflect the *NSW Circular Economy Policy Statement*, the *Net Zero Plan Stage 1:2020–2030* and the *National Waste Policy Action Plan*.

To compliment the first stage of WaSM, the government also released the *NSW Plastics Action Plan* which sets out how problematic plastic materials will be phased out and the *NSW Waste and Sustainable Materials Strategy: A guide to future infrastructure needs* which sets out the investment pathway required to meet future demand for residual waste management and recycling.

WaSM makes the case for change on the basis that NSW creates around one-third of Australia's total waste, and this is forecasted to grow from 21 million tonnes to nearly 37 million tonnes by 2041. At current rates of generation and recycling, the residual waste landfills servicing Greater Sydney are likely to reach capacity within the next 15 years. The non-residual landfills will reach capacity within the current decade. In some regional areas landfill capacity is also likely to expire this decade.

Demand for recycled materials, particularly from the household and commercial waste streams, has steadily contracted with the closure of export markets. This has led to an oversupply of recycled materials and a corresponding decline in value, particularly for poorly sorted or hard-to-recycle paper and plastic.

In response to this the resource recovery industry has started to transition to more resilient business models, focused on value-adding and the production of high-quality, well-sorted recycled materials. As the prices for recycled material have declined but the cost of sorting and processing has increased, costs for councils, ratepayers and businesses are also under pressure.

In 2014, NSW set a target for landfill diversion of 75 percent of all waste by 2021. However, as of 2019/20, it had only reached 65 percent. Construction and demolition (C&D) recycling had performed the best at a rate close to 80 percent, followed by commercial and industrial recycling at 53 percent. Municipal solid waste diversion (mostly household waste) had plateaued at just over 46 percent (NSW EPA, 2020). WaSM was positioned as an opportunity to refocus efforts and target investment where it is most needed.

The WaSM aims to reduce waste generated and increase recycling through adoption of the Targets outlined in the below figure.



Figure: NSW WaSM Targets

(Source: NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027)

The State government has also committed to:

- Developing a NSW regional litter prevention strategy before June 2023;
- Reporting annually on the progress towards meeting these targets prior to a review of WaSM in 2027;
- Establishing new indicators to track the progress of infrastructure investment and cost of waste services; and

- Developing a new measure of the emissions performance of waste and materials management which tracks performance across the lifecycle of materials.

Mandating FOGO separation for all households and some businesses

Both the WaSM and the accompanying infrastructure needs guide focus on better management of organic waste. In 2019 an estimated 2.5 million tonnes of organic waste (such as food organics, garden organics, timber, and textiles) was sent to landfill. Emissions from organic waste decomposing in landfill make up more than 2 percent of total net annual emissions in NSW. Methane emissions from the decomposition of organic material in landfills can last up to 25 years in the atmosphere. WaSM indicates that increased diversion of organics from landfill and processing technologies like composting and anaerobic digestion are an important first step towards reducing emissions from waste.

The amount of organic material going to landfill can be reduced by collecting it separately and processing it at specialised organic waste facilities. WaSM recognises that many councils already provide a separate bin to collect garden organics from households and some (less than a third) also collect food organics.

Other organic material, like textiles and timber, finds its way into household bins. Audits of residential kerbside residual waste bins in the waste levy area in NSW show that:

- The proportion of food and garden organics waste overall was 41 percent in 2019; and
- Councils that provided a separate food and garden organics collection service had a far lower proportion of these materials in the residual waste bin (25 percent) compared to councils with only garden organics (41 percent) or no organics collection (54 percent).

To achieve the WaSM targets of halving food waste to landfill and achieving net zero emissions from organics in landfill by 2030, the government will require the separate collection of:

1. Food and garden organics from all NSW households by 2030; and
2. Food waste from businesses that generate the highest volumes, including large supermarkets and hospitality businesses, by 2025.

The government has committed to consulting with councils, businesses, and service providers on the best way to transition to these new arrangements, including the need for phasing in new or grandfathering existing contracts, managing the different needs of high-density housing, and working with service providers to ramp up processing capacity.

To help with the transition, the NSW Government will invest \$65 million over five years from 2023. The funding will support the rollout of new collection services, the development of more

processing capacity and a state-wide education campaign that will help households adjust to the changes and improve their recycling habits.

Infrastructure Needs

The transition to the source-separated collection of food and garden organics from households and source-separated collection of food organics from selected businesses will significantly increase the volume of clean organics entering the recycling system. Accordingly, there needs to be a corresponding capacity to reprocess this material.

Based on an assessment of waste and circular economy infrastructure needs over the next decade and beyond the government has identified three key areas to focus on – residual waste, organics, and plastics.

Recovery and recycling infrastructure will need to keep pace with demand and to support this there will need to be investment in new and upgraded facilities from now to 2030 to prevent any shortfall in capacity.

WaSM sets out three priority areas:

1. Meeting future infrastructure and service needs as waste volumes grow;
2. Reducing carbon emissions through better waste and materials management; and
3. Building on work to protect the environment and human health from waste pollution.

Getting the right infrastructure in the right place will be critical to recover, reuse and extend the life of most materials. The *WaSM Guide to Future Infrastructure Needs 2021* reviews the waste infrastructure requirements in NSW to underpin change.

While investment will largely be driven by industry, the NSW Government will play a role to help investment in the right place at the right time. WaSM indicates that, commencing in 2021 the Government will undertake feasibility assessments and engage with the community, local government and business about the infrastructure investment needed to meet the demands. It will undertake a coordination role to attract the right investment at the right time. The early priority will be to ensure there is a pipeline of residual waste management infrastructure, but it will also target complementary recycling and reprocessing infrastructure to help meet capacity gaps. This will involve coordinating functions across government, such as investment attraction, planning, environmental licensing, and grant funding.

Plastics Action Plan

The NSW Plastics Action Plan supports the NSW Waste and Sustainable Materials Strategy 2041. The NSW Plastics Action Plan outlines a variety of actions to address plastic across all elements of the plastic lifecycle (production, consumption, disposal, and recycling) including the following:

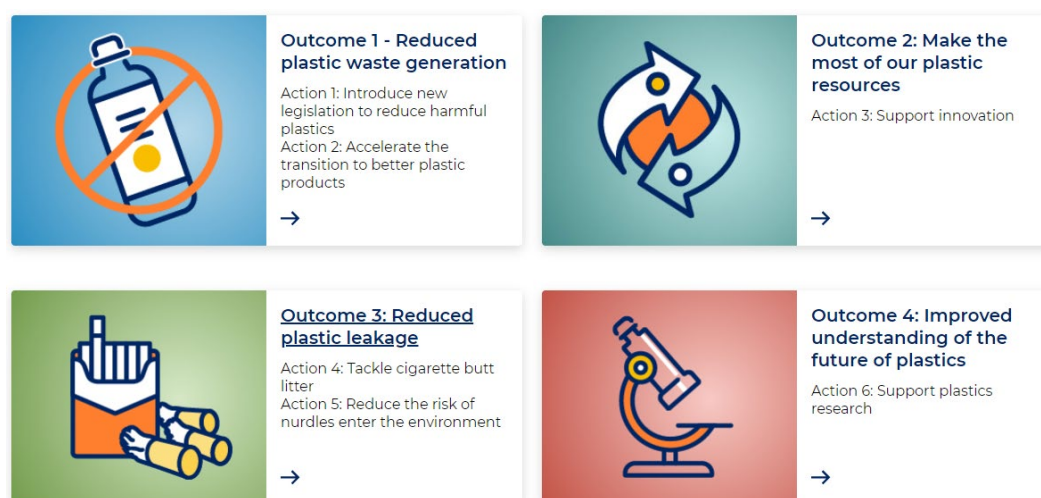


Figure: NSW Plastics Action Plan Actions

(Source: www.dpie.nsw.gov.au/our-work/environment-energy-and-science/plastics-action-plan)

There are four outcomes that will achieve better management of plastics, reduce the impacts on the environment and make the most of these resources, the outcomes are supported by six actions.

NSW Energy from Waste Infrastructure Plan

The *NSW Waste and Sustainable Materials Strategy 2041* commits to the adoption of a strategic approach to the role of thermal energy recovery from waste to ensure it protects human health and the environment and supports the transition to a circular economy. The recently released *NSW Energy from Waste Infrastructure Plan 2041* guides strategic planning for future thermal energy from waste facilities and outlines how the NSW Government will facilitate the establishment and operation of energy from waste infrastructure to manage genuine residual waste.

Waste can be thermally treated to recover the embodied energy in that material. The energy can be recovered as heat or as a solid, liquid, or gaseous fuel. These outputs can be used to generate electricity or used directly in machinery, vehicles, and industrial processes (NSW Government, 2021, pg. 2).

Energy proposals must represent the most efficient use of the resource, adequately manage the risks of harm to human health or the environment, and maximise the environmental, social, and economic benefits to communities.

‘Eligible waste fuels’ including biomass and residues are listed in Part 3 of the Policy Statement and defined in the Eligible Waste Fuels Guidelines. These are excluded from this Plan and

continue to be permitted across NSW where they comply with planning and regulatory frameworks.

The plan aligns with the *20-Year Vision for Regional NSW*. Thermal energy from waste facilities only be established, or permitted to operate, in key, identified priority infrastructure areas or by the exception listed as follows:

- West Lithgow Precinct;
- Parkes Special Activation Precinct;
- Richmond Valley Regional Jobs Precinct;
- Southern Goulburn Mulwaree Precinct; or
- At facilities that use waste, or waste-derived, feedstock to replace less environmentally sound fuels (including coal or petroleum-based fuels) thermally treated (or approved to be thermally treated) at the site, and the energy produced from the waste is used predominantly to power the industrial and manufacturing processes on-site, rather than exporting that energy to the grid.

The Southern Goulburn Mulwaree Precinct is located within the CRJO region within the Goulburn Mulwaree Council area and may pose opportunities for the member councils.

A.3 Regional Framework

CRJO

CRJO was formally established in 2017 when the NSW Parliament passed the *Local Government Amendment (Regional Joint Organisations) Act 2017*, to establish a network of joint organisations (JOs). The JOs are local government entities with legal powers to enable councils to work together at a regional level and with State agencies and other organisations to achieve better planning, economic development and service delivery outcomes in regional NSW. There are 14 regional organisations across NSW which each perform the functions similar to CRJO on behalf of their member councils. The groups are all coordinated by the NSW EPA through the RENEW NSW program.

CRJO has several working groups including the Resource Recovery Working Group and Waste Education Working Group which are represented by the Waste Managers or Education Officers respectively. The group is facilitated and coordinated by the Regional Waste Coordinator who is funded by the NSW EPA. The Regional Waste Coordinator reports directly to the CRJO's Executive Officer, who updates members on regional waste programs through the General Managers' Advisory Committee (GMAC).

Resource Recovery and Waste Education Working Groups meet periodically to discuss operations, infrastructure and services all with an aim to boost regional collaboration, knowledge sharing and improve the resource recovery system within the region. The working groups, along with the preparation of the Regional Waste and Sustainable Materials Strategy

2022-27 form the conduit between the member councils and CRJO, providing a voice to State and Federal Government and access to regionally supported grant funding programs.

South East and Tablelands Regional Plan 2041

The draft South East and Tablelands Regional Plan 2041 provides a long-term land use planning vision and framework for the region. It is developed in accordance with the *Environmental Planning and Assessment Act 1979* (EP&A Act) and is currently being reviewed.

Of particular note, the draft South East and Tablelands Regional Plan 2041 includes an objective (Objective 9) to 'Support the Development of a Circular Economy' and aligns with several aspects considered within this Strategy. The development of a circular economy is supported at a Federal, State and regional level and aligns with the Strategic Direction of this Strategy which seeks to transition to a more circular economy.

A.4 Local Framework

Local Government Act 1993

The *Local Government Act 1993* sets out the legal framework, governance, powers, and responsibilities of councils in New South Wales. Guiding principles for councils include:

- Carrying out functions in a way that provides the best possible value for residents and ratepayers;
- Planning strategically for the provision of effective and efficient services to meet the diverse needs of the local community;
- Working co-operatively with other councils and the State government to achieve desired outcomes for the local community; and
- Working with others to secure appropriate services for local community needs.

Councils may provide goods, services, and facilities, and carry out activities, appropriate to the current and future needs within their local community and of the wider public. The Act sets out the functions of councils, including its service functions such as, providing community health, recreation, education & information services, environmental protection, and waste removal & disposal. A council must also levy an annual charge for the provision of domestic waste management services for each parcel of rateable land for which the service is available.

Community Strategic Plans

A *Community Strategic Plan (CSP)* is a key element within the integrated planning and reporting framework which all councils in NSW have a legislative obligation to adhere to. This framework aims to streamline a council's operations and optimise the use of resources. The *CSP* addresses four key questions for the community:

- Where are we now?
- Where do we want to be in ten years' time?

- How will we get there?
- How will we know when we have arrived?

The implementation of the CSP is supported by a suite of integrated plans that include actions to support the strategies identified in the CSP. These include the following:

- Delivery program – 4 year plan that sets out the strategies from the CSP that will be priorities for the current council term
- Operational plan – annual plan containing detailed actions from the Delivery program
- Resourcing strategy – a suite of 3 key plans that support the implementation of the CSP focusing on finances, workforce and asset management.

Local Waste and Resource Recovery Strategies

Each of the member councils have a Waste and Resource Recovery Strategy which outlines the strategic and operational direction for waste management within its council. The documents currently being utilised for this purpose by each council are shown in the below table.

Table: Member council waste and resource recovery frameworks

Member Council	Title
Bega Valley Shire Council	Recycling Our Future 2018-28
Eurobodalla Shire Council	Eurobodalla Waste Strategy 2011-18 and Eurobodalla Waste Minimisation Policy (2022)
Goulburn Mulwaree Council	Waste Management and Disposal Policy (2017) and Strategic Business Plan Waste & Recycling (2017)
Hilltops Council	Waste Management and Resource Recovery Strategy (2021)
Queanbeyan Palerang Regional Council	Waste Strategy (2021)
Snowy Valleys Council	Zero Waste Strategy 2019-2030
Snowy Monaro Regional Council	Waste Management Strategy (2021)
Upper Lachlan Shire Council	2021 Planning an Integrated Water, Sewer, and Waste Strategy
Wingecarribee Shire Council	2019 Waste Services Review
Yass Valley Council	Waste & Recycling Strategy 2017 – 2027 (Draft)

Where possible these framework documents for each member council were considered and utilised to inform and support the development of this regional Strategy.

Furthermore, the waste related guiding documents from ACT and Wagga Wagga City Council were also considered namely; *ACT Waste Management Strategy - Towards a*

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan
Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



sustainable Canberra (2011-2025, and draft Wagga Wagga City Council Corporate Net Zero Strategy (2022).

APPENDIX B: Council Data

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



Residual Waste

	Tonnes				Waste Growth Rate (%)			
Council	2017-18	2018-19	2019-20	2020-21	2017-18 to 2018-19	2018-19 to 2019-20	2019-20 to 2020-21	Adopted (%)
Bega	12,524	11,827	11,008	11,783	0.94	0.93	1.07	0.98%
Eurobodalla	9,980	10,413	10,952	12,230	1.04	1.05	1.12	1.07%
Goulburn Mulwaree	10,409	12,966	11,633	17,399	1.25	0.90	1.50	1.21%
Hilltops	4,227	2,938	2,938	6,897	0.70	1.00	2.35	1.35%
Queanbeyan Palerang	15,647	15,292	20,287	16,014	0.98	1.33	0.79	1.03%
Snowy Monaro	7,647	8,495	4,770	5,643	1.11	0.56	1.18	0.95%
Snowy Valleys	3,546	4,311	150	7,690	1.22	0.03	51.27	1.10%
Upper Lachlan	4,920	2,850	3,035	4,518	0.58	1.06	1.49	1.04%
Wingecarribee	11,289	10,307	11,207	11,410	0.91	1.09	1.02	1.01%
Yass	3,020	4,346	6,729	5,847	1.44	1.55	0.87	1.29%
Total	83,208	83,744	82,710	99,430				1.10%

(Source: NSW EPA WARR Data, excluding ACT and Wagga Wagga City Council)

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



Recycling Waste

	Tonnes				Waste Growth Rate (%)			
<u>Council</u>	2017-18	2018-19	2019-20	2021-22	2017-18 to 2018-19	2018-19 to 2019-20	2019-20 to 2020-21	Adopted (%)
Bega	6,437	6,551	4,993	8,845	1.02	0.76	1.77	1.18%
Eurobodalla	6,219	6,151	6,461	7,727	0.99	1.05	1.20	1.08%
Goulburn Mulwaree	1,842	3,139	11,053	3,431	1.70	3.52	0.31	1.85%
Hilltops	1,021	1,038	993	2,947	1.02	0.96	2.97	1.65%
Queanbeyan Palerang	4,996	6,657	7,260	6,870	1.33	1.09	0.95	1.12%
Snowy Monaro	3,572	4,404	2,911	3,223	1.23	0.66	1.11	1.00%
Snowy Valleys	1,966	2,489	2,530	5,255	1.27	1.02	2.08	1.45%
Upper Lachlan	1,559	359	1,219	686	0.23	3.40	0.56	1.40%
Wingecarribee	6,771	8,673	9,412	8,724	1.28	1.09	0.93	1.10%
Yass	2,952	2,250	2,837	4,449	0.76	1.26	1.57	1.20%
Total	37,336	41,709	49,669	52,157				1.30%

(Source: NSW EPA WARR Data, excluding ACT and Wagga Wagga City Council)

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



Organic Waste

	Tonnes				Waste Growth Rate (%)			
<u>Organics</u>	2017-18	2018-19	2019-20	2020-21	2017-18 to 2018-19	2018-19 to 2019-20	2019-20 to 2020-21	Adopted (%)
Bega	5,513	7,049	7,137	15,379	1.28	1.01	2.15	1.48%
Eurobodalla	8,594	8,518	10,021	7,756	0.99	1.18	0.77	0.98%
Goulburn Mulwaree	1,727	3,055	2,478	2,927	1.77	0.81	1.18	1.25%
Hilltops	934	653	653	4,804	0.70	1.00	7.36	3.02%
Queanbeyan Palerang	5,401	7,231	10,429	6,910	1.34	1.44	0.66	1.15%
Snowy Monaro	1,792	1,027	642	1,070	0.57	0.63	1.67	0.95%
Snowy Valleys	-	-	-	150				1.25%
Upper Lachlan	-	150	200	400		1.33	2.00	1.25%
Wingecarribee	7,646	7,963	8,132	10,773	1.04	1.02	1.32	1.13%
Yass	2,439	150	600	800	0.06	4.00	1.33	1.80%
Total	34,046	35,796	40,291	50,968				1.48%

(Source: NSW EPA WARR Data, excluding ACT and Wagga Wagga City Council)

APPENDIX C: Member Councils & Associate Member Profiles

C.1 Bega Valley Shire Council

Bega Valley Shire Council (Bega Valley) is located on the south-eastern corner of the CRJO region with the Victorian border to the south, Snowy Monaro Regional Council to its west and the Eurobodalla Shire Council to the north. Bega Valley has a land area exceeding 6,200km², 66% of which is parkland. Its current population of 35,761 and is projected to increase to 38,138 by 2036.

