



# **Attachment 1 to Item 4.5.2**

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## **Western Sydney Regional Waste and Sustainable Materials Strategy 2022-2027**

Date of meeting: 11 July 2023  
Location: Council Chambers  
Time: 6:30 p.m.





# WESTERN SYDNEY REGIONAL WASTE AND SUSTAINABLE MATERIALS STRATEGY 2022 – 2027





## ACKNOWLEDGEMENT OF COUNTRY

We acknowledge the traditional custodians as the first protectors of the land, water, sea and sky on which we live and work, and pay our respects to elders past, present and future.

We recognise the ongoing connection to their land, their waters and surrounding communities and acknowledge their ancient history here on this land.

We also acknowledge our Aboriginal and Torres Strait Islander employees who are an integral part of our diverse workforce and recognise the knowledge embedded forever in Aboriginal and Torres Strait Islander custodianship of Country and cultures.



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## Acronyms and Abbreviations

<b>Acronym</b>	<b>Definition</b>
ACCU	Australian Carbon Credit Unit
AWT	Alternative Waste Treatment
C&D	Construction and Demolition
CALD	Culturally And Linguistically Diverse
CDS	Container Deposit Scheme
CRC	Community Recycling Centre
EfW	Energy from Waste
EPA	Environment Protection Authority
EWMP	Emergency Waste Management Plan
FO	Food Organics
FOGO	Food Organics and Garden Organics
GPT	Gross Pollutant Trap
LEP	Local Environmental Plan
LGA	Local Government Area
L-RIP	Litter Regional Implementation Plan
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
MUD	Multi-Unit Dwelling
MWOO	Mixed Waste Organic Outputs
NSW	New South Wales
POEO Act	Protection of the Environment Operations Act
RID	Regional Illegal Dumping
SEPP	State Environmental Planning Policy
SMA	Sydney Metropolitan Area
SUD	Single Unit Dwelling
WaSM	Waste and Sustainable Materials
WSROC	Western Sydney Regional Organisation of Councils



## EXECUTIVE SUMMARY

Western Sydney is home to 1.7 million people and represents one of New South Wales' fastest growing communities. Rapid population growth and urbanisation are projected to see domestic waste generation within the region increase by 46% to 1 million tonnes by 2041. If not managed properly, and without sustained action over the next two decades, the region will generate more waste than can safely be managed.

Substantial changes have occurred in recent years to waste management and resource recovery with significant changes to regulation and policy in NSW and export bans impacting international markets for recyclables.

Transitioning to circular economy is the central aspiration in all national and state government waste strategies. It involves systems change, from designing out waste, to recovering materials at their highest value use, including reuse and repair. There is commitment from all Australian state and territory environment ministers to work with the private sector to design out waste and pollution, keep materials in use and foster markets to achieve a circular economy by 2030.

The Western Sydney Regional Waste and Sustainable Materials Strategy 2022-27 ('the Strategy') was developed by eight councils in the region. It outlines a 20-year vision with a detailed 5-year focus on how the region will work collectively to deliver waste services that recover more resources and reduce carbon emissions.





*Western Sydney councils identified seven priority areas for the region over the next 5 years, aligned to local needs and national and state policy directives.*

## PRIORITY AREAS

1



### MEETING WASTE INFRASTRUCTURE NEEDS BY 2030 AND BEYOND:

A strong pipeline of critical infrastructure investment is urgently needed to maintain and improve capacity to collect, sort, process and dispose of waste and recycling.

2



### IMPLEMENTING HOUSEHOLD ORGANIC WASTE COLLECTION SERVICES:

The state mandate for all NSW households to have food organics and garden organics (FOGO) waste services by 2030 requires detailed planning of service roll-out and householder education, as well as system-wide development of processing infrastructure and compost markets.

3



### BUILDING RESILIENCE TO CLIMATE CHANGE IMPACTS ON WASTE SERVICES:

Unprecedented flooding, bushfires and heavy rains have limited access to landfill and prioritised the need to plan for and upgrade emergency waste management plans and systems.