Bega Valley has a three bin FOGO kerbside collection system with residuals and recycling being utilised by over 2/3 of resident households while FOGO is utilised by just over half. A key factor between the differing utilisation of the 3-bin system is associated with rural areas not needing the FOGO service. Problematic wastes that have been identified for Bega Valley are C&I, E-Waste, mattresses, road maintenance waste and soft plastics, with the availability of markets, for items recovered from these materials, a key challenge.

The Central Waste Facility is Bega Valley's main waste infrastructure located at Frogs Hollow near Bega. Additional smaller waste management facilities are located at Bemboka, Bermagui, Candelo, Eden, Merimbula and Wallagoot. The Merimbula facility houses both the Community Recycling Centre (CRC) and organics processing facility. Challenges regarding waste infrastructure include the establishment of long-term landfill space, organics processing practices and capacity, legacy landfills, leachate management and disaster waste.

In order to align with changing drivers within the waste industry and address waste management problems, Bega Valley's *Waste Management and Resource Recovery Strategy 2018-2028* outlines the council's themes and aspirations for the future including:

- Avoid and reduce waste generation;
- Increase recycling;
- Divert more waste from landfill;
- Better management of problem wastes;
- Reduce Litter;
- Reduce Illegal Dumping; and
- Review and develop Operations.

C.2 Eurobodalla Shire Council

Eurobodalla Shire Council (Eurobodalla) is located along the eastern boundary of the CRJO region with Bega Valley Shire Council to the south, Snowy Monaro Regional Council to the south-west and Queanbeyan Palerang Regional Council to the northwest. Additionally, while not a part of CRJO, the Shoalhaven City Council borders Eurobodalla to the north. Of council's 3,400km² land area, approximately 72% is undeveloped. The current population is 40,500 and is projected to increase to 45,500 within the next 15 years.

Eurobodalla has a three bin GO kerbside collection system with close to the maximum utilisation of services by each household. Increasing waste diversion is a challenge along with managing problematic types of materials including asbestos, C&D, C&I, disaster waste, E-waste, mattresses, solar panels, soft plastics, textiles and tyres.

The main waste facility for Eurobodalla resides at Surf beach. It operates a CRC and buy back shop as well as its landfill. Additional waste management are located at Brou and Moruya, both of which incorporate buy back shops. Eurobodalla is increasing its capacity for managing organics at Surf beach and its waste operations through the expansion of the WMF at Brou.

As a result of decreasing landfill space and an increasing population and tourism industry and the need for a sustainable waste management system council prepared the *Eurobodalla Waste Strategy 2011- 2018*, with the following themes and aspirations:

- Increase recovery and usage of materials in the three major waste streams and reduce waste;
- Increase the life of Councils waste management facilities;
- Reduce greenhouse gas emissions from waste facilities;
- Ensure Councils waste services are cost effective;
- Improve data collection of waste and recycling volumes;
- Educate the community on waste minimisation; and
- Develop future waste initiatives and additional improvements.

C.3 Goulburn Mulwaree Council

Goulburn Mulwaree Council (Goulburn Mulwaree) is located in the north-eastern area of the CRJO region with Queanbeyan Palerang Regional Council to the south, Upper Lachlan Shire Council to the northwest and Wingecarribee Shire Council to the northeast. Additionally, while not a part of CRJO, the Shoalhaven City Council borders Goulburn Mulwaree to the east. Goulburn Mulwaree is noted as having a land area in excess of 3,200 km², 69% of which is primary production and its current population of 32,138 is projected to increase to 37,702 by 2036.

In terms of waste services, Goulburn Mulwaree has a highly utilised three bin FOGO kerbside collection system with close to every household that possesses a residual bin also possessing a recycling and FOGO bin. It must be noted however that this figure represents just over 62% of the total households within the LGA. Recent challenges noted by council include transportation of waste, diversion from landfill of mixed waste and data availability/accuracy. Problematic wastes that have been identified for Goulburn Mulwaree are C&D, C&I waste and excess clean fill.

Goulburn Mulwaree has three waste management facilities in operation, located at Goulburn, Marulan and Tarago. Waste infrastructure within Goulburn Mulwaree will have increased

capacity and improved levels of services upon the completion of significant upgrades to the Goulburn Waste Management Centre including a Re-Use Hub (tip shop) and a CRC. The site currently has licence capacity to process up to 50,000tpa of organics.

In order to guide the future direction of the waste management operations of Goulburn Mulwaree, *The Strategic Business Plan- Waste & Recycling* was created. Within this document, the following themes were outlined for optimisation and/or improvement and have recently dictated council's strategic direction:

- Collections;
- Waste Disposal and Resource Recovery;
- Fees and Charges;
- Capital works; and
- Monitor and Review.

C.4 Hilltops Council

Hilltops Council (Hilltops) is located on the northwest corner of the CRJO region with the Upper Lachlan Shire Council to the east and Yass Valley Council area to the southeast. Hilltops is also bordered by other councils that are not part of CRJO: Cootamundra Gundagai, Temora, Bland, Weddin and Cowra. Hilltops current population is 19,216 and is projected to grow to 19,922 by 2036. Hilltops' land area exceeds 7,100 km² with approximately 98% of that area used for primary production.

The main waste management facility is located at Young with smaller facilities at Boorowa, Murrumburrah, Galong, Jugiong and smaller villages. Challenges identified within Hilltops include a lack of disposal/recycling options for problematic household waste (no CRC), several rural landfills and legacy landfills, limited landfill capacity and contingency and continued illegal dumping incidents (often from outside the CRJO region). Hilltops also utilises the landfilling services at the privately owned Bald Hill Quarry.

Hilltops has a three bin GO kerbside collection system with approximately half of residents utilising a recycling and GO bin. Hilltops has varying service offerings to its residents depending on their location within the local government area. Due to its location, Hilltops also experiences difficulties associated with the viable transportation of waste and management of problematic waste streams such as mattresses and tyres in particular.

Hilltops has undertaken recent community engagement and within the *Hilltops Waste Management and Resource Recovery Strategy* it is outlined how it will provide resource recovery and waste management services that meet community expectations, statutory obligations, fiscal responsibility and environment sustainability requirements. To this end, the following priorities were identified:

- Standardise waste services and fees across Hilltops - ensure they encourage waste minimisation and cost recovery;
- Upgrading waste management sites and ensuring safety, security and supervision are maintained;
- Redevelopment of other local and village landfill sites across Hilltops;
- Maintain licences for all relevant facilities;
- Remain an active member of regional waste groups;
- Waste minimisation practices and infrastructure; and
- Proactive management of problem wastes and illegal dumping.

C.5 Queanbeyan-Palerang Regional Council

Queanbeyan- Palerang Regional Council (Queanbeyan-Palerang) is located on the eastern boundary of the CRJO region with the Snowy Monaro Regional Council to the southwest, the ACT to the west, Yass Valley Council to the northwest, Upper Lachlan Shire Council to the northwest, Goulburn Mulwaree Council to the north and Eurobodalla Shire Council to the southeast. The land (5,300 km²) of Queanbeyan-Palerang is comprised of 54% primary production and contains a current population of approximately 63,400. This figure is expected to grow to 78,756 within the next 15 years.

Queanbeyan-Palerang has a mix of 3 bin kerbside collection systems with Braidwood, Bungendore and Captain Flats being provided with FOGO services while the remaining suburbs within the LGA receive only GO. It is anticipated that the remaining areas will transition to the FOGO service shortly. In relation to this service, Queanbeyan-Palerang is currently facing challenges associated with community expectations within new developments including a growing number of multi-unit dwellings (MUDs). Other key challenges identified by council include FOGO education and awareness, C&D waste capacity and recovery, green waste and FOGO management in rural areas and soft plastics recycling.

In addition to its landfill at Nerriga, Queanbeyan-Palerang has waste management facilities at Araluen, Braidwood, Bungendore which has a CRC, Bywong, Captain Flats, Majors Creek, and Queanbeyan where a CRC also resides. Challenges associated with batteries and fluorescent bulbs were identified along with the management of C&D waste.

In an effort to maximise landfill diversion and resource recovery within Queanbeyan-Palerang, council's *Waste Management Strategy 2019-2049* outlines the following strategic goals:

- Reducing total waste;
- Increasing average recovery rate from all waste streams;
- Increasing the use of recycled content;
- Phasing out problematic and unnecessary plastics;
- Reducing the amount of organic waste sent to landfill; and

- Improving community education.

C.6 Snowy Monaro Regional Council

Snowy Monaro Regional Council (Snowy Monaro) has a current population of 21,659 which is projected to grow to 21,885 by 2036. Snowy Monaro is located on the southern edge of the CRJO region with the Snowy Valleys council to the west, ACT to the north, Queanbeyan-Palerang Regional Council and Eurobodalla Shire Council to the northeast and Bega Valley Shire Council to the east. Snowy Monaro is noted to have a land area of approximately 15,100 km², 54% of which is primary production.

Snowy Monaro has three landfills located at Bombala, Cooma and Jindabyne; while six transfer stations are located at Adaminaby, Berridale, Bredbo, Delegate, Nimmitabel and Numeralla. Cooma and Jindabyne both have CRC services. Snowy Monaro experiences challenges in particular with the management of C&D and C&I waste across its jurisdiction. Additionally, it is noted that E-waste and soft plastics are problematic waste streams within the council area however, on a smaller scale than C&D and C&I waste.

Snowy Monaro has a three bin FOGO kerbside collection system with approximately 70% of households having a residual and recyclables bin while just over 25% have FOGO however, the current low utilisation of the FOGO service is explained by it only being available initially within the Cooma township as part of council's wider roll out.

In an effort to address past performance challenges, lack of consistency in services and facilities and increasing operating costs, the *Snowy Monaro Regional Council Waste Strategic Summary* outlines the following themes:

- Improve operational efficiency of waste management services and facilities;
- Optimise Councils waste management costs;
- Minimise the environmental impact of waste disposal, meeting NSW 20-year waste strategy targets; and
- Increase the accessibility and utilisation of waste facilities for residents.

C.7 Snowy Valleys Council

Snowy Valleys Council (Snowy Valleys) is located on the southwestern corner of the CRJO region with Yass Valley Council to the northeast, ACT to the east and Snowy Monaro Regional Council to the east. While not a part of CRJO, Snowy Valleys is also bordered to the west by Greater Hume, north-west by Wagga Wagga and north by Cootamundra Gundagai. Snowy Valleys has a current population of 14,901 spread across 8,900km², 59% of which is parks and reserves.

Snowy Valleys has recently implemented a three bin FOGO kerbside collection system with significant support for these services with high utilisation rates across each of the three collections. Six Resource Recovery Centres (RRCs) are currently active within the council area at Adelong, Batlow, Khancoban, Talbingo, Tumbarumba and Tumut with two CRC's located at the Tumut and Tumbarumba facilities. Council utilises the landfilling services at the privately owned Bald Hill Quarry. Council is also building a new organics processing facility at Tumut. Snowy Valleys geographic location presents challenges regarding the transportation of waste as well as the availability of markets for diverted materials. Other challenges experience by council includes legacy landfills, cost recovery, remediation of current sites and integrity/accuracy of waste data.

With the release of the *Snowy Valleys Council Zero Waste Strategy 2019-2030*, council has realised the business as usual approach is no longer viable financially, socially, technologically, environmentally or regulatorily. As such, the following themes are outlined within its strategy to transition from disposing waste to processing resources:

- Deliver waste education and advocate for behavioural change;
- Maximise resource recovery;
- Innovation and circularity;
- Data capture and intelligent decision making; and
- Service and infrastructure harmonisation and upgrade.

C.8 Upper Lachlan Shire Council

Upper Lachlan Shire Council (Upper Lachlan) is located on the northern edge of the CRJO region with Yass Valley Council to the southwest, Hilltops Council to the west, Wingecarribee Shire Council to the east and Goulburn Mulwaree to the southeast. Upper Lachlan is also bordered to the north by Cowra, Bathurst, Oberon and Wollondilly councils. Primary production utilises 91% of the 7,100km² land area and hosts a current population of 8,491.

Six Waste and recycling centres are currently active within Upper Lachlan located at Crookwell, Gunning, Collector, Taralga, Bigga and Tuena. Challenges experienced at the facilities include staff retention, data quality and, without a CRC, limited annual hazardous/problematic household waste collections. Additional problematic wastes to manage include gas bottles, mattresses and tyres.

Upper Lachlan has a three bin GO kerbside collection system that is uniformly utilised by approximately a third of the LGA. Transportation of waste and recycling is a substantial environmental and financial burden with recycling transported to Canberra and FOGO to also be processed outside the LGA.

Within *The Upper Lachlan Strategy Vision 2020*, the following approaches to minimise waste management risks and challenges were highlighted:

- Improving landfill operation, capacity and site security;
- Encouraging the minimisation of waste; and
- Conducting an assessment of sustainable waste management practices.

C.9 Wingecarribee Shire Council

Wingecarribee Shire Council is located on the north-eastern corner of the CRJO region with Goulburn Mulwaree Council to its southwest and the Upper Lachlan Shire Council to the west. Due to its northern location bordering, Wollondilly, Wollongong, Shellharbour, Kiama and Shoalhaven, it is the only CRJO council that pays the landfill levy. Wingecarribee's current population is 52,456 and is projected to increase annually by 1.5%. It has a land area of approximately 2,600 km², 75% of which is primary production or parkland.

Wingecarribee owns and operates one waste management facility, the Resource Recovery Centre at Moss Vale which manages a large variety of materials ready for sale, stockpiling, processing and/or transfer. Of note, the site contains a dual weighbridge, reuse shop, CRC and raised residual waste transfer station. The site accepts and manages both commercial and residential recycling and waste. Problematic materials for Wingecarribee include mattresses, hot water systems, inert waste and a growing number of solar panels. Council is formulating a master plan for the site to guide improvements for the next 15 years. 90% of households receive a three bin GO kerbside collection service with the residual and organics brought to the Resource Recovery Centre for consolidation and transfer.

Wingecarribee is currently preparing a new Waste Strategy with the following key themes being considered:

- Alignment with the focus areas outlined in the NSW WaSM and this CRJO Strategy;
- Waste avoidance, reduction and setting a landfill diversion target;
- Value of waste services;
- Domestic waste collection and processing (including bulky waste and FOGO);
- Contamination management in kerbside bins;
- Commercial and industrial waste;
- Construction and demolition waste;
- Litter and illegal dumping;
- Problem waste management;
- Waste education and information;
- Waste infrastructure;
- Regional collaboration; and/or
- Development controls for waste management.

C.10 Yass Valley Council

Yass Valley Council (Yass Valley) has a current population of 17,234 however, this is projected to increase to 27,315 within the next 15 years. Yass Valley borders the ACT to the north with Snowy Valleys Council to the south west, Hilltops Council to the northwest, Upper Lachlan Shire Council to the north east and Queanbeyan Palerang Regional Council to the southeast. Cootamundra Gundagai, (not part of CRJO), is to its west. Primary production accounts for 76% of the 4,000km² land area.

Yass Valley currently has a two bin kerbside collection system with approximately 60% of households utilising the service. There are waste transfer stations located at Binalong, Bookham, Bowning, Gundaroo, Murrumbateman, Wee Jasper and Yass. A small facility within Sutton accepts recycling only. Yass Valley utilises the privately operated Bald Hill Quarry for landfill services. Due to a lack of landfill contingency, residual waste management is recognised as a major potential challenge for the future.

Transportation and servicing costs, particularly for isolated rural communities, is a significant challenge across most facilities along with maintaining suitable site security. Additionally, small volumes of household hazardous wastes and the proximity to the ACT, has prevented the approval to establish a CRC in the area. Further challenging material streams include C&D waste, green waste contamination, timber and soft plastics.

In order to meet the levels of service required for waste services, the *Yass Valley Waste and Recycling Strategy 2017-2027* outlines the following principals and goals:

- Promote waste prevention, recycling, reuse , reprocessing and waste utilisation;
- Dispose of waste as a last resort;
- Apply user pays and polluter pays principals to waste management;
- Develop and maintain a Waste Management Strategy that reflects current practices and identifies future directions for Yass Valley Council;
- Promote effective commercial waste minimization practices;
- Eliminate landfills within the local government area of the Council;
- Increase integration with regional strategies and the use of regional facilities; and
- Minimise or avoid adverse effects on the environment.

C.11 South West Regional Waste Management Group

A sub-regional group called the South West Regional Waste Management Group was formed by CRJO members Yass, Hilltops, and Snowy Valleys councils along with Cootamundra Gundagai Regional Council. The group has a memorandum of understanding to utilise private landfill disposal services at Bald Hill Quarry near Jugiong. Recent challenges have resulted in the some of the CRJO councils raising concerns regarding the dependency upon one landfill

in the case of an emergency and the unknown long-term disposal security risks associated with short-term disposal contracts.