4



### UPDATING WASTE PLANNING CONTROLS IN NEW BUILDINGS TO ADDRESS NEW POLICY DIRECTIVES:

The introduction of FOGO services and the opportunity to embed circular economy considerations in council's planning controls for new developments will require updating council and state level policy and controls.

5



### FACILITATING THE TRANSITION FROM A LINEAR TO CIRCULAR ECONOMY:

A common approach to connect and educate stakeholders and embed circular economy considerations in waste planning and procurement processes to foster a circular economy in the region.

6



### PROTECTING THE REGION FROM WASTE POLLUTION:

Minimise waste pollution through better management of household problem waste and prevention of litter and illegal dumping. This will focus on diverting high-risk problem wastes from council kerbside services, coordinating education initiatives, and advocating for greater enforcement powers.

7



### EXPLORING JOINT PROCUREMENT OF WASTE SERVICES AND/OR INFRASTRUCTURE:

Regional joint procurement may present cost-effective opportunities to procure items and services supporting councils' own waste contracts.

**These priority areas are the core of the Strategy, working to overcome key challenges faced by councils and deliver effective services for the community.**





# 01

# INTRODUCTION

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This section provides an overview of the purpose, context, development process, and guiding principles of the Strategy.

# 1.1 Purpose of the Strategy

The Western Sydney Regional Organisation of Councils (WSROC) and eight participating councils have come together to develop the Western Sydney Regional Waste and Sustainable Materials Strategy 2022-27 ('the Strategy'). Its purpose is to establish the strategic direction and regional priorities for waste management and the emerging circular economy in western Sydney.

The Strategy reflects the priorities of participating councils in line with state and national requirements. It presents a 20-year vision with a detailed 5-year focus on how the region will work collectively to enable the circular economy, address waste pollution and facilitate development of waste services that recover more resources and reduce carbon emissions.

The Strategy builds on the lessons and achievements from the previous Waste Avoidance and Resource Recovery Strategy 2017-21 to ensure continuous improvement. However it also reflects the significant changes in the management of waste in Australia. It integrates the objectives and directives of the NSW Waste and Sustainable Materials Strategy 2041 (WaSM) as well as the wider policy and industry context and seeks to maximise funding opportunities underpinned by the WaSM Strategy.

The Strategy framework was developed in accordance with NSW Environment Protection Authority's (EPA) guidelines. It will be delivered by WSROC in partnership with western Sydney councils.

Eight local councils in the greater western Sydney region will work together to deliver this strategy. These councils are:

- Blacktown City Council
- Blue Mountains City Council
- Cumberland City Council
- Fairfield City Council
- Hawkesbury City Council
- The Hills Shire Council
- Liverpool City Council
- City of Parramatta

WSROC will implement the strategy in partnership with councils. WSROC delivers a range of advocacy initiatives and projects to maximise support for councils and improve outcomes for the community of western Sydney.

## 1.2 Background and Policy Context

The waste policy landscape in Australia is fast evolving, with circular economy at the heart of a range of national and state level strategies. Fundamental changes seen in recent years are in recycling and organics, markets and services.

### 1.2.1 National Sword Policy

For several decades, China was the world's primary market for recycled paper and plastics. Australia depended on China's growing demand for recyclables to underpin household waste services. In 2018, China implemented its 'National Sword' policy that effectively banned import of pre-processed materials that was not ready for remanufacturing.

### 1.2.2 Australian Government Waste Policy

The waste sector is the seventh largest source of Australia's greenhouse gas emissions (2.4%), primarily from the breakdown of organic waste in landfill. This has driven a key focus on diverting organics from landfill, including the mandatory introduction of food waste collections in NSW by 2030.