C.12 Associated CRJO Members

Australian Capital Territory (ACT)

The ACT is a large presence within the CRJO region with over 450,000 residents causing it to have significant influence on parts of the region. While not a formal member of CRJO, it is located between four member councils; Snowy Monaro, Snowy Valleys, Yass and Queanbeyan Palerang. Due to its proximity, residents of both the ACT and CRJO are found to travel between the two regions resulting in opportunities to share, align and optimise waste, resources recovery and circular services and infrastructure. Several CRJO member councils already utilise infrastructure within the ACT including a landfill at Mugga Lane and MRF at Hume, with the MRF to be fully replaced in the near future with best practice technology and services. The ACT is also proposing to establish an organics recovery facility by 2025 as it introduces FOGO kerbside collection services.

Through the preparation of this Strategy, it was apparent that the ACT, and in particular ACT NoWaste, values the engagement with the CRJO regional Waste & Resource Recovery Working group and will continue to support and collaborate with the member councils to create efficiencies across the region where possible.

The *ACT Waste Management Strategy 2011–2025* outlines the following four key outcomes to be delivered:

- Outcome 1: less waste generated;
- Outcome 2: full resource recovery;
- Outcome 3: a clean environment; and
- Outcome 4: a carbon neutral waste sector.

The ACT Government is currently preparing a waste and resource recovery education strategy and a circular economy strategy to guide improvements in these areas for the future. ACT NoWaste see this is an important aspect of its strategic planning prior to updating the current *ACT Waste Management Strategy 2011–2025* so that all can fully align and promote a circular economy for the future.

Wagga Wagga City Council

Wagga Wagga City Council (Wagga Wagga Council) is an associate member and as a result works closely with some of the member councils. Wagga Wagga is located adjacent to the western edge of CRJO with 95% of its area allocated to primary production. It too is a large regional centre with a current population of 67,860 which is projected to increase to 80,984 by

2036, providing further collaborative opportunities for CRJO member councils within close proximity.

Wagga Wagga Council has a 3 bin FOGO kerbside collection system with all households receiving the service, a Waste Management Centre at Gregadoo and waste transfer stations at Collingullie, Currawarna, Galore, Humula, Mangoplah, Tarcutta, and Uranquinty.

APPENDIX D: Known Private Infrastructure

D.1 Recycling

Endeavour Industries - Goulburn

A small MRF is operated by social enterprise Endeavour Industries in Goulburn, and accepts Goulburn Mulwaree Council's kerbside recycling along with other commercial customers within the area. Materials accepted include:

1. Cardboard and paper;
2. White office paper;
3. Recycling office paper;
4. Plastics 1-5;
5. Steel cans;
6. Aluminium Cans; and
7. Glass.

Kurrajong Recycling – Wagga Wagga

Kurrajong Recycling is a not-for-profit organisation based in Wagga Wagga which receives approximately 22,000 tonnes of recyclable materials per annum from Councils, businesses and the community within the region. Materials accepted at the facility include:

1. Household and business mixed recycling;
2. E-waste (TVs, computers and printers);
3. Container Deposit Scheme materials;
4. Selected plastics received (e.g. plastic bumper bars, drums, and twine); and
5. Bulk loads of cardboard.

Pact Group Holdings, Cleanaway Waste Management and Asahi Beverages – Albury

The group operates a recycling facility. It is anticipated the facility will recycle the equivalent of one billion 600 millilitre PET plastic bottles each year.

Eloura Association - Young

A small MRF is operated by social enterprise Eloura Association in Young, and accepts Hilltops Council's kerbside recycling. Materials accepted include:

1. Cardboard and paper;
2. White office paper;
3. Recycling office paper;
4. Plastics 1-5;
5. Steel cans;
6. Aluminium Cans; and
7. Glass.

D.2 Organics

There are currently a number of council owned and operated organics facilities however, in addition, there are four privately operated organics processing facilities within the CRJO region including the following:

1. Veolia Woodlawn (Tarago) – 50,000 tpa (or more) licence capacity;
2. Martin Fertilizers (Yass) – 5,000 tpa licence capacity;
3. Blue Ridge Quarry - Eurobodalla (Bodalla) - 5,000 tpa licence capacity; and
4. Landtasia (Mulloon) - 5,000 tpa licence capacity.

It should be noted that the Veolia's Woodlawn facility also operates as a landfill.

D.3 Landfill

Most of the member councils own and operate at least one landfill however, for those that do not, there are several landfills within the region that are privately owned and operated including the following:

1. Bowral Waste Centre - Inert Landfill (Bowral);
2. Bellette's Bulk Bins - Landfill (Tumut);
3. Bald Hill Regional Quarry - Landfill (Jugiong); and
4. Veolia Woodlawn (Tarago) - Landfill.

D.4 Other Major Entities

There are a number of large major national or international companies operating within the CRJO region which presents opportunities for member councils to explore synergies regarding waste, resource recovery and circular approaches. The following companies are highlighted as potential collaborators now and into the future because of their significant influence and presence within the region:

1. Veolia (Tarago);
2. Bega Cheese (Bega);
3. Visy (Tumut);
4. CSIRO; and
5. Universities such as the University of Canberra, Australian National University or University of NSW which currently licences a form of microfactory technology.

APPENDIX E: Council Challenges

Workshop Results

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan
Attachment A Regional Waste & Sustainable Materials Strategy 2022-27

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



Table E-1: Member Council Summary - Challenges

	Bega	Eurobodalla	Goulburn Mulwaree	Hilltops	Queanbeyan Palerang	Snowy Monaro	Snowy Valleys	Upper Lachlan	Wingecarribee	Yass Valley
Transport and/or economies of scale	Cost	Cost	Cost	Cost	Cost	Cost	Cost	Cost		Cost
FOGO mandate all households	Rural	LGA	Rural	LGA	Rural			LGA		
Legacy Landfills	Risk			Risk	Risk		Risk	Risk		
Rural / remote communities services	Cost				Cost		Cost	Cost	Cost	Cost
Landfill capacity and contingencies				Capacity			Capacity			Capacity
Processing capacity and contingencies						C&D, C&I			Inert	
CRC services				Desired				Desired		Desired
Disaster and resilience planning	Need to plan	Need to plan	Need to plan		Need to plan	Need to plan	Need to plan		Need to plan	
C&D and/or C&I diversion	Impact, Influence	Impact, Influence	Impact, Influence		Impact, Influence					Impact, Influence
Material flow and data accountability		Circular	Circular		Circular		Circular			Circular
Energy from Waste (EfW)			Opposed		Opposed					Opposed

APPENDIX F: Bibliography

APCO (2020): *Supporting government procurement of recycled materials*. Version 1, November 2020. Retrieved from: <https://documents.packagingcovenant.org.au/public-documents/Supporting%20Government%20Procurement%20of%20Recycled%20Materials>

APCO (2021): Australian packaging consumption and recycling data 2018–19. Version 1: January 2021. Retrieved from: <https://documents.packagingcovenant.org.au/public-documents/Australian%20Packaging%20Consumption%20And%20Recycling%20Data%202018-19%20Executive%20Summary>

Bega Valley Shire Council (2018): *Recycling Our Future 2018-28*

Australian Circular Economy Hub (2021): Our mission. Retrieved from: <https://acehub.org.au/about>

Australian Government (2021): *National Plastics Plan 2021*. Department of Agriculture Water and the Environment 4 March 2021. Retrieved from: <http://www.environment.gov.au/protection/waste/publications/national-plastics-plan>

Canberra Region Joint Organisation (2018): *Regional Waste Strategy 2018-2023*

Canberra Region Joint Organisation (2018): *Regional Waste Strategy 2018-2023 – Action Plan*

Eurobodalla Shire Council (2011): *Eurobodalla Waste Strategy 2011-18 and Eurobodalla Waste Minimisation Policy*

Goulburn Mulwaree Council (2017): *Waste Management and Disposal Policy (2017) and Strategic Business Plan Waste & Recycling (2017)*

Hilltops Council(2021): *Waste Management and Resource Recovery Strategy*

NSW EPA (2018): *NSW waste sector volume 1: Key findings*. Retrieved from: [Key-Findings.pdf \(nsw.gov.au\)](#)

NSW EPA (2018): *Too Good To Waste Discussion paper on a circular economy approach for NSW*. October 2018. Retrieved from: <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/recycling/18p1061-too-good-to-waste-circular-economy-discussion-paper.pdf>

NSW EPA (2019): *NSW circular economy policy statement: Too good to waste. February 2019*. Retrieved from: <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/recycling/19p1379-circular-economy-policy-final.pdf?la=en&hash=F80151EA9C2C3E27BA889D15D18041CDF7A4D25A>

NSW EPA (2020): *2019 2020 LG Waste Resource Recovery Data – Appendix*. Retrieved from: <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/wastestrategy/21p3136-2019-20-lg-waste-resource-recovery-data-appendix.xlsx?la=en&hash=338BE06C63A2012864C437E513BC6680A8CD5702>

NSW EPA (2020): *Cleaning up our act to manage plastics and waste into the future*. Retrieved from: <https://www.epa.nsw.gov.au/newsletters/epa-connect-newsletter/summer-february-2020/cleaning-up-our-act-to-manage-plastics-and-waste-into-the-future>

NSW EPA (2020): *Waste and Resource Recovery Data Survey*. 13 August 2020

NSW EPA (2021): *Preventing food waste in business*. Retrieved from: <https://www.epa.nsw.gov.au/news/media-releases/2021/epamedia210421-preventing-food-waste-in-business>

NSW EPA (2021): *NSW Energy from Waste Policy Statement*. Retrieved from: <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/waste/21p2938-energy-from-waste-policy-statement.pdf>

NSW EPA (2022): *Taking a regional response to the Waste and Sustainable Materials Strategy, February 2022*.

NSW Government (2018): *Waste Less, Recycle More Organics Collections Grants Program - Business Stream 2018 Guidelines for Applicants* Retrieved from: <https://www.environment.nsw.gov.au/resources/grants/guidelines-organics-collections-business-180031.pdf>

NSW Government (2019): *Organics Infrastructure – Stream 2 Business Organics Recycling grant project summaries*. Retrieved from: <https://www.environment.nsw.gov.au/funding-and-support/nsw-environmental-trust/grants-available/organics-infrastructure/stream-2-business-organics-recycling/grants-awarded-and-project-summaries>

NSW Government (2020): *Food waste in business*. Retrieved from: <https://www.lovefoodhatewaste.nsw.gov.au/in-business/food-waste-in-business>

Regional Waste and Sustainable Materials Strategy 2022-27
Canberra Region Joint Organisation



NSW Government (2020): *Net Zero Plan Stage 1: 2020–2030*. Retrieved from:
<https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/net-zero-plan-2020-2030-200057.pdf>

NSW Government (2021): *Energy from Waste Infrastructure Plan 2041*. September 2021.
Retrieved from: <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/waste/21p3261-energy-from-waste-infrastructure-plan.pdf>

Queanbeyan Palerang Regional Council (2021): *Waste Strategy*

Snowy Valleys Council (2019): *Zero Waste Strategy 2019-2030*

Snowy Monaro Regional Council (2021): *Waste Management Strategy*

Upper Lachlan Shire Council (2021): *Planning an Integrated Water, Sewer, and Waste Strategy*

Wingecarribee Shire Council (2019): *Waste Services Review*

Yass Valley Council (2017): *Waste & Recycling Strategy 2017 – 2027 (Draft)*



CANBERRA REGION JOINT ORGANISATION

Canberra Region Joint Organisation (CRJO)

Suite 6B (Upper Level)

2 Brindabella Circuit

Brindabella Business Park

Canberra Airport ACT 2609

reception@crjo.nsw.gov.au



CANBERRA REGION
JOINT ORGANISATION

Regional Waste and Sustainable Materials Strategy

2022-27

Action Plan

9 December 2022

ACKNOWLEDGEMENT OF COUNTRY

We acknowledge Country and pay respect to the Traditional Owners and Custodians of the land and waters across South East New South Wales. We recognise and honour their ancient cultures and their spiritual, cultural and physical connections with land, waters and community.

For over 70,000 year this Country has been inhabited and cared for by First Nations people from various mobs and dialects. We pay our respects and gratitude for their stewardship and for sustaining this land where we live, work, and visit. Their connection and understanding of the natural and cultural landscape is seen and heard through art, song, dance, and storytelling practices. We recognise the importance of these First stories, the contemporary stories of displacement, and the continued journey of self-determination in Australia.

Acknowledgement of the member councils:



Acknowledgement of associate members:



DOCUMENT CONTROL					
Version	Description	Date	Author	Reviewer	Approver
1.0	1 st Draft Release	6/10/2022	TA	AU	RM
2.0	2 nd Draft Release	15/11/2022	TA	AU	RM
3.0	Final Draft	23/11/2022	TA	AU	RM
4.0	Final	09/11/2022			RM



Table of Contents

1	Introduction	1
1.1	Targets and KPIs	2
2	Action Plan	3
2.1	Theme 1: Avoid or Reduce	3
2.2	Theme 2: Recover Resources	4
2.3	Theme 3: Protect the environment	5
2.4	Theme 4: Strategic Collaboration	7

Tables

Table 1-1: Targets and KPIs.....	3
Table 2-1: Theme 1 Action Plan Summary	3
Table 2-2: Theme 2 Action Plan Summary	4
Table 2-3: Theme 3 Action Plan Summary	5
Table 2-4: Theme 4 Action Plan Summary	7

1 Introduction

The Action Plan contains a variety of actions that address each of the WaSM Priority Areas and Themes, along with Canberra Region Joint Organisation's (CRJO's) sub-themes and assist the region to strive towards the WaSM Targets. The WaSM Themes have been utilised to structure the Action Plan in the following sections.



Several actions address more than one WaSM Theme and therefore are shown more than once within the Action Plan summaries in the following sections. To provide clarity regarding duplicate actions across multiple Themes, the Actions have been numbered individually from 1 to 51, with the same reference number allocated to each action no matter which Theme it addresses.

The Action Plan provides an indication of the timeline for project delivery via a priority allocated to each action by the member councils. However, the timeline for delivery is a guide and can be altered where necessary if a relevant funding program becomes available. The timeline for delivery of each action is split into the following three phases:

- Year 1 (2022 - 2023);
- Years 2 to 3 (2024 - 2025); and
- Years 4 to 5 (2026 - 2027).

Each Action is listed a responsible entity. In most cases this is CRJO and the Regional Coordinator however, in other instances, a member council or group of member councils may be responsible. Distributing who is responsible places greater ownership on the projects while providing greater capacity to achieve more. Responsibility is largely influenced by the type of project or action, in particular, whether it's a local, sub-regional or regional initiative. However, collaboration will be critical and utilising the human and financial resources of the CRJO members will ensure greater success.

CRJO is committed to reviewing the Action Plan on an annual basis to adjust for changes to projects or timelines as funding, policy and/or industry changes occur, or to reevaluate targets and KPIs if necessary.

In addition, the Action Plan is supported by an electronic version which cross references the actions against the CRJO sub-themes and WaSM grant programs to assist in identifying suitable projects when funding opportunities are available. This electronic version is available to CRJO and member councils.



1.1 Targets and KPIs

CRJO and its member councils fully support the targets within the WaSM Strategy. The targets are, however, often aspirational for regional/rural areas yet CRJO will strive to achieve the targets over the next 20 years. To support this notion, CRJO commits to the following targets and reporting against the associated key performance indicator (KPIs).

Table 1-1: Targets and KPIs

Target	KPI	#	Source Data
Advocate for the reduction of total waste generated by 10% per person by 2030	Annual reduction in waste generated per person	1	EPA WARR Reports
Advocate for an average recovery rate of 80% for residual waste, recycling and organics by 2030	Annual increase in recovery rate for residual waste, recycling and organics	2	EPA WARR Reports
Significantly increase the use of recycled content by governments and industry	Annual increase in the use of recycled content	3	Councils
Support the phase out of problematic and unnecessary plastics by 2025	Annual decrease in use of problematic and unnecessary plastics	4	Compositional Audits
Halve the amount of organics waste sent to landfill by 2030	Annual reduction in organics sent to landfill	5	Compositional Audits + EPA WARR Reports
Reduce plastic litter items by 30% by 2025	Annual reduction in plastic litter	6	EPA Litter Audits
Reduce the overall litter by 60% by 2030	Annual reduction in litter	7	EPA Litter Audits
Triple the plastic recycling rate by 2030	Annual increase in plastic recycling	8	Compositional Audits + EPA WARR Reports
Net Zero Emissions by 2050	Annual decrease in emissions	9	Councils

KPIs align with the WaSM targets and have been referenced 1 to 9. Each action within the Action Plan is allocated a KPI reference number. In some instances, actions may contribute towards more than one KPI and therefore, will reference several KPIs. CRJO is committed to reporting against the KPIs on an annual basis.

These targets provide clear guidance for the CRJO member councils to support and contribute to the WaSM targets and deliver reduced waste generation and improved recycling and

resource recovery. The KPIs provide a metric to report against on an annual basis which demonstrates an ongoing contribution to the targets.