At the national level, the Australian Government has committed to taking greater responsibility for managing the waste Australia generates. The overarching national policy drivers for circular economy are the National Waste Policy and Action Plan with the following targets:

- Regulate waste exports
- Reduce total waste generated by 10% per person by 2030
- Recover 80% of all waste by 2030
- Significantly increase the use of recycled content by governments and industry
- Phase out problematic and unnecessary plastics by 2025
- Halve the amount of organic waste sent to landfill by 2030
- Provide data to support better decisions

In 2022, there was agreement by all Australian environment ministers to work with the private sector to design out waste and pollution, keep materials in use and foster markets to achieve a circular economy by 2030.

### 1.2.3 NSW Waste and Circular Economy Policy

The NSW Waste and Sustainable Materials Strategy 2041 (WaSM) sets targets and priority areas to transition NSW towards a circular economy. The WaSM targets, which build on the national agenda, are to:

- Reduce total waste generated by 10% per person by 2030
- Have an 80% average recovery rate from all waste streams by 2030
- Significantly increase the use of recycled content by governments and industry
- Phase out problematic and unnecessary plastics by 2025
- Halve the amount of organic waste sent to landfill by 2030
- Reduce litter by 60% by 2030 and plastics litter by 30% by 2025
- Triple the plastics recycling rate by 2030

These targets sit within the WaSM priority areas, which also provide the framework for the regional strategy. They are:

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

Alongside the WaSM Strategy, the NSW Plastics Action Plan focuses specifically on phasing out problematic single use plastics, tackling litter and supporting innovation and research.

The NSW Circular Economy Policy Statement aims to assist the NSW Government in embedding circular economy principles into decision making, policies, strategies, and programs.

The NSW Government has allocated \$356 million in grants and programs to deliver priority programs and policy reforms under the WaSM Strategy and the NSW Plastics Action Plan. This provides funding for activities targeted at recycling from businesses, organics collection, end market development and tackling illegal dumping and littering.

WSROC will be working with councils to apply for these grants to transition to achieving circular outcomes in the region.

## 1.3 Strategy Development Process

Councils worked together to ensure the Strategy delivers local priorities and preferences. The engagement process involved the following stages:

- **Review of each council's waste strategy documents to ensure consistency with council visions, themes, objectives, targets and actions**
- **Interviews with all participating councils to explore local priorities, challenges and aspirations**
- **Two workshops with councils to collectively develop the Strategy vision, themes, objectives, targets and actions**

From this, councils identified and agreed on key priorities for the region over the next 5 years. In order of priority (and further discussed in Section 3), these include:

1. **Meeting waste infrastructure needs to 2030 and beyond**
2. **Implementing FOGO (or food only) collections to all households by 2030 NSW mandate**
3. **Building resilience to climate change impacts on waste services**
4. **Updating waste planning controls in new developments to improve resource recovery and address the new policy directives**
5. **Facilitating the transition from a linear to circular economy**
6. **Protecting the region from waste pollution**
7. **Exploring joint procurement of resources and services to support councils' delivery of waste services.**

## 1.4 Guiding Principles

The principles that guide the Strategy are the waste hierarchy and circular economy, which together will help the region avoid and reduce waste generation, recover more resources and divert as much waste as possible away from landfill.

### 1.4.1 The Waste Hierarchy

The waste hierarchy is a framework that informs waste policy and is underpinned by objectives outlined in the NSW Waste Avoidance and Resource Recovery Act. The hierarchy provides a conceptual framework that prioritises approaches to waste management based on environmental impacts and broader sustainability principles, promoting efficient use of resources and reduction of disposal to landfill.

The principles are arranged from most preferable at the top of the hierarchy, with the least preferable at the bottom, seeking to avoid the creation of waste and prevent waste requiring processing or disposal. An expanded waste hierarchy is seen in Figure 1.