Source: CRJO

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan

Attachment B Regional Waste & Sustainable Materials Strategy 2022-27 Action Plan

Regional Waste and Sustainable Materials Strategy 2022-27
Action Plan
Canberra Region Joint Organisation



2 Action Plan

2.1 Theme 1: Avoid or Reduce

Table 2-1: Theme 1 Action Plan Summary

WaSM Priorities			#	Actions	Implementation Year					Local (L) / Regional	Responsibility	KPI(s)
Meeting our future infrastructure and service needs	Reducing carbon emissions through better waste and materials management	Building on our work to protect the environment and human health from waste pollution			1	2-3	2-3	4-5	4-5			
✓			1	Develop regional waste education guidance accessible to all councils, to support the correct use of recycling and organics.		2-3	2-3			R	CRJO	2, 5
✓			2	Develop regional media accessible to all councils, to support the correct use of recycling and organics.		2-3	2-3			R	CRJO	2, 5
✓			3	Facilitate the use of a shared resource for waste education.		2-3	2-3			R	CRJO/ Councils	1, 4, 6, 8
✓			4	Develop an interactive digital program for waste education.		2-3	2-3			R	CRJO	1, 4, 6, 8
✓			5	Facilitate knowledge sharing/projects/lessons learnt within the region through online and face-to-face workshop/webinars supported by an online data portal/library.		2-3	2-3			R	CRJO	2
✓			6	Develop a regional waste education program in collaboration with ACT	1					R	CRJO	1, 4, 6, 8
✓			25	Collaborate with research institutions to develop circular economy opportunities via Think Tanks or similar				4-5	4-6	R	CRJO/ Councils	1, 3, 8
✓			27	Develop a scoping study for circular economy projects		2-3	2-4			R	CRJO	1, 3, 8
✓			28	Develop a regional circular economy strategy	1					R	CRJO	1, 3, 8
		✓	42	Support delivery of Single Use Plastic Ban through educational campaigns and advocate for plastic waste prevention		2-3	2-4			R	CRJO/ Councils	4
		✓	45	Implement an asbestos awareness campaign and/or provide training/guidance regarding its correct management.				4-5	4-5	R	CRJO/ Councils	1, 7
✓		✓	46	Explore plastic reduction and/or innovative processing opportunities.				4-5	4-5	R/L	CRJO/ Councils	4, 6, 7, 8

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan

Attachment B Regional Waste & Sustainable Materials Strategy 2022-27 Action Plan

Regional Waste and Sustainable Materials Strategy 2022-27
Action Plan
Canberra Region Joint Organisation



2.2 Theme 2: Recover Resources

Table 2-2: Theme 2 Action Plan Summary

WaSM Priorities			#	Actions	Implementation Year					Local (L)/ Regional)	Responsibility	KPI(s)
Meeting our future infrastructure and service needs	Reducing carbon emissions through better waste and materials management	Building on our work to protect the environment and human health from waste pollution			1	2-3		4-5				
✓			11	Investigate and implement a regional procurement for metal collection, organics processing, concrete crushing, solar panel collection, kerbside collections and/or mattresses or any other key material stream identified.		2-3	2-3			R	CRJO	2, 3, 5
✓	✓		13	Develop a regional solution for FOGO processing.	1					R	CRJO/ Councils	2, 5
✓		✓	14	Establish a mobile CRC for Yass, Hilltops and Upper Lachlan	1					R	CRJO/ Councils	1, 2, 7
✓		✓	30	Support the consolidation of landfills and closure or conversion into resource recovery centres.		2-3	2-3			R/L	CRJO/ Councils	9
✓		✓	33	Regional Aboriginal communities waste management Strategy		2-3	2-3			R	CRJO	2
✓			40	Facilitate and support the transition to, or improvement of, FOGO collections and processing programs.	1					R/L	CRJO/ Councils	2, 5
✓		✓	43	Explore opportunities to participate in a Textile Recycling Program.				4-5	4-5	L	CRJO/ Councils	2, 3
✓			44	Investigate Microfactories and establish a trial facility within the region.				4-5	4-5	L	CRJO/ Councils	1, 3, 8
✓		✓	46	Explore plastic reduction and/or innovative processing opportunities.				4-5	4-5	R/L	CRJO/ Councils	4, 6, 7, 8
		✓	47	Continue to investigate new recyclable material streams for councils and/or industry to develop markets and manage.				4-5	4-5	R	CRJO	2, 3, 8
		✓	48	Support councils to actively inform residents what happens with recycling streams and ensure evidence is publicly available through communications and education programs.		2-3	2-4			L	CRJO/ Councils	2
✓			49	Support the establishment, improvement and/or expansion of resource recovery centres and landfills to include Reuse/Buy Back (tip) Shops.				4-5	4-5	L	CRJO/ Councils	1, 2, 5, 8
✓	✓		50	Support the improvement of existing resource recovery centres and landfills to facilitate greater resource recovery and protection of the environment.				4-5	4-5	L	CRJO/ Councils	1, 2, 5, 8,
		✓	51	Monitor and assist in developing Extended Producer Responsibility (EPR) and/or Product Stewardship schemes.		2-3	2-4			R	CRJO	2, 3, 8

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan

Attachment B Regional Waste & Sustainable Materials Strategy 2022-27 Action Plan

Regional Waste and Sustainable Materials Strategy 2022-27
Action Plan
Canberra Region Joint Organisation



2.3 Theme 3: Protect the environment

Table 2-3: Theme 3 Action Plan Summary

WaSM Priorities			#	Actions	Implementation Year			Local (L)/ Regional)	Responsibility	KPI(s)
Meeting our future infrastructure and service needs	Reducing carbon emissions through better waste and materials management	Building on our work to protect the environment and human health from waste pollution			1	2-3	4-5			
✓		✓	14	Establish a mobile CRC for Yass, Hilltops and Upper Lachlan	1			R	CRJO/ Councils	1, 2, 7
✓	✓	✓	15	Develop a business case for a regional landfill gas capture procurement		2-3	2-3	R	CRJO/ Councils	9
✓	✓	✓	16	Implement a regional procurement for landfill gas capture		2-3	2-3	R	CRJO/ Councils	9
✓		✓	30	Alternative fuel collection vehicle study and trial.		2-3	2-3	R/L	CRJO/ Councils	9
✓		✓	33	Support the consolidation of landfills and closure or conversion into resource recovery centres.		2-3	2-3	R	CRJO	2
✓		✓	35	Regional Aboriginal communities waste management Strategy		2-3	2-3	R	CRJO	1, 2
✓		✓	37	True cost of Landfill study		2-3	2-4	R	CRJO/ Councils	1, 2, 6, 7
✓		✓	38	Cross Jurisdictional Illegal Dumping Awareness and Prevention Campaign			4-5	R	CRJO/ Councils	1, 2, 6, 7
✓		✓	39	Cross Jurisdictional Regional Illegal Dumping Strategy			4-5	R	CRJO/ Councils	1, 2, 6, 7
✓			41	Cross Jurisdictional Regional Litter Prevention Strategy			4-5	L	CRJO/ Councils	2
		✓	42	Explore options for onsite collections from MUDs including residual, recycling and organics		2-3	2-4	R	CRJO/ Councils	4
		✓	45	Support delivery of Single Use Plastic Ban through educational campaigns and advocate for plastic waste prevention			4-5	R	CRJO/ Councils	1, 7
✓		✓	46	Implement an asbestos awareness campaign and/or provide training/guidance regarding its correct management.			4-5	R/L	CRJO/ Councils	4, 6, 7, 8
✓			49	Explore plastic reduction and/or innovative processing opportunities.			4-5	L	CRJO/ Councils	1, 2, 5, 8
✓	✓		50	Support the establishment, improvement and/or expansion of resource recovery centres and landfills to include Reuse/Buy Back (tip) Shops.			4-5	L	CRJO/ Councils	1, 2, 5, 8, 9

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan

Attachment B Regional Waste & Sustainable Materials Strategy 2022-27 Action Plan

Regional Waste and Sustainable Materials Strategy 2022-27
Action Plan
Canberra Region Joint Organisation



		✓	51	Support the improvement of existing resource recovery centres and landfills to facilitate greater resource recovery and protection of the environment.		2-3	2-4			R	CRJO	2, 3, 8
--	--	---	----	--	--	-----	-----	--	--	---	------	---------

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan

Attachment B Regional Waste & Sustainable Materials Strategy 2022-27 Action Plan

Regional Waste and Sustainable Materials Strategy 2022-27
Action Plan
Canberra Region Joint Organisation



2.4 Theme 4: Strategic Collaboration

Table 2-4: Theme 4 Action Plan Summary

WaSM Priorities			#	Actions	Implementation Year			Local (L) / Regional	Responsibility	KPI(s)
Meeting our future infrastructure and service needs	Reducing carbon emissions through better waste and materials management	Building on our work to protect the environment and human health from waste pollution			1	2-3	4-5			
✓			1	Develop regional waste education guidance accessible to all councils, to support the correct use of recycling and organics.		2-3	2-3	R	CRJO	2, 5
✓			2	Develop regional media accessible to all councils, to support the correct use of recycling and organics.		2-3	2-3	R	CRJO	2, 5
✓			3	Facilitate the use of a shared resource for waste education.		2-3	2-3	R	CRJO/ Councils	1, 4, 6, 8
✓			4	Develop an interactive digital program for waste education.		2-3	2-3	R	CRJO	1, 4, 6, 8
✓			5	Facilitate knowledge sharing/projects/lessons learnt within the region through online and face-to-face workshop/webinars supported by an online data portal/library.		2-3	2-3	R	CRJO	2
✓			6	Develop a regional waste education program in collaboration with ACT	1			R	CRJO	1, 4, 6, 8
✓			7	Develop a procurement principles guideline (including ACCC requirements for regional projects)		2-3	2-3	L/R	CRJO/ Councils	3
✓			8	Undertake composition audits.		2-3	2-3	L/R	CRJO/ Councils	1, 2
✓			9	Investigate Regional Waste Collection Software		2-3	2-3	R	CRJO	2, 9
✓			10	Facilitate the use of a shared resource for procurement.		2-3	2-3	R	CRJO	3
✓			11	Investigate and implement a regional procurement for metal collection, organics processing, concrete crushing, solar panel collection, kerbside collections and/or mattresses or any other key material stream identified.		2-3	2-3	R	CRJO	2, 3, 5
✓			12	Update CRJO Regional Waste Infrastructure Prospectus based on a waste perspective	1			R	CRJO	2
✓	✓		13	Develop a regional solution for FOGO processing.	1			R	CRJO/ Councils	2, 5
✓		✓	14	Establish a mobile CRC for Yass, Hilltops and Upper Lachlan	1			R	CRJO/ Councils	1, 2, 7

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan

Attachment B Regional Waste & Sustainable Materials Strategy 2022-27 Action Plan

Regional Waste and Sustainable Materials Strategy 2022-27
Action Plan
Canberra Region Joint Organisation



✓	✓	✓	15	Develop a business case for a regional landfill gas capture procurement		2-3	2-3			R	CRJO/ Councils	9
✓	✓	✓	16	Implement a regional procurement for landfill gas capture		2-3	2-3			R	CRJO/ Councils	9
✓			17	Investigate and map closed legacy landfills across the region.				4-5	4-6	R	CRJO	9
✓			18	Engage with EPA and advocate for an appropriately funded legacy landfill grant program		2-3	2-4			R	CRJO	9
✓			19	Investigate the feasibility of 'real time' waste reporting.				4-5	4-6	R	CRJO/ Councils	1, 2, 5
✓			20	Investigate an online regional information and data collection, dashboard and hosting platform/portal.		2-3	2-4			R	CRJO	2
✓			21	Improve data capture and accuracy at WMFs without a weighbridge.				4-5	4-6	R	CRJO/ Councils	1, 2, 5
✓		✓	22	Conduct a 'lessons learnt' activity from recent natural disasters and develop a guidance document.	1					R	CRJO	2
✓			23	Develop an emergency Waste Management Plan Template for councils	1					L	CRJO	2
✓		✓	24	Develop a Regional emergency Waste Management Plan		2-3	2-4			R	CRJO	2
✓			25	Collaborate with research institutions to develop circular economy opportunities via Think Tanks or similar				4-5	4-6	R	CRJO/ Councils	1, 3, 8
✓			26	Undertake a regional material flow analysis	1					R	CRJO	2
✓			27	Develop a scoping study for circular economy projects		2-3	2-4			R	CRJO	1, 3, 8
✓			28	Develop a regional circular economy strategy	1					R	CRJO	1, 3, 8
✓			31	Establish a proactive cross-jurisdictional committee with ACT NoWaste and Wagga		2-3	2-3			R	CRJO	1, 2, 6, 7
✓			32	Establish a MoU with ACT NoWaste for joint funding and collaboration		2-3	2-3			R	CRJO	2
✓		✓	37	Fees, Charges & Landfill Levy Study - Comparison of member councils, explore harmonisation and impact the levy would have on the region.		2-3	2-4			R	CRJO/ Councils	1, 2, 6, 7
✓		✓	38	Solar public place compactor bin study and trials				4-5	4-5	R	CRJO/ Councils	1, 2, 6, 7
✓		✓	39	Cross Jurisdictional Illegal Dumping Awareness and Prevention Campaign				4-5	4-5	R	CRJO/ Councils	1, 2, 6, 7
✓			40	Cross Jurisdictional Regional Illegal Dumping Strategy	1					R/L	CRJO/ Councils	2, 5
		✓	42	Cross Jurisdictional Regional Litter Prevention Strategy		2-3	2-4			R	CRJO/ Councils	4

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan

Attachment B Regional Waste & Sustainable Materials Strategy 2022-27 Action Plan

Regional Waste and Sustainable Materials Strategy 2022-27
Action Plan
Canberra Region Joint Organisation



✓		✓	43	Facilitate and support the transition to, or improvement of, FOGO collections and processing programs.				4-5	4-5	L	CRJO/ Councils	2, 3
✓			44	Support delivery of Single Use Plastic Ban through educational campaigns and advocate for plastic waste prevention				4-5	4-5	L	CRJO/ Councils	1, 3, 8
		✓	45	Explore opportunities to participate in a Textile Recycling Program.				4-5	4-5	R	CRJO/ Councils	1, 7
		✓	48	Investigate Microfactories and establish a trial facility within the region.		2-3	2-4			L	CRJO/ Councils	2
		✓	51	Implement an asbestos awareness campaign and/or provide training/guidance regarding its correct management.		2-3	2-4			R	CRJO	2, 3, 8



CANBERRA REGION
JOINT ORGANISATION

Canberra Region Joint Organisation (CRJO)
Suite 6B (Upper Level)
2 Brindabella Circuit
Brindabella Business Park
Canberra Airport ACT 2609
reception@crjo.nsw.gov.au



WASTE & RECYCLING STRATEGY 2017 - 2027

To operate a reliable and cost effective waste management service that meets the community service, public health and environmental obligations including promotion of diversion of wastes from landfills by encouraging recycle and reuse.

CONTENTS

EXECUTIVE SUMMARY	2
Abbreviations and Acronyms	3
1. Waste Management Hierarchy	4
2. Legislation Requirements	6
2.1 NSW State Legislation	6
2.2 Government Policies and Guidelines	7
3. Links to other Plans & Strategies	8
4. Regional Co-Operation	12
4.1 CBR Region Joint Organisation (CBRJO) formerly SEROC – South East Regional Organisation of Councils – South East Resource Recovery Group	12
4.2 South West Regional Waste Management Group	13
5. Licensing and Regulation	15
5.1 Environmental Protection Licence	15
5.2 Landfill Environmental Management Plan	15
5.3 Annual Reporting	16
6. Current Services	17
6.1 Domestic Waste Collection	17
6.2 Commercial Waste Collection	17
6.3 Waste Management Facilities	17
6.4 Transfer and Recycling Stations	18
6.5 Material Recovery Facility	19
6.6 Landfills	19
6.7 Waste Minimisation and Resource Recovery Services	20
6.8 Miscellaneous Waste Services	20
6.9 Waste Services Assets	21
6.10 Capital Works Program	21
7. Financial Management – Fees & Charges	22
7.1 Environmental Levy	23
7.2 Domestic Waste Management Charge	23
7.3 Kerbside Side Collection Business	23
7.4 Paper / Cardboard Collections	24
7.5 Special Events	24
7.6 Transfer Station Fees and Charges	24
7.7 Public Services	24
8. The Future	25
8.1 Goal 1 - Waste Education & Awareness (Internal & External)	27
8.2 Goal 3 – Residential & Domestic Waste Avoidance	31

EXECUTIVE SUMMARY

Yass Valley Council provides a range of waste services that have been developed in response to the Local Government Act and the state-wide waste strategy as appropriate for the local needs.

Council's primary objection with waste services is to meet the adopted Levels of Service, which cover the following areas:

- Services provided to customers
- Frequency and duration of planned and unplanned service interruptions;
- Response times to service interruptions;
- Frequency and response times for customer queries and/or complaints.

In early 2015, the Council developed, and adopted a Strategic Business Plan (SBP) which covers the development and operation of the waste services provided by Council.

Through the SBP, Council has recognised four Key Result Areas that must be managed well to achieve success in the long-term provision of waste management services to its customers. These are:

- Customer service;
- Total asset management;
- Work force; and
- Finance.

Council has adopted the following principals and goals under which Council strategies and procedures for managing waste will operate:

- Promote waste prevention including waste avoidance and waste reduction;
- Aim to increase recycling including reuse, reprocessing and waste utilisation;
- Recognise disposal as a last resort;
- Recognise that waste management or disposal is assured;
- Apply user pays and polluter pays principals to waste management;
- Develop and maintain a Waste Management Strategy that reflects current practices and identifies future directions for Yass Valley Council;
- Promote effective commercial waste minimization practices;
- Eliminate landfills within the local government area of the Council;
- Increase integration with regional strategies and the use of regional facilities;
- Minimize or avoid adverse effects on the environment.

The implications of Council's vision, mission and values for the provision of the waste services can be summarised as follows:

- To be environmentally committed and responsible;
- To ensure sustainable infrastructure and assets;
- To meet community expectations;
- To provide necessary services efficiently; and
- To be dynamic and responsive to change.