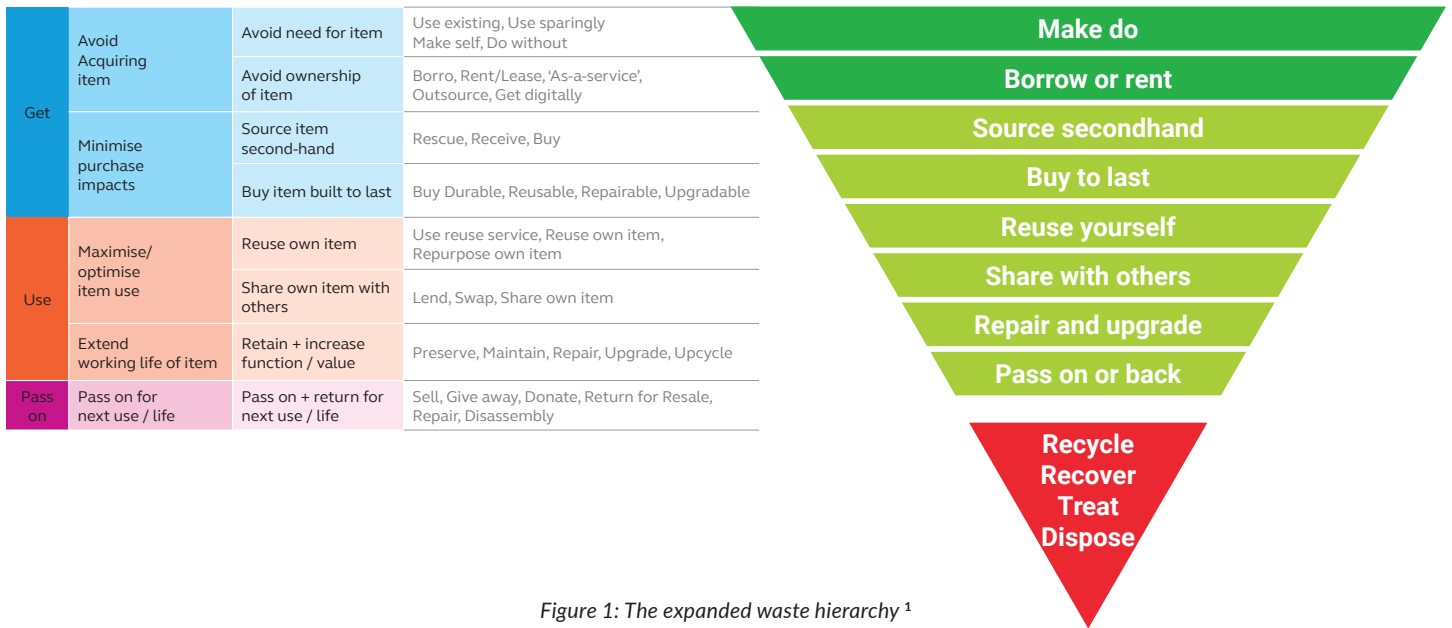


Figure 1: The expanded waste hierarchy <sup>1</sup>

### 1.4.2 Circular Economy

Today’s economy is mostly linear in design in which raw materials are extracted to make products that are used only once and then discarded. However, growing pressures on the stock of global resources and the recognition of the impact of waste on our oceans, lands and health has seen the transition to a circular economy.

The circular economy framework values resources by keeping products and materials in use for as long as possible. It contributes to innovation, growth and job creation while minimising impact on the environment. The circular economy framework provides the following guiding principles:

- Design out waste and pollution: Around 80% of waste and pollution that occurs across the lifecycles of products and materials is determined at the design stage. Through careful design decisions, waste and pollution can be avoided in the first place
- Keep materials in use: In a linear economy, valuable materials and resources are lost at the end of their life. A circular economy aims to keep materials in use for longer, therefore maximising the value we get from them. Examples of strategies that extend the life of materials include designing durable products, repairing broken products, and recycling component materials to make new products
- Regenerate natural systems: For a long time, humans have been extracting resources from natural systems, and polluting natural environments. A circular economy aims to restore and regenerate ecosystems so that we improve rather than deplete the value of natural resources



Figure 2: Circular Economy

There is a significant opportunity to achieve more circular management of councils’ wastes through collaborative procurement processes that incentivises and supports stakeholders to rethink, invest, and innovate with a focus on achieving outcomes over prescribed processes. While there is limitation to councils’ influence over product design, councils encourage local businesses and organisations to adopt a circular economy model.