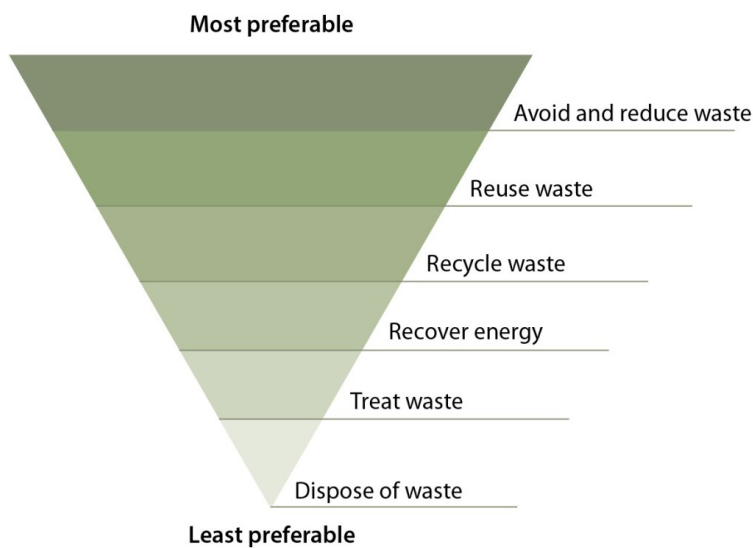
Abbreviations and Acronyms

ACT	Australian Capital Territory
BOB	Bank of Bins (rural area collection service)
C&D	Construction and Demolition used resources
C&I	Commercial and Industrial used resources
CBRJO	Canberra Region Joint Organisation (formerly SEROC)
DCP	(Council) Development Control Plan
DLG	Department of Local Government
DWMC	Domestic Waste Management Charge
EPA	Environment Protection Authority NSW
EPA –SPD	Sustainability Programs Division of EPA
HDPE	Plastics No. 2 e.g. milk bottles
LG Act NSW	Local Government Act, 1993
LPB	Liquid Paper Board e.g. milk cartons
MGB	Mobile Garbage Bin/Wheelie Bin
MRF	Materials Recovery Facility
NiCad	Nickel Cadmium (batteries)
PET	Plastics No. 1 e.g. soft drink bottles
POEO Act	NSW Protection of the Environment Operations Act, 1997
REROC	Riverina East Regional Organisation of Councils
RRE	Resource Recovery Estate
SBP	Strategic Business Plan
SEROC	South East Regional Organisation of Councils (now CBRJO)
SERRG	South East Resource Recovery Group
SWRWMG	South West Regional Waste Management Group
WARR Act	NSW Waste Avoidance and Resource Recovery Act, 2001
WMM Act	NSW Waste Minimisation and Management Act, 1995
WRAPP	Waste Reduction & Purchasing Policy - EPA
YTS	Yass Transfer Station

1. Waste Management Hierarchy

The Waste Hierarchy is a recognised framework for waste management, established under the Waste Avoidance and Resource Recovery Act 2001, which is an accepted guide for prioritising waste management practices with the objective of achieving optimal environmental outcomes. It sets out the preferred order of waste management practices, from most to least preferred.

The hierarchy is one of the guiding principles of NSW'S legislative approach to waste management, informing the Protection of the Environment Operations Act 1997 and the need for flexibility based on local and regional economic, social and environmental conditions.



The further activities moves up the Waste Management Hierarchy, the more gains there are to be made. To effectively address the zero waste and climate change agenda, there needs to be a move beyond recycling into the largely uncharted territory of the higher end of the hierarchy, to reuse, reduce and avoid, with a particular emphasis on eco-efficiency (the same or greater utility from less material input).

Avoid & Reduce is the ultimate zero challenge, the highest point on the hierarchy. The volume and rate at which resources are being channelled through the human economy needs to be slowed, along with a recognition that all our material goods have an energy 'price tag'.

Reuse requires less energy than recycling, although designs which are both adaptable and durable are essential to its success. Other factors, such as the consumer desire for 'newness', can conspire against reuse. This next preferred option is the reuse of the materials without further processing, avoiding the costs of energy and other resources required for recycling. There are many ways that clothes, cars, books, buildings and other materials are currently reused, such as:

- trash and treasure markets
- second-hand Saturday
- eBay
- free giveaway swap websites

Reuse is already part of our society, so there is an existing precedent to build on.

Recycling is the processing of waste materials to make the same or different products. This includes composting which recycles nutrients back into the soil. Recycling a product generally requires fewer resources than drawing virgin materials from the environment to create a new one.

Recover the energy from the material where possible and then feed this back into the community where acceptable.

Treatment of some waste materials may be necessary to stabilise them and minimize their environmental and health impact when there is no possibility of reuse, recycle or recovery of energy options.

Disposal or direct treatment of some wastes, such as hazardous chemicals or asbestos is recognized as the most appropriate management option.

2. Legislation Requirements

2.1 NSW State Legislation

Waste Management in NSW is predominately regulated by the NSW Environment Protection Authority (EPA) using innovative tools and programs to prevent pollution, minimize resource use, improve the recovery of materials from the waste stream and ensure the appropriate disposal of waste. .

The following Acts and Regulations govern waste management and recycling in NSW:

Acts and Regulations	Implications for Service/ Operation
Local Government Act 1993 – Sec.496, 504 and 510 Local Government (General) Regulation 2005	Overall scheme operation and service provision
Environmental Planning and Assessment Act 1979 Environmental Planning and Assessment Regulation 2000	Siting of waste transfer, treatment and disposal facilities
Protection of the Environment Admin. Act 1991 Protection of the Environment Operations (Waste) Regulations 1996 Protection of the Environment Operations Act 1997 – Sec.75, 76 and 88 Protection of the Environment Amendment (Littering) Act 2000	Licensing of waste treatment and disposal operations Operation of unlicensed waste facilities Defining and dealing with offences related to littering
Waste Avoidance and Resource Recovery Act 2001	Implementation of programs and strategies for sustainable management of waste
Contaminated Land Management Act 1997	Public Health Landfill management
Product Stewardship Act 2011 Product Stewardship (Televisions and Computers) Regulations 2011	Co-regulatory partnership with manufacturers for end-of-life recycling of electronic wastes
Work Health and Safety Act 2011	Workplace environment and employees health and safety

Under the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021, the vision is:

"The primary goal of this strategy is to enable all the NSW community to improve environmental and community well-being by reducing the environmental impact of waste and using resources more efficiently.

Using resources efficiently and keeping materials circulating in the productive economy can also help to create jobs and grow the NSW economy."

The Department of Local Government (DLG) controls the governance and financial operations of Council through legislation, including the Local Government Act 1993 and guidelines, ensuring probity and accountability to the community.

2.2 Government Policies and Guidelines

Council is obligated to manage its waste services in accordance with the requirements of a number of government policies and guidelines that have been formulated under the provisions of the various legislation. The following table summarises the major policies and guidelines and their impact on the provision of waste management services.

Acts and Regulations	Implications for Service/ Operation
State Environmental Planning Policy (no.48) – Major putrescible landfill sites	Siting of landfills
Environmental Guidelines: Solid Waste Landfill 1996	Siting of waste transfer, treatment and disposal facilities
National Waste Management Strategy 2009	National level priorities/ strategies to be achieved by 2020
Extended Produced Responsibility Statement 2004	Managing 16 identified wastes for extended producer responsibility
NSW Waste Avoidance and Resource Recovery Strategy 2010	Waste reduction and resource recovery strategies and targets

3. Links to other Plans & Strategies

In June 2013, Council adopted the Community Strategic Plan 2013-2030. The environmental vision, outcomes sought and strategies outlined in this plan drive the development and implementation of the Waste Strategy. The relevant sections of that plan appear below:

<i>Long Term Goals</i>	<i>Strategies to achieve Long Term Goals</i>	<i>Performance Targets</i>
1.1 Our natural environment remains clean and healthy	1.1.1 Develop a regional strategy to control and minimise illegal dumping 1.1.2 Identify and promote best practice in sustainable land management 1.1.3 Develop a sustainable waste management strategy	✓ Waste reduction and recycling targets are met ✓ Regional Illegal Dumping ("R.I.D.") Squad is established ✓ Enforcement Program is developed and implemented to minimise illegal dumping ✓ Long term landfill sites are identified ✓ Yass Valley is recognised for its achievements in sustainable land management ✓ There are ongoing community education programs to promote best practice in sustainable land management
1.4 Practices in environmental sustainability are widely adopted throughout our local area	1.4.1 Develop and implement initiatives to reduce Yass Valley's carbon footprint including use of clean energy alternatives, water saving measures and transport options 1.4.2 Businesses, agencies and households have access to environmental sustainability education and awareness programs 1.4.3 Promote Yass Valley as host to a range of best practice examples of environmental sustainability in local industry and agriculture	✓ There are ongoing community education programs to support practices in environmental sustainability ✓ Yass Valley is recognised for its achievements in the use of clean energy alternatives, water saving measures and transport options

4.3 Regional Waste & Sustainable Materials Strategy 2022-2027 and Regional Waste & Sustainable Materials Strategy 2022-2027 Action Plan
Attachment C Draft Yass Valley Waste Strategy 2017-2027

Councils 2014-2015 Operational Plan further outlines the above long term goals in a more practical application as appearing below:

Strategy	Strategic Action	Responsibility		External Stakeholders (other than the community as a whole)	DELIVERY PROGRAM Key Performance Indicators 2013/17	OPERATIONAL PLAN Key Performance Indicators 2014/15
		Primary	Secondary			
1.1.1 - Develop a regional strategy to control and minimise illegal dumping.	1.1.1.1 – Develop an LGA wide illegal dumping policy.	Director Planning and Environmental Services	Senior Ranger	<ul style="list-style-type: none"> ➤ ACT Government ➤ SEROC 	Policy implemented.	Joint illegal dumping strategy prepared as part of NSW-ACT Cross Border illegal dumping project by Dec 2014.
	1.1.1.2 – Develop community education programs.	Director Planning and Environmental Services	Senior Environmental Health Officer	<ul style="list-style-type: none"> ➤ ACT Government ➤ SEROC 	Community awareness and education programs implemented.	Joint illegal dumping education strategy prepared as part of NSW-ACT Cross Border illegal dumping project by Dec 2014.
	1.1.1.3 – Promote the establishment of a regional illegal dumping strategy within government.	Director Planning and Environmental Services	Senior Environmental Health Officer Senior Ranger	<ul style="list-style-type: none"> ➤ SEROC ➤ OEH ➤ ACT Government 	Regional illegal dumping strategy is established.	NSW-ACT Cross Border Illegal Dumping Project formalised by official MOU by Dec 2014
1.1.3 - Develop a sustainable waste management strategy.	1.1.3.1 – Work with SEROC and SWRWMG to develop long term regional waste strategies.	Director Operations	Business Services Manager	<ul style="list-style-type: none"> ➤ SEROC ➤ SWRWMG ➤ Other Councils in region 	Long term regional waste strategy developed.	Draft Regional Waste Strategy developed and reported to Council by Oct 2014.
	1.1.3.2 – Develop asset management and long term financial plans for waste facilities.	Director Operations	Business Services Manager	<ul style="list-style-type: none"> ➤ SEROC ➤ SWRWMG 	<ul style="list-style-type: none"> ➤ Long term financial plan for waste services developed. ➤ Asset Management Plan for waste services developed and implemented. 	LTFP developed and adopted by March 2015.
	1.1.3.3 – Develop long term strategies for reducing the amount of waste going to landfill.	Director Operations	Business Services Manager	<ul style="list-style-type: none"> ➤ SEROC ➤ SWRWMG ➤ Other Councils in region 	Waste minimisation strategies are developed in conjunction with SEROC & SWRWMG.	Waste Strategy developed and adopted by Council by Dec 2014

Council's Strategic direction addresses NSW Government policy goals and objectives of the *NSW Waste Avoidance and Resource Recovery Strategy* and *NSW 2021 - A plan to make NSW number one*. Both of these documents have been considered in the development of this strategy.

Through Goal 22 of *NSW 2021*, the NSW Government has set clear goals and objectives in dealing with waste to protect the environment (Goal 22), including to;

- *Protect local environments from pollution – Target illegal dumping – Reduce the incidence of large scale(greater than 200m3 of waste) illegal dumping detected in Sydney, the Illawarra, Hunter and Central Coast by 30% by 2016.*
- *Increase renewable energy – 20% renewable energy by 2020*
- *By 2016, NSW will have the lowest litter count per capita in Australia.*
- *Increase recycling to meet the 2014 NSW waste recycling targets (Review the Waste Levy and continue to support local council recycling through guidance and assistance programs and support Community Drop-Off Centre's to make it easier for people to recycle and remove problem waste from bins).*

The *NSW Waste Avoidance and Resource Recovery Strategy 2014-21* is designed to provide a continuing framework that will guide actions to minimize environmental harm from waste generation through to disposal, conserving and maximizing resource use.

NSW Waste Avoidance and Resource Recovery Strategy 2014-21 Targets to 2021-22

Key Result Area	Target
1 – Avoid and reduce waste generation	By 2021-22 reduce the rate of waste generation per capita. The target in this key result area aims to improve the efficient use of materials across the community and avoid generating unnecessary waste.
2 – Increase Recycling	By 2021-22, increase recycling rates for: <ul style="list-style-type: none"> • municipal solid waste from 52% (in 2010-11) to 70% • commercial and industrial waste from 57% (in 2010-11) to 70% • construction and demolition waste from 75% (in 2010-11) to 80%. The target in this key result area aims to increase the amount of material that is recycled and put back into the productive economy.
3 – Divert more waste from landfill	By 2021-22, increase the waste diverted from landfill from 63% (in 2010-11) to 75%. The target area refers to the alternative pathways for materials entering the system that avoid disposal to landfill, such as recycling and energy recovery.
4 – Management problem waste better	By 2021-22, establish or upgrade 86 drop-off facilities or services for managing household problem wastes state-wide. The target area of this key result aims to reduce the impact of problem wastes on human health and the

	environment by separating them from household waste and recycling and treating them appropriately.
5 – Reduce litter	By 2016–17, reduce the number of litter items by 40% compared with 2011–12 levels and then continue to reduce litter items to 2021–22.
6 – Reduce illegal dumping	From 2013–14, implement the NSW Illegal Dumping Strategy 2014–16 to reduce the incidence of illegal dumping state-wide As part of this strategy, by 2016–17: <ul style="list-style-type: none"> • reduce the incidence of illegal dumping in Sydney and the Illawarra, Hunter and Central Coast regions by 30% compared with 2010–11 • establish baseline data to allow target-setting in other parts of the state

4. Regional Co-Operation

4.1 CBR Region Joint Organisation (CBRJO) formerly SEROC – South East Regional Organisation of Councils – South East Resource Recovery Group

Yass Valley Council is an active participant in CBRJO's Resource Recovery Group – SERRG.

In 2014, in support of the NSW 2021, a South East NSW Regional Action Plan was developed. To identify with "Goal 22 – Protect our natural environment" of the NSW 2021 business plan, a priority action was identified for local member Councils, on a regional basis, to "Develop waste strategies to increase recycling and tackle illegal dumping." In 2014 SERRG developed, and the EPA endorsed the Regional Waste Stream Management Strategy 2012-2032 (revised 2014) ("Regional Strategy").

The Regional Strategy outlines the following key outcomes:

1. Help member councils be pro-active, holistic and innovative in addressing the concept of 'waste';
2. Help member councils to provide efficient waste services to meet community needs;
3. Foster the take-up of sustainable behaviours in member councils and their community;
4. Improve council bargaining power in service contracts and managing difficult products;
5. Increase local markets for, and business and employment opportunities in, recovered resources
6. Educate and advocate for life cycle responsibility, and against the creation of 'waste'

The group aims to achieve the development and implementation of regional solutions to resource recovery including education initiatives which are currently co-ordinated by the Bournda Environmental Education Centre. SERRG's Regional Education Program includes the regional strategies above in particular 1, 3, 5 & 6.

This Regional Education Program is aligned with the NSW Environment Protection Agency's (EPA) "Changing Behaviour Together: NSW Waste Less, Recycle More Education Strategy 2015-17".

Key activities include:

- **Love Food Hate Waste**

SERRG is in partnership with the NSW EPA with the Love Food Hate Waste program which is aimed to educate the public, and businesses to waste less food, save money and the environment. It provides tips, information and tools to help households buy, cook and save food, raising awareness about the food we waste and the impact it has on our environment and budgets.



- **Hazardous Household Chemical Events**

This is the gradual reduction from society on a voluntary disposal basis, of all banned, caustic and toxic chemicals. It is a State and Local Government funded grant and current funds sourced initiative in order for the consumer to believe it is a free service. By voluntarily removing these items from the community the desired results of prevention to potential environmental harm, public health and ad hoc disposal funding pressures (volume disposal cheaper than one-off), are achieved.



4.2 South West Regional Waste Management Group

In 1998 the opportunity presented to partner with surrounding Council's and private enterprise in order to establish a regional landfill at Jugiong became available. This opportunity included approximately 1,000,000 cubic metres of landfill space, collective effort towards costs of providing and establishing the facility, a common transport system and no minimal options to explore for new sites in our Local Government Area.

After extensive assessment and evaluation, Yass Valley Council signed on as a group member to the South West Regional Waste management Group (Group). This Group, under a binding MoU, works towards efficient and sustainable solutions for regional waste disposal, and developing and sharing access to a regional landfill facility.

The Group consists of eight Councils including Boorowa, Cootamundra, Gundagai, Harden, Yass, Young, Tumbarumba and Tumut, in agreement with Bald Hill Quarry Pty Ltd (trading as Ecofill).

In 2005 Yass Transfer Station was further enhanced with the building of a waste pit and compactor allowing all putrescible and general commercial waste to be transferred from Yass Shire to the regional landfill at Bald Hill Jugiong. This site is leased and operated by Ecofill. The Group (through the administering Council, Harden Shire Council) holds the Supervisory Environment Protection Licence which oversees the environmental compliance of the Ecofill operations. The operator, Ecofill, through their development consent, and Environment Protection Licence have a restriction to accept 40'000 tonnes of waste per annum for landfill application. A further modification to the development consent in 2012 includes a guaranteed airspace of 25'000 tonnes for the Group's member Council waste. The remaining 15'000 tonne airspace is for sale by Ecofill to commercial customers whose origin of waste is restricted to the Group's member Council local government area. Currently the Group's accounting and trailer maintenance and replacement requirements, license supervision, finances and day to day operations are managed by a Group Manager who is based at Harden Shire Council.

The Group currently disposes of approximately 17'660 tonnes per annum (South West Regional Waste Management (SWRWMG) Annual Data 2013/2014) to the landfill. Yass Valley Council contributed approximately 26% of the total 2014 tonnage (4629 tonnes). This annual tonnage is expected to increase with the closure of the Murrumbateman landfill and the ultimate diversion of waste to the Bald Hill landfill.

The remaining life of the Bald Hill landfill, at the current annual filling rate, is estimated to be approximately 25 years.

The Group is ultimately responsible for the closure and post-closure monitoring of this regional landfill and as such currently raises a per tonnage fee to cover the associated costs.

Ecofill operators and the Group are aware of Bald Hill Quarries' depletion of the adjoining basalt quarry and both parties are committed to exploration discussions for future regional agreements for waste disposal options.

5. Licensing and Regulation

Waste activities within NSW are regulated by the Protection of the Environment Operations (POEO) Act 1997 and the Protection of the Environment Operations (Waste) Regulation 2014. Within the POEO “waste” is defined for regulatory purposes and establishes management and licensing requirements along with office provisions to deliver environmentally appropriate outcomes. The POEO also establishes the ability to set various waste management requirements via the regulation. It is the primary piece of legislation regulating pollution control and waste disposal in NSW. The POEO is administered by the NSW EPA.

The POEO Regulation was introduced on 1 November, 2014. This sets out provisions covering the way waste is managed in terms of storage and transportation as well as reporting and record keeping requirements for waste facilities.

5.1 Environmental Protection Licence

The NSW Environment Protection Authority (NSW EPA) issue environment protection licences (ELPs) under the Protection of the Environment Operations ACT 1997 (POEO Act). Licence conditions relate to pollution prevention, amenity and waste minimisation. This is achieved through monitoring, reporting on environmental and weight tallies aimed at effective disposal through recycling, reuse and the Council’s best efforts at implementation of best practice.

Murrumbateman landfill is the only EPA licenced landfill in the Yass LGA being located within 250m of residentially used or zoned lands. The Murrumbateman landfill licence has a condition that states the site will cease landfilling activities by 30 September 2015, and Council will have completed all capping works by 30 September 2016.

Council resolved to close this landfill as it had reached its capacity and was no longer viable to remain operating. The site is currently being converted to a Transfer Station which will continue to meet the waste disposal needs of the local community. The waste received at this site will then be transported to the Bald Hill landfill.

Council’s license – EPL 5895 for Murrumbateman landfill is freely available online at the NSW EPA website [NSW EPA Licence 5895](http://www.epa.nsw.gov.au) - www.epa.nsw.gov.au.

5.2 Landfill Environmental Management Plan

Until the Murrumbateman landfill ceases operating as a landfill, and the licence is varied to a Transfer Station, the NSW EPA requires all licensees to hold a reviewable Landfill Environmental Management Plans (LEMP’s). LEMP’s enable Council to take a strategic approach to protection of the environment and site management while meeting the goals outlined in the Environmental Guidelines: Solid Waste Landfills. The LEMP facilitates the safe and efficient operation of the landfill and ensures that the environment and surrounding residents are not negatively impacted from pollution (odour, litter, dust and noise).

5.3 Annual Reporting

Licenses also require annual reporting on progress towards the licence conditions and the LEMP. Annual results and reporting include tonnages received by category of waste, volumes recycled, amounts re-used (green waste) and environmental incidents and pollution and groundwater monitoring. From 2012, environmental monitoring of licenced premises needs to be published on Council's web page (as with any other EPL's held by Council such as Sewage Treatment Works).

6. Current Services

6.1 Domestic Waste Collection

Council services about 4'100 residential properties with a weekly collection of the 140 litre MGB and fortnightly collection of the 240 litre MGB co-mingled recycling bins on the designated collection days. Council currently collects waste from the townships of Yass, Murrumbateman, Binalong and Bowning.

The current services are undertaken by Council's day labour and utilises two side-lift compactor trucks.

This service has the potential to expand into the townships of Gundaroo and Sutton if feasible.

Council will further investigate the waste types being collected to identify further resources which can be diverted from landfill.

6.2 Commercial Waste Collection

Council offers two types of waste collection services to commercial customers. The first type being a weekly kerbside service collection both recycling and general waste streams. Council currently provides this type of service to about 100 business customers.

Alternatively, business customers can opt for the larger 1'100 litre separate waste or cardboard only bulk bin that will be collected as required. About 45 businesses in the Yass, Murrumbateman, Gundaroo, Bowning and Wee Jasper areas are currently utilising this service provided by Council. The service is on the basis of a fee for service but is also open to competition from external commercial providers.

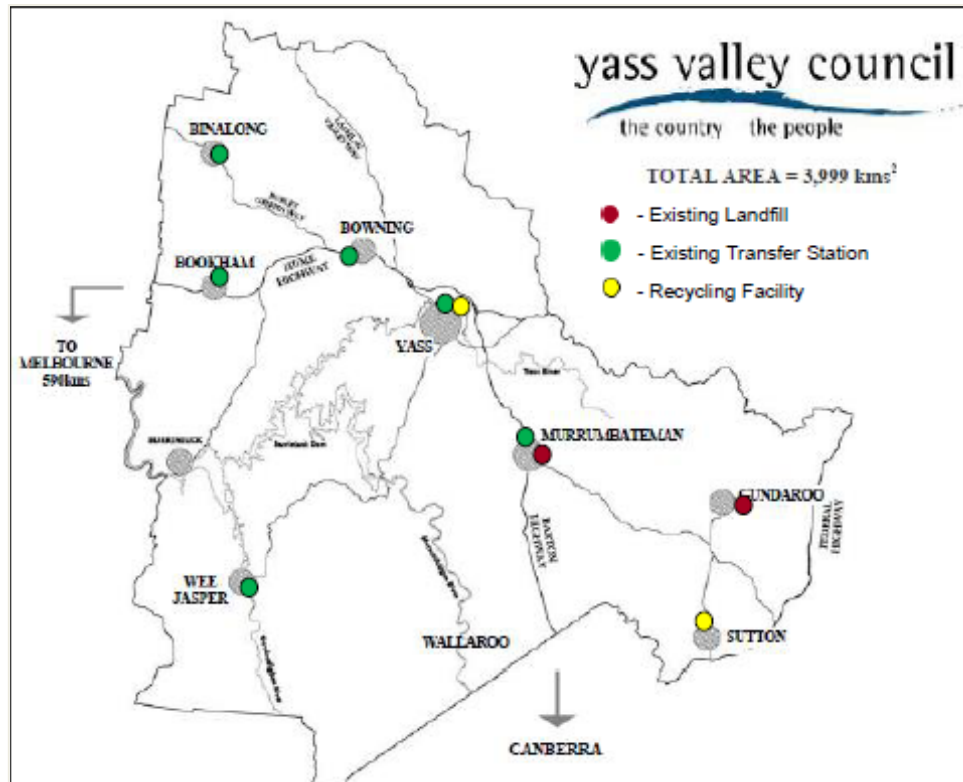
The service is currently being reviewed to gauge the future capacity for growth and the financial viability of extending the service collection area.

6.3 Waste Management Facilities

Council operates three types of waste management facilities:

- Landfills;
- Transfer stations; and
- Recycling facilities.

The location of these is shown in the following figure:



6.4 Transfer and Recycling Stations

Council operates seven transfer stations located at Binalong, Bookham, Bowning, Gundaroo, Murrumbateman, Wee Jasper and Yass, and a recycling station at Sutton. These facilities offer collection points for recyclable materials such as:

- Clear/ Brown/ Green Glass
- Cardboard and Paper
- Bottles and containers made of PET and HDPE
- Milk bottles
- Aluminium and steel cans
- Metal
- Green wastes

The Yass transfer station operates all seven days a week. All other transfer stations except Wee Jasper and Sutton are open for twice a week. The recycling drop-off facilities at Sutton and Wee Jasper operate all 7 days. The general waste drop-off service at Wee Jasper is currently available for only half a day a week (on Sundays).

6.5 Material Recovery Facility

A Material Recovery Facility (MRF) that originally dealt with the sorting of kerbside collected recyclables has been operating at the Yass transfer station site for more than 17 years. This facility currently processes recyclable materials deposited at all other waste facilities and baled paper and cardboard received either via direct drop-off or through the commercial cardboard collection service. The recyclable materials accepted at this facility include:

- PET plastics (No.1), e.g. soft drink bottles
- HDPE plastics (No.2) e.g. milk bottles
- Liquid Paper Boards (LPB) e.g. milk cartons
- Glass (green, brown and clear)
- Steel
- Aluminium
- Paper and cardboard

The comingled recyclable materials collected through kerbside collection service are currently processed by Remondis Australia Pty Ltd at Hume, ACT.

6.6 Landfills

As previously mentioned in section 5 – Licensing and Regulation, there are currently two landfill sites, one licensed and one unlicensed, operating within the Council area. These are:

- Murrumbateman landfill – a licensed solid waste landfill. This landfill has reached capacity and will close at the expiry of the current license period being 30 September 2015; and
- Gundaroo landfill – Unlicensed landfill taken over by Council in 2004 Council boundary adjustment.

The Murrumbateman landfill is the only licenced solid waste landfill (EPA Licence No.5895) operating within the Council area. This landfill has been operating for more than 40 years servicing mainly the waste disposal needs of Murrumbateman and the surrounding areas. Major upgrade works were carried out at the Murrumbateman landfill site in 1998 and again in 2004 which included the rehabilitation of old landfill cells, installation of a leachate collection system, lining of the leachate dam and excavation of new landfill cell.

In recent years, only small loads of self-hauled putrescible wastes generated by local residents was accepted at this landfill. All other putrescible waste generated within the Shire is diverted to the regional landfill at Jugiong, and in 2015 Council will have completed construction of a compactor transfer station system for the transport of all putrescible wastes to the regional landfill at Jugiong.

The Gundaroo landfill is an unlicensed facility that became the responsibility of the Council following the local government boundary adjustments in 2004. Council plans to alter the operations of this landfill to reflect other landfill operations within the Council.

6.7 Waste Minimisation and Resource Recovery Services

Council has been implementing a number of initiatives to minimise the amount of wastes going to landfill through long term recovery programs as a commitment to the State's Waste Management Strategy.

In addition to the kerbside recycling and recyclables drop-off windows at the transfer stations, the waste minimisation services provided by the Council include:

- Green (garden/timber) organics drop-off
- Engine oil drop-off
- Cooking oil drop-off

Currently Council accepts green wastes at all the waste facilities. Some of this material is currently being mulched.

Drop-off points for engine oil and cooking oil exist at all the waste management facilities. Local contractors remove the collected oils for recycling free of charge. Council will participate in the Garage Trail Sale event during 2015/16 and 2016/17.

Council also operates a small 'Revolve' shed at the Yass Transfer Station, where reusable items such as furniture, push bikes etc. are accepted, and made available for sale through the 'Revolve' shed.

6.8 Miscellaneous Waste Services

Yass Valley Council provides a number of other waste services such as:

- Street and Park bins
- Household hazardous waste collection
- Drum Muster

Council provides street and park litter bins for disposal of general litter. These bins are well used over the weekends and holiday periods when sporting events and activities are taking place. Further to the review of street and park bin services, Council has evaluated the needs of public receptacles and has implemented a strategy to best suit the needs by providing bins in a variety of locations such as recreational playing fields, playgrounds, parks, walking tracks, bus stops and the main streets.

Council acknowledges the need to provide a separate collection service for household wastes that are excluded for disposal into MGBs and are not accepted at waste facilities.

These include household quantities of chemicals, paints, pesticides and insecticides etc. that have the potential to pollute the environment. Yass Valley Council in association with the members Resource Recovery Group of the South East Regional Organisation of Councils (SEROG), has been implementing a collection program specifically designed for household hazardous wastes with the funding support from EPA at the NSW Office of the Environment and Heritage (OEH).

DrumMuster is a federally funded program implemented throughout Australia with the objective of collecting and disposing safely the empty drums from agricultural operations that may contain hazardous substances. Council is a registered participant of this program and accepts drums at all the waste management sites.

Council is investigating options to provide a means of free disposal of electronic wastes such as TVs, computer screens, printers etc. for the Shire residents.

6.9 Waste Services Assets

Yass Valley Council maintains an Asset Register and the locations of all major assets are recorded. A summary of Council's waste services assets is presented below. In general, the assets are in good condition and will only require minor maintenance in addition to the planned maintenance schedules.

Asset	Average Age	Average Remaining Life	Current Replacement Cost (\$'000) June 2014	Fair Value (\$'000) June 2014
Buildings	13	37	221	127
Equipment	8	32	325	200
General Infrastructure	13	22	1,790	972
Roads	5	7	220	88
Total	-	-	2,556	1,387

6.10 Capital Works Program

Major capital works planned for waste services over the next five (5) years and the justification for why they are planned are detailed below:

Proposed Capital Work	Year	Justification
Murrumbateman transfer station - Waste pit compactor	2015	Operational efficiency improvement
Murrumbateman transfer station - Shed	2015	WHS and operational efficiency improvement
Murrumbateman - Rehabilitation of landfill	2015 - 2016	Regulatory requirement and environmental protection
Yass - Procurement of POS system	2017	Operational efficiency improvement
Yass transfer station - Replacement of baler	2018	Renewal of ageing asset
Yass - New 'Revolve' shed	2018	Improved levels of service
Gundaroo - Retaining wall and loading area for transfer station	2018	Operational efficiency improvement and improved WHS
Yass transfer station - Replacement of baler	2019	Renewal of ageing asset and equipment upgrade for improved levels of service

7. Financial Management – Fees & Charges

Under the Local Government Act 1993, Council must levy a separate charge for domestic waste management services – known as the Domestic Waste Management Charge. The cost of these services cannot be financed from ordinary rates and the charge must be sufficient to recover the reasonable costs of providing the services. In effect, Council can neither subsidise nor profit from the provision of domestic waste services. For other waste and commercial waste, charging should be such that it is full cost recovery and in order that the general rate dollar can be best put to other areas of administration and action in the local government area.

The sources of revenue for funding waste management operations are:

- Annual domestic waste charges
- Tip/ Transfer station fees
- Commercial collection service charges
- Environmental levy

Council will develop a long-term financial model and establish Council's commitment to provide the levels of service described in the SBP for Waste Management Services by setting the fees and annual charges to collect revenues of the order forecast by the financial model.

The following table details the proposed financial plan for waste management:

Objective 14: Financial Plan					
Affordable long-term funding plans for waste management services for meeting LOS					
Performance Target					
Develop and adopt long-term financial model by December 2015.					
Strategies					
Maintain current long-term financial plans					
Action	Start	End	Responsible	Cost (\$'000)	
				Implement	Ongoing
Develop a long-term financial plan for waste management services	Started	Dec 2015	BSM	NAE	
Update financial plan	Annually	Ongoing	BSM		NAE
Update and adjust waste management charges	Annually	Ongoing	BSM/ FM		NAE
Update and adjust environmental levy	Annually	Ongoing	BSM/ FM		NAE
Apply for Government grants/ subsidies	As and when required		BSM/DE		NAE

The full financial model and planning process for the Waste Management Services provided by Council are detailed in the SBP which must be read in conjunction with this Strategy.

Council waste services are funded through a number of revenue streams: environmental levy, domestic waste management charge, commercial service charge and tip/transfer station fees.

7.1 Environmental Levy

Within the SBP, the waste service operations have a 20-year forecast period capital works plan which has a revenue stream generated through the Environmental Levy (40%), and the tip/transfer station fees and the commercial waste collection revenues (60%).

Council applies a waste management environmental levy of \$75.00 (2015/16) to all rateable properties throughout the local government area for the purpose of providing transfer stations and the management of environmental matters related to waste management services. The environmental levy is in addition to the annual charges for the waste and recyclables collection services, where provided.

7.2 Domestic Waste Management Charge

Under sections 496 and 504 of the Local Government Act 1993, Council levies annual domestic waste management charges for the periodic collection of wastes generated on domestic premises, from individual parcels of rateable land including the services associated with recycling activities, treatment and disposal of wastes, provided to these properties.

Council offers kerbside garbage collection to a defined collection area. Under the 1919 Local Government Act, this used to be referred to as the "Garbage Scavenging Area" yet is now referred to as the contracted area or the collection area. Under the Local Government Act, 1993 (LGA 1993), a Council is empowered to charge fees to sustain this service. These fees are listed separately on Rates Notices and cover occupied and vacant lands within the defined collection area.

The Domestic Waste Management Charge (DWMC) on occupied land is currently \$346 and vacant land \$30 (2015/2016). The charge on vacant land is an obligation of the Local Government Act, intended to help fund infrastructure costs for when a dwelling is erected on the land in the future.

The service includes a weekly collection of a 140 litre grey garbage wheelie bin and a fortnightly collection of a green recycling wheelie bin.

The DWMC funds the kerbside garbage collection service – kerbside collection, collection, disposal to the Yass Transfer Station, handling, transfer and disposal to the regional facility, and costs related to the incorporation of the SWRWMG. Residents receiving kerbside collection are able to secure more bins and more services for the property if they are a higher waste or recycling producer (which is charged through the fee structure listed on the rates notice).

7.3 Kerbside Side Collection Business

Council provides two options to the business and commercial operators within the Shire the availability to engage Council to undertake waste management services.

The first option is the same service as provided to domestic properties with a scheduled weekly and fortnightly collection. Currently the charge is the same as for the domestic service at \$346 (2015/2016) per annum.

The second option is a scheduled or presented service of commercial bins. The bin sizes are 240 litres, 660 litres or 1100 litres. The current charges are \$17.50, \$27.50 and \$33.50 respectively per collection (2015/2016). This service allows the business operators to obtain a service based on demand rather than the regular weekly service.

7.4 Paper / Cardboard Collections

Business and commercial operators within the Shire can engage the Council to provide a specific paper and cardboard collection. As this material is recyclable and the separation and reuse of the product encouraged by Council, the collection services charges are reduced from the general waste collection. Currently the per bin per collection fee is \$9.50 for a 240 litre wheelie bin, \$15.50 for a 660 litre bulk bin and \$22.50 for a 1100 litre bulk bin.

All recyclable material is accepted free of charge at the Yass transfer station.

7.5 Special Events

The Council provides waste management services to community and private special events. Wheelie bins can be hired on a per day rate of \$2 per day per bin (2015/2016) and either serviced on site at a rate of \$85 per hour (2015/2016) or they can be emptied at the Yass transfer station at a rate of \$10 per bin (2015/2106).

7.6 Transfer Station Fees and Charges

Council's Fees and Charges are reflected on signage boards at the waste transfer stations in Binalong, Bookham, Bowning, Gundaroo, Murrumbateman, Sutton, Wee Jasper and Yass. The fee rates are for domestic, commercial and other materials and include their recycling, disposal and associated handling fees. The fee structure is in general based on volume rates, with some fees applied at a fixed rate for specific loads such as vehicle or trailer loads.

Commercial loads of waste may only be taken to the Yass and Murrumbateman transfer stations. The village locations are provided to meet the waste management needs of the domestic residential communities only.

Recycling materials, as per those items accepted in the kerbside wheelie bin collection service, may be taken to the transfer station for free disposal. This includes commercial volumes which are uncontaminated with non-recyclable items.

7.7 Public Services

Council provides and performs many other waste services, including:

- A public place garbage service which is provided to streets and parks for public health and sanitation purposes;
- A street sweepings and spills cleanup service,
- A garbage and recycling collection from most of its community purpose buildings like community health, library and Visitor Information Centre.

8. The Future

As a member of the South East Regional Organisation of Council's (SERO), Yass Valley Council was actively involved in the development of the sub-committee - South East Resource Recovery Group's - Regional Waste Stream Management Strategy which was finalised in 2012 and updated in 2014 to align with the Environmental Protection Authorities requirement for a regional approach with key performance goals.

Planning the future approach for waste management within the Shire requires a recollection of the adopted principals and goals of the Council's Strategic Business Plan (SBP) for Waste Management Services (2015), which include:

- Promote waste prevention including waste avoidance and waste reduction;
- Aim to increase recycling including reuse, reprocessing and waste utilisation;
- Recognise disposal as a last resort;
- Recognise that waste management or disposal is assured;
- Apply user pays and polluter pays principals to waste management;
- Develop and maintain a Waste Management Strategy that reflects current practices and identifies future directions for Yass Valley Council;
- Promote effective commercial waste minimization practices;
- Eliminate landfills within the local government area of the Council;
- Increase integration with regional strategies and the use of regional facilities;
- Minimize or avoid adverse effects on the environment.

Consideration must also be given to the Principal Issues raised in the SBP, which identified the following:

Strengths

- Community acceptance of the service levels
- High quality infrastructure and clean sites
- Adequate capacity to service future growth
- Readily available data/ information for planning management of services
- Happy customers

Weaknesses

- Training needs to up-skill the staff
- Inadequate information dissemination and community education
- Too many transfer stations servicing smaller population
- Lack of a comprehensive waste strategy

Opportunities

- Waste reduction through encouragement of household composting of organic wastes
- Kerbside collection of organic wastes
- Promotion and expansion of commercial collection services
- Expansion of collection services to neighbouring councils
- Improvement to the 'REVOLVE' program
- Partnering with private sector for business opportunities
- Extending kerbside collection areas within the LGA

Threats

- Legislative changes
- Fluctuating recyclables sales market

- Competition to services from private operators
- Increasing cost of waste disposal and recycling

These issues raised have been addressed in detail in the SBP.

This document provides the direction for the strategic waste management activities that Council has identified need to occur to maintain, and enhance the services provided to the community now and in the long term future.

This section is strategic in nature and provides the aims and preliminary actions for delivery on these aims. These aims provide wide bands where Council may act so that it can tailor programs to its whole community or sectors of the community dependent upon need. This section then will translate into the Action Plans in the appendix to this report.

The Action Plans are a base line. It is intended to take each Action Plan, sit down with each sector of interest, work up from the baseline and develop these into specific documents that set out the next 3 or 4 years action plan. This will develop certainty, involvement and ownership in order that waste management and recycling are done to their optimum levels in this Shire.

Include capital works

- Revolve sheds at Yass and Murrumbateman

8.1 Goal 1 - Waste Education & Awareness (Internal & External)

Goal Action Plan:

- 1.1 Staff Training;
- 1.2 School Programs;
- 1.3 National & State Waste Programs;
- 1.4 Engage with Community Service Groups;

STRATEGY		ACTION	TIMEFRAME
Goal 1.1 Staff Training			
1.1.1	Ensure waste staff are up-skilled and provided the relevant training to be competent in their jobs and educating the community;	<ul style="list-style-type: none"> Staff undertake the necessary training, ie Diploma of Waste Management, Trade Waste, Asbestos Handling & Disposal; 	
Goal 1.2 School Programs			
1.2.1	Engage with the community in providing education for waste reduction, recycling and reuse;	<ul style="list-style-type: none"> Engage with the community through workshops, educational brochures, community notices on Council activities and strategies; 	
1.2.2	Utilise the services of SERRG education provider to relate positive messages to the pre, primary and high schools;	<ul style="list-style-type: none"> Undertake regional school forums with Bournda Environmental Education Centre (2015 Contractor); Improve and development web site available tools and resources, including links to related sites such as Yours2Take and RecyclingNearYou; Participate in regional events occurring; 	
Goal 1.3 National & State Waste Programs			
1.3.1	Engage, participate and promote national, regional and local waste initiative programs which promote waste awareness, recycling and waste reduction themes;	<ul style="list-style-type: none"> Participate in national and state waste focused programs such as: National Recycling Week National Organic Week Garage Sale Trail; Love Food Hate Waste; 	

Goal 1.4 Engage with Community Service Groups		
1.4.1	Initiate and promote local and regional recycling and reuse programs through the engagement of organisations supporting people with social and physical challenges;	<ul style="list-style-type: none">Engage with community service groups to discuss and identify mutually beneficial activities which would provide community support and initiatives for managing valuable resource streams for Council;

Goal 2 – Finance, Infrastructure and Asset Management

Goal Action Plan:

- 2.1 Cost Effective Collection Services;
- 2.2 Marketing and Sale of Recyclable Products;
- 2.3 Staff Retention;
- 2.4 Garden Organic Services;

STRATEGY		ACTION	TIMEFRAME
Goal 2.1 Cost Effective Collection Services			
2.1.1	Ensure Council provides the most efficient and cost effective services to the community across all waste activities;	<ul style="list-style-type: none"> Undertake a comprehensive review of each activity and develop an individual action plan for areas of improvement; 	
Goal 2.2 Marketing and Sale of Recyclable Products			
2.2.1	Ensure Council secures competitive market contracts for the sale and recyclable products collected through all services;	<ul style="list-style-type: none"> Promote recycling through targeting education and awareness campaigns for all sectors of the community (residential, commercial, public spaces and government); Continuously monitor the level of contamination to reduce the costs of collection recyclable products; Continue to work on regional solutions and co-operative understandings with adjoining local government areas to increase recycling and minimise landfill disposal; 	
Goal 2.3 Staff Retention			
2.3.1	Retain trained and valuable staff in specialised areas;	<ul style="list-style-type: none"> Continue to offer employee benefits and promote personal development to ensure staff job satisfaction is maintained; Up-skill staff as required to ensure knowledge within the industry is gained and maintained; 	
Goal 2.4 Garden Organic Services			
2.4.1	Promote reuse through community awareness and education campaigns	<ul style="list-style-type: none"> Develop targeted education and awareness campaigns for all sectors of the community; Investigate programs to support and promote the reuse of greenwaste and organic products; 	

8.2 Goal 3 – Residential & Domestic Waste Avoidance

Goal Action Plan:

- 3.1 Organic Kerbside Collection;
- 3.2 Electronic Waste Services;
- 3.3 Revolve Centres;
- 3.4 Problem Wastes;
- 3.5 Hazardous Wastes;
- 3.6 Bulky Kerbside Collections;

STRATEGY		ACTION	TIMEFRAME
Goal 3.1 Organic Kerbside Collection			
3.1.1	Investigate options for establishing a regular greenwaste and/or organic kerbside collection service, including free market and partnership options;	<ul style="list-style-type: none"> Report on ownership/free market options considering long term contractual obligations, access, price control to Council, default clause to Council and liquidated damages, biomass to compost (income and partnerships); Investigate and cost possible models for collection of greenwaste or greenwaste <u>and</u> organics; Provide an efficient and effective green waste services; 	
Goal 3.2 Electronic Waste Services			
2.2.1	Establish an eWaste collection service;	<ul style="list-style-type: none"> Investigate cost effective solutions to eWaste collection and recycling, including regional partnerships, grant opportunities, low cost disposal markets and required infrastructure; 	
Goal 3.3 Revolve Centres			
3.3.1	Remove recyclable and re-useable items from the landfill/disposal waste stream and make available for purchase;	<ul style="list-style-type: none"> Provide a cost effective service which identifies and removes items from the waste stream which are deemed to have a reuse or extended life span; Provide the items in a purpose built shed for the general public to purchase at below cost outlay; 	

Goal 3.4 Problem Wastes		
3.4.1	Identify and provide alternative disposal options for problem wastes such as mattresses, couches and styrofoam;	<ul style="list-style-type: none"> Review the volumes generated in the local community and research industry for best practice in addressing the various waste streams and removing them from landfill disposal;
Goal 3.5 Hazardous Wastes		
3.5.1	Identify and provide alternative disposal options for problem wastes such as batteries, chemicals, paints, light globes, sharps;	<ul style="list-style-type: none"> Promote and host regional Hazardous Chemical Cleanout event program in conjunction with the EPA; Expand the platforms used to advertise and promote the site to increase awareness of services; Monitor technological developments in waste processing to identify new methods for recycling and reusing problem wastes;
Goal 3.6 Bulky Kerbside Collections		
3.4.1	Provide a kerbside service to residential and domestic properties to assist in clean-ups and bulky item disposal;	<ul style="list-style-type: none"> Continue to provide the bulky kerbside collection service on an annual basis; Promote and encourage source separation of waste streams to increase recyclables collected at kerbside; Promote reuse services, such as Yours2Take for recycling of products with extended life;

Goal 4 – Business & Commercial Waste Avoidance

Goal Action Plan:

- 4.1 Commercial Recycling Services;
- 4.2 Problem Wastes;
- 4.3 Hazardous Wastes;
- 4.4 Construction & Demolition (C&D);
- 4.5 Commercial & Industrial (C&I);

STRATEGY		ACTION	TIMEFRAME
Goal 4.1 Commercial Recycling Services			
4.1.1	Commence and enhance commercial and industrial recycling services;	<ul style="list-style-type: none"> Report on options for implementing / encouraging a commercial and industrial recycling service; 	
Goal 4.2 Problem Wastes			
4.2.1	Maintain required infrastructure to continue to upgrade access, delivery and processing of commercial wastes;	<ul style="list-style-type: none"> Support and promote commercial industry to engage with local businesses to increase appropriate disposal of problem wastes; 	
Goal 4.3 Hazardous Wastes			
4.3.1	Promote, participate and maintain commercial services for the safe and efficient disposal of hazardous wastes;	<ul style="list-style-type: none"> Support and promote chemical collections such as DrumMuster and ChemClear; 	
Goal 4.4 Construction & Demolition (C&D)			
4.4.1	Promote and encourage the reuse of recyclable C&D products in local services;	<ul style="list-style-type: none"> Investigate, implement and maintain the application and use of recycled C&D products in road maintenance and constructions; Promote the reuse of products through development applications; 	
Goal 4.5 Commercial & Industrial (C&I)			
4.5.1	Promote business and commercial recycling and reuse of by-products of industry;	<ul style="list-style-type: none"> Engage, promote and support local businesses to reuse and recycle their waste products through exchange programs and regional initiatives; 	

Goal 5 – Council Operations & Services

Goal Action Plan:

- 5.1 Council Offices;
- 5.2 Parks & Street Bins;
- 5.3 Special & Public Events;

STRATEGY		ACTION	TIMEFRAME
Goal 5.1 Council Offices			
5.1.1	Ensure Council office waste management practices "lead by example";	<ul style="list-style-type: none"> Promote Councils recycling and waste diversion message to all staff; Ensure signage and educational brochures are circulated and available to all staff; Nominate or elect staff "waste champions" to assist in monitoring contamination and best practice; 	
Goal 5.2 Parks & Street Bins			
5.2.1	Increase recycling and reduce litter in public spaces;	<ul style="list-style-type: none"> Investigate cost effective solutions for the provision of recycling bins versus contamination rates; Promote recycling campaigns to include general public support; Promote use of "Don't Be a Tosser" (EPA) electronic application to report littering in public spaces; Install recycling bins in parks and public spaces; 	
Goal 5.3 Special & Public Events			
5.3.1	Promote and encourage recycling at special and public events;	<ul style="list-style-type: none"> Promote use of recycling bins when hiring Council facilities or waste disposal services; Provide signage and adequate educational material to customers; Encourage through incentives such as free delivery and pick up from site and hire agreements; 	

**INTRODUCING A FOOD ORGANICS GARDEN ORGANICS (FOGO)
COLLECTION SERVICE TO YASS VALLEY
RATIONALE, CASE STUDIES AND THRESHOLD QUESTIONS FOR DISCUSSION**

WHY A FOGO COLLECTION SERVICE?

Environmental reasons

- 2 billion tonnes p.a. of nitrogen, phosphorous and potassium (NPK) around the world is being lost to landfill. According to the EPA, 1.2 million tonnes of food waste in NSW is lost to landfill.
- Food organics going to landfill release methane gases 25 times more harmful than CO₂.
- Making better use of organics not only helps in addressing the climate crisis but also the energy and food production challenges of our time.

Financial reasons

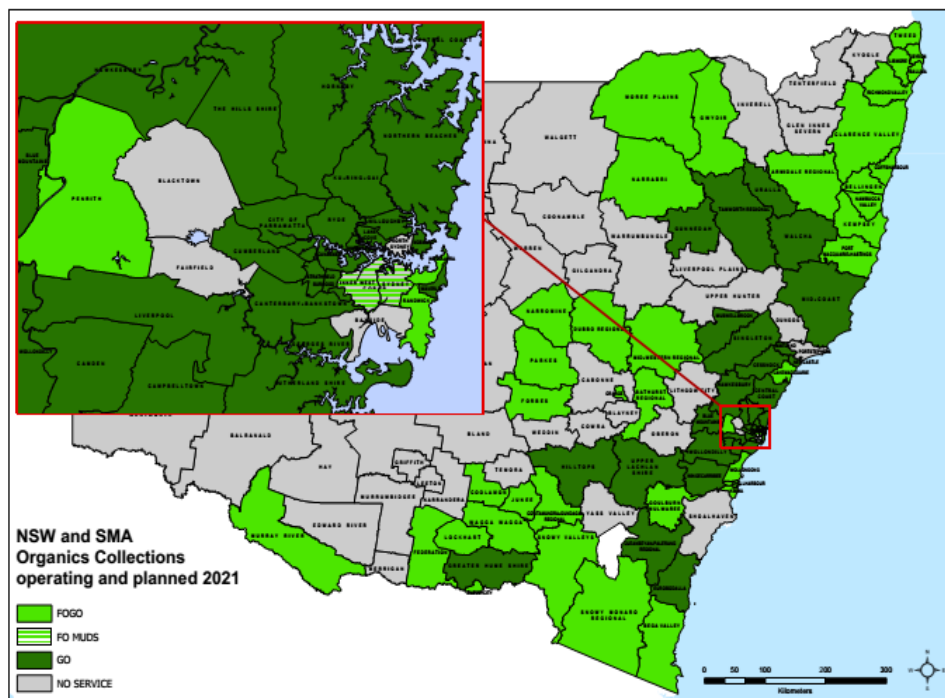
- Landfill costs can be decreased through FOGO diversion (Organics make up 50% of the typical residual waste bin by weight).
- For an average Sydney council collecting and landfilling 30,000 tonnes of waste per year, the savings in removing even a conservative 50% of food organics can be up to \$2m every year. YVC sent 5874 tonnes to landfill in 2020/21.
- A composting facility in regional NSW composting 15,000 tonnes p.a. of FOGO, growing at 2.5% p.a. and with a lifespan of 30 years, has an internal rate of return of 23% and a payback period of 7 years.
- There is also potential to earn carbon credits. EPA estimates 280 units p.a. per 1000 households. Equals approx. 1,680 units for YVC per annum. At current market price = \$599,000 in income over 7 years. With projected carbon price by 2035 = approx. \$2.5 million over 7 years
- \$46 million in grant funding available over 4 years – 2 rounds per annum. 6 rounds left.
- Up to \$1.3 million to introduce a FOGO collection service. Up to \$3 million to build a new processing facility.

Regulatory reasons

- The NSW Government and the NSW Local Government and Shires Association have committed to achieving an 80% rate of diversion of waste from landfill.
- YVC is sending more residual waste to landfill than most of its peers. (In 2019/20 73.4% of YVC's waste was residual (ie. neither dry recyclable or organic), while amongst the 12 large, rural councils offering an organic 54% was residual).
- The 20-year NSW Waste Strategy requires councils to have in place a FOGO service by 2030.

Community expectations

- 43 local councils in NSW offer a full Food Organics / Garden Organics (FOGO) service, with 66% offering at least a garden organics collection service. See map below:



CASE STUDIES AND COSTINGS

Detailed costings information for many of the most recent FOGO services are ‘commercial-in-confidence’ and for some of the older services there appears to be nothing online. However, there is material on two of the most recently introduced FOGO collection services in our area – ie. the wholesale introduction of a service in Snowy Valleys and the extension of the service in Snowy-Monaro.

(i) Snowy Valleys Council

- Snowy Valleys Council waste collection services are provided to roughly 5000 residences.
- In 2021 it introduced a new full 240 litre FOGO weekly service, reduced their red bin service not in size¹ but in frequency down to a fortnightly service.
- Operating costs were estimated to increase from \$111.90 per household per year to \$138.10 per household per year; a modest rise of \$26.20 per household per year. However, this increase in costs was in turn expected to be offset by a reduction in the amount of waste going to landfill. We do not have a figure for this.
- Capital and other project costs were estimated and included \$20,000 for a part-time education officer, \$86,000 for education and audit, \$310,000 in bins, caddies, pamphlets and

¹ Note that there was some work and expenditure to harmonise existing 120l red bins with a standard 140l bin.

fridge magnets, and \$877,000 for an additional collection truck, bin harmonisation, compostable bin liners and project management plus contingencies.

- An estimated \$1.9 million was also required for the processing facility.
- A 10-year cost analysis for the operation of the composting facility was modelled and determined that it would operate in surplus after year four and could return a revenue stream to Council of \$3,531,091 over the ten-year modelling period; based on 13,181 tonnes of FOGO being diverted from landfill over 10 years and the compost produced being sold to end users for \$55/m³.
- Council subsequently secured grants of \$1.35 million against a total estimated cost to rollout the FOGO service and construct the processing plant of \$3.2 million, with Council contributing the \$1.85 million, funded (ie. amortised) through the waste budget.

(ii) Snowy Monaro Regional Council

- In 2015 the former Cooma-Monaro Shire Council introduced a 240-litre bin fortnightly – not weekly - FOGO service for the approximately 2,700 households of Cooma township, along with a composting business.
- In late 2021 the new amalgamated Snowy-Monaro Council agreed to expand the service to all other properties receiving a 2-bin service; that is some 7,800 households in total.
- The existing cost in 2020 of general waste collection was some \$98 per household per year, recycling was \$61 per household per year and the FOGO service for those receiving it was \$39 per household per year.
- Expansion of the service was expected to cost \$392,000 in new green bins and a truck, and some \$230,000 to expand the existing compost facility and between \$50,000 to \$120,000 depending upon the size of the education campaign.
- The increased operating cost per household for the expanded FOGO services was estimated at \$55 per year. A saving of \$199 per tonne was expected from the reduced amounts going to landfill.

Further details on both the Snowy Valleys service and the Snowy-Monaro expansion presumably would be available to YVC through its contacts on the CRJO. It may also be possible to obtain details relating to the QPRC's FOGO roll-out and the ACT FOGO trials through the CRJO.

UNDERSTANDING THE MARKET

Use of organics in urban garden settings remains the key source of demand, accounting for 68% of the organics market.

The Western Sydney Regional Organisation of Councils (WSROC) region contributes the largest supply and demand in the market with more than 30% of all supply transported to facilities in this region. WSROC is a net importer of recycled organics and demand is largely driven by urban and industrial development.

The agriculture market is the second-largest end-use market, and growth is accelerating. Research indicates the location of facilities has a strong influence on end-use markets. Composters in regional NSW are favouring agricultural markets over urban amenity markets, as the demand in these areas is higher.

As the urban amenity market continues to grow, the market is becoming increasingly discerning as well, so higher quality product is critical. Organics processing businesses that invest in technology to create high-quality products are receiving higher prices and strong demand.

Agricultural supply is available to meet demand, however differentiated compost products are needed to achieve higher prices, with an emphasis on carbon, nutrient and soil health benefits. Composted products that have been differentiated from synthetic fertilisers and raw manures are realising up to \$100 per tonne as a biological soil health product for agriculture. In some cases, up to \$200 per tonne has been achieved. Farmers are also able to claim carbon credits for what they put back into depleted soils.

There are several barriers to organics market expansion, including drought, contamination and the current focus on gate fee returns by many producers. The drought from 2017–2020 affected supply and demand and caused the collected garden organics (GO) to be incredibly dry. These drier inputs required significant additional processing, water input and a longer processing time.

Contamination management in source-separated FOGO and GO streams is a constant challenge, which requires extra time and resources and impacts the quality of composted products. Ongoing education is critical to ensure the community understands how to use the FOGO service correctly.

THRESHOLD QUESTIONS TO CONSIDER

Research and Capability:

1. What statistics are available regarding current bin usage and waste profile in Yass Valley? Eg. is our organic waste likely to be of sufficient quality to meet agricultural requirements? What do we know of other organics in the Valley, eg. animal manures, which could be subject to processing and might influence decision-making about the size of any facility or contract? What are our landfill costs? Councils may see up to a 30% reduction in landfill. Presumably data is limited.
2. Given available evidence from other rural local councils, is it necessary to do complete sampling (ie. bin audits) of current waste disposal patterns and waste composition in YVC bins to determine potential FOGO volumes and quality? Could a small sample be as informative?
3. Does YVC have the capacity and capability to manage the transition to a FOGO collection service? Eg. is there sufficient capability to manage the complex design, procurement and contract management elements, community engagement and communication effort, etc? Or will Council need to hire or contract-in such capability?

Design:

4. What parts of the operation should Council provide or outsource? These parts range from (i) the collection service itself, (ii) transportation to a processing facility, (iii) preliminary sorting of materials and removal of contaminants (iv) the conversion of waste to compost or energy at facility, (v) marketing of the product and (vi) both the initial introductory and ongoing community education campaigns?

5. What is the potential to partner with neighbouring councils or the ACT in the operation of a scheme, given that the majority of surrounding councils have already moved to establish stand-alone operations? Is YVC left with no option other than to go it alone?
6. Of the other councils operating their own organic processing facilities do any have spare capacity or interest in taking YVC organics? Have there been any discussions with them or the ACT to date? The ACT composting facility is expected to handle 50,000 tonnes per annum rising to 70,000 tonnes. City Services estimated 26,000 tonnes of organic waste per annum in 2022. If separation of FO and GO is an issue, should we consider a 4-bin option?
7. Of the four private operators in the region – Veolia at Tarago, Martins at Yass, Blueridge at Eurobodalla and Landtasia at Mulloon – are any likely to be interested in YVC's organics?
8. GoTerra in the ACT offer a food waste bioconversion on site or in Canberra. Albury City Council have an arrangement with GoTerra for commercial food organic waste. QPRC also had an arrangement which saw the FO collected from three villages separated from the stream and the GO processed by its existing provider. The arrangement has now ended with QPRC introducing an LGA wide FOGO collection service. Is this a model to follow? Set up and pack-back timeframes at GoTerra appear very positive.
9. What interest might there be from local agriculture to both use locally produced compost, contributing their own organics to a processing operation and claiming carbon credits in the use of the end-product? Noting also that better soils will contribute indirectly to improved biodiversity and improved water quality.
10. If Council outsources all or part of the operation what are the risks of 'market-capture'? What is the danger that in outsourcing all or part of the operation at the outset that the cost in the longer term proves higher?
11. Can YVC realistically wait for the CRJO to develop (ie. broker) a regional solution for FOGO processing as per Action 13 in its Waste and Sustainable Materials Strategy?
12. Would conversion to energy (through Anaerobic Digestion) in a small dedicated generator – as opposed to composting - be a feasible use? Likely problematic in terms of community acceptance etc. but the question should be asked.

SECOND ORDER QUESTIONS

Design:

13. Should the service be limited to Yass and the villages only? Or should it be provided to all currently serviced properties? Does that meet the EPA mandate?
14. If provided to currently serviced properties alone, what capacity will be provided at the waste transfer centres for residents to bring FOGO to the sites directly?
15. What approach should be taken for units and apartments? Eg. a FO service only at a reduced cost?
16. Should a commercial FOGO collection service be offered to local business? Hotels, restaurants and cafes (HRC) are producers of significant volumes of FO. Do we have any idea how much?
17. Should opportunity be provided to pay for additional bin capacity for large households?
18. Should Council provide food caddies? This is generally the recommended approach.
19. And should it supply compostable liners to reduce potential contamination? Again, this is generally recommended given recent issues with quality of compostable liners.
20. If Council has to establish a composting facility, what provisions should be made for operation of the facility on a carbon neutral basis as is likely to be required by State Government sometime in the next 10 years?

21. What monitoring is required to meet EPA standards for compost materials if Council operates its own facility? (Note that Hilltops wound-back their service because they couldn't meet the standard)
22. If Council looks to commercialise the sale of compost and mulch materials, what will be necessary in terms of competitive neutrality to separately account for the service?

Operation and Costs:

23. What are the appropriate bin sizes (red, yellow and green) and how often will they be picked up (weekly or fortnightly)? Noting that the smaller the red bin and the less frequent the service the greater the level of food recovery from the green bin. Will support be available for eligible households who have medical needs and therefore more landfill waste?
24. If red bin collections are reduced to a fortnightly service, then there presumably will be spare capacity (up to 50%). Can existing trucks be converted or sold off?
25. What collection trucks are required? Can existing or alternative vehicles used for domestic waste collection one week also be used for FOGO collection on the alternate weeks? Probably not, but the question needs to be asked. Does YVC have any 'modelling' capacity to optimise the design of its waste collection runs?
26. How will YVC handle the 'YUCK' factor if the residual waste collection is moved to a fortnightly service? There has been much discussion and some analysis on matters such as nappy disposal which needs to be considered and incorporated into communications if moving to a fortnightly red bin service.
27. What are industrial implications of introducing a FOGO service? Eg. does it require amendment of current roles and enterprise agreements?
28. What increase in the waste levy will be required to support capital and operational costs? What savings are likely to be made by reducing volumes going to landfill? Again, any data and any modelling capacity?
29. What are the likely supply constraints on equipment and infrastructure as councils across NSW and Australia roll-out their own FOGO services? Note that this should not be exaggerated given the number of councils already operating part of full FOGO services.

Education, Roll-out and Hiccups:

30. What type of community education campaign is required? Who does it?
31. What is the optimal timeframe for roll-out of the service, both in terms of managing costs, giving the community time to adapt but also driving behavioural change? Generally recommended that council start talking about the service coming 12 months out and then providing details 6 months in advance.
32. Should it be a full roll-out on a set date or is it better to 'trial' the service by offering it first in the villages, then Murrumbateman and finally Yass township?
33. What are the likely behavioural outcomes when it comes to dumping? I.e. might it increase if the weekly red bin service is reduced to a fortnightly service? Does YVC want to adopt an inspection program and fines? Several councils have a three-strikes policy.
34. What is the likelihood of sabotaging behaviours (as happened for a brief time in Bathurst for example) and what strategies should be employed to counter this if it occurs?
35. Will the new service lead to improved recovery rates such that the 80% by 2030 diversion target is met? As this is unlikely given the experience of other jurisdictions, what additional steps will be required and when?



Venture Private Infrastructure
Infra Pty Ltd. ACN 663311064
L4, 10 Market Street, Brisbane QLD 4000
www.infra.earth

Yass Valley Council

Attention: Mayor Allan McGrath
By email: AMcGrath@yass.nsw.gov.au

1 March 2023

Dear Mayor McGrath

Re: Town Power – 2GW regional renewable energy projects

I am writing to respectfully invite Council to consider a proposal to provide your communities with exclusive access to utility-scale renewable energy generation and storage, and to make an important contribution to achieving Australia’s renewable energy goals.

Infra Pty Ltd is a developer of private infrastructure projects. We are proposing to develop a national portfolio of up to 80 new solar PV and battery storage projects representing 2GW of generating capacity and 4GWh of storage in total. We call these the “**Town Power**” projects. Each Town Power project will be located adjacent to a regional community which, through its council, will have exclusive rights to its capacity. Individual projects will be in the range of 10MW/20MWh to 50MW/100MWh, or equivalent in capacity to rooftop PV and home batteries for between 2,000 and 10,000 households.

Currently, most utility-scale renewables projects are or are planned to be located *in* regional areas, but they do not and will not generate power *for* the regions. Their power is sold into the National Electricity Market (the “**NEM**”) based on their distance from the central nodes of the national transmission network, and they require hundreds of kilometres of high voltage transmission lines to connect to distant consumers of their power.

Our proposal is different. We propose to build new utility-scale solar PV and battery storage in regional areas to generate and store power entirely *for* local communities by embedding them into the existing local medium-low voltage distribution networks. The Town Power projects will provide all the benefits of community-owned renewable energy projects (“**CORE**”) but with real size and without the formidable financing and co-ordination obstacles that have made the development of even small CORE projects extremely difficult.

The Town Power projects

Key features of the Town Power projects:

- Each project will connect directly to the existing local medium-low voltage distribution network serving its community, providing embedded generation and storage.
- The council representing the community will enter an agreement with Infra’s project company under which it will be allocated exclusive rights to the project’s capacity in exchange for a fixed annual capacity payment over circa 20 years. There may be multiple projects in a given council area.

- The capacity payments will be fixed to recover the financed capital cost of the project and its operating costs. They will **not** be benchmarked or otherwise referenced to energy prices in the NEM.
- Each project is expected to be eligible to receive large-scale generation certificates. These will all be allocated to the council, which will be able to retain them or sell them in the market to offset the capacity payments.
- The council will make capacity or power from the project available to households and businesses in the manner that it and the community chooses.
- The council will enter agreements with the distribution company that owns and manages the local distribution network to deliver power from the project to households and businesses on its behalf.
- For the avoidance of doubt, it is **not** proposed that the local distribution network be separated or islanded from the national transmission network. Rather, the projects are intended to substantially reduce the communities' demand for power from the NEM.

The Town Power projects will provide regional communities, through their councils, with cost-effective, secure, and deliverable sources of renewable energy, avoiding the disadvantages of rooftop PV and home battery systems, on the one-hand, and NEM-connected, utility-scale renewables projects, on the other.

Compared to rooftop PV and home battery systems, the Town Power projects should –

- Enjoy economies of scale in procurement and construction and use more economically efficient (and safer) flow battery technology, giving a lower capital cost per unit of energy capacity.
- Make capacity available to all community members, including renters and lessees, strata-owners, social housing tenants, and low-income and commercially unsophisticated homeowners who cannot access rooftop PV and home battery systems.
- Avoid the adverse impacts of rooftop PV on the transmission and distribution networks, including two-way energy flow and lack of visibility for systems operators, which is likely to result in the imposition of costs on owners and increasing forced curtailment.

Compared to NEM-connected, utility-scale renewables projects, the Town Power projects should provide lower cost and more secure power to regional communities because they should –

- Be insulated from volatile power prices in the NEM.
- Not suffer transmission losses.
- Not have to bear, directly or indirectly, the costs or risks of the construction of new high voltage infrastructure, or the ongoing costs of balancing and stabilising mechanisms, required by the national transmission network.
- Not be subject to suboptimal operation or forced outages of the national transmission network or have their energy production curtailed due to overcapacity of renewables at certain times or locations on that network.

- Be insulated from future revisions of the NEM and transmission network regimes as those evolve uncertainly towards the net zero target in 2050, accommodate the loss of baseload fossil fuel generation, and attempt to satisfy many incumbent and competing interests¹.

An important contribution

The Australian Energy Market Operator is forecasting a shortfall in generation capacity, even if all the currently proposed new NEM-connected projects go ahead². However, for the reasons above, there are serious challenges to the bankability of new NEM-connected renewables projects which cast significant doubt even on that assumption³. The evidence is that large-scale investment in renewables has stalled, and we are very far from adding the capacity we need based on existing approaches.

In fact, billions of dollars of institutional capital are currently available for investment in renewables but are not being deployed because of the lack of bankable investment opportunities at sufficient scale. One of the first priorities in the design of the Town Power proposal was that the portfolio be unquestionably bankable, which we believe we have achieved. The targeted 80 Town Power projects will be developed and financed together as a single 2GW/4GWh portfolio, mobilising up to \$3 billion of new bank and institutional capital.

The Town Power projects will **not** compete with other new renewables projects. As a nation we are at a critical point where we need to exploit all readily available sources of renewable energy. And by embedding utility-scale PV generation *and storage* within regional distribution networks where there is the land area and local demand to do so, the Town Power projects will reduce the demand and stress on the national transmission network. This will help facilitate its orderly development, and thus the development of the NEM-connected renewables projects that we still need to replace fossil fuel generation and meet demand in our major urban areas. Regional councils and communities that participate in Town Power projects will be filling what we believe is currently a critical gap in our national energy strategy⁴.

Next steps

We are seeking to begin a dialogue with Council which could lead, in the first instance, to a preliminary, non-binding expression of interest in hosting one or more Town Power projects. Once we have non-binding interest in a critical mass of projects, albeit not for the full target 80 projects, we will then also seek to –

- Formally engage with the relevant distribution companies and energy regulators.
- Commence the detailed design and procurement process with our preferred EPC contractor.
- Commence the portfolio funding process with our lead project finance banks and institutional investors.

¹ See, for example, <https://www.theguardian.com/environment/2023/feb/24/australian-renewable-energy-struggles-to-hit-grid-with-one-solar-farm-wasting-half-its-yearly-output>

² See “2022 Electricity Statement of Opportunities.” Australian Energy Market Operator. August 2022. https://aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/nem_esoo/2022/2022-electricity-statement-of-opportunities.pdf?la=en&hash=AED781BE4F1C692F59B1B9CB4EB30C4C

³ See Srikantharajah, Nesanathan & Wilson, Stephen J. & Chapman, Archie C., 2022. "From green to amber: is Australia's National Electricity Market signalling a financial warning for wind and solar power?" Energy Policy, Elsevier, vol. 167(C).

⁴ See McIlwaine et al., 2021. “A state-of-the-art techno-economic review of distributed and embedded energy storage for energy systems” Energy, Elsevier, vol. 229. Section 5.

- Continue to build out the full project portfolio by securing interest from additional councils and communities.

Please let me know if you would like to meet to discuss this proposal further, and if you have any questions or would like any further information please do not hesitate to ask.

Kind regards



William Wild
Principal
Infra Pty Ltd

william.wild@infra.earth
0405 652 212