<sup>1</sup> Downes, J. (2022) Framework for understanding, measuring & communicating waste prevention. Prepared for the Australian Government Department of Climate Change, Energy, the Environment and Water. BehaviourWorks Australia, Monash University



# 02

## WHERE ARE WE TODAY?

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This section presents a comprehensive overview of the current state of waste management in the region, covering the status of services and infrastructure, as well as the outlook on future waste generation and its associated challenges and opportunities.

## 2.1 Overview of Achievements

Since 2014, western Sydney councils have successfully developed and delivered two regional waste strategies, fostering a successful and collaborative working relationship. The 2017-2022 strategy delivered many projects and initiatives for the benefit of the western Sydney community, fulfilling the 32 actions listed within the strategy and additional challenges as they emerged.

Noteworthy achievements include:

- Assessments of ownership options, procurement models and land zoning for development of waste and resource recovery infrastructure in the region
- Delivery of the Western Sydney Regional Litter Plan
- Development of multiple guidance and template documents to support councils in evidence-based decision making and improvement to planning documentation, infrastructure provision and contract negotiation
- Professional forums for capacity building and networks for council officers to enable knowledge sharing on key waste policy topics
- Delivery of a range of education projects and campaigns for councils and the community
- Training of council staff in a range of skill areas where councils themselves do not have enough staff to warrant delivering the training
- Significant advocacy to state government and industry on behalf of councils, highlighting waste and resource recovery considerations to ensure sustainability, reliability and affordability of waste service provision for the community.

## 2.2 Population and Demographic Information

The western Sydney councils' region has a population of 1.7 million and is one of the fastest growing communities in NSW. The population is forecast to grow 46% by 2041 (approximately 773,000 people), an average increase of 2.3% a year. Most of the region's councils will experience population growth at a rapid rate with Liverpool City expecting average growth of 3.8% per year. However, there are some councils with minimal growth, such as Blue Mountains with an average population growth rate of 0.3% a year. Blacktown City is the biggest council by population at 24% of the region's total, while Hawkesbury and Blue Mountains are the smallest, at 4% and 5% respectively.

There are approximately 590,000 households in the region. They are comprised of 67% freestanding single unit dwellings (SUDs) and the other 33% are medium to high density multi-unit dwellings (MUDs). Approximately 20% of households contain only one person, while 35% contain four persons or more. By 2041, the number of households is forecast to increase to 907,000 with the majority of this growth comprising multi-unit dwellings.

Western Sydney is one of the most culturally diverse regions in NSW. More than 200 languages are spoken, with the top non-English languages spoken at home being Arabic (6%), Mandarin (5%) and Vietnamese (4%). The region has a higher concentration of non-English speakers than the Greater Sydney average, with close to 160,000 people reporting difficulty speaking English (9%). This characteristic is likely to remain as the majority of new migrants to NSW settle in western Sydney.

This collaborative regional Strategy ensures the region's future direction in waste management and emerging circular economy addresses western Sydney's culturally diverse and growing population.

# Demographics 2021

Population	No. of Households	No. of SUDs	No. of MUDs	Average persons per households
1,676,489	588,410	394,965	195,897	2.92

Council LGA	Population	Population (%) by Council
Blacktown	399,711	24%
Parramatta	258,799	15%
Cumberland	239,834	14%
Liverpool	234,917	14%
Fairfield	207,922	12%
The Hills	188,557	11%
Blue Mountains	78,740	5%
Hawkesbury	68,009	4%
<b>TOTAL</b>	<b>1,676,489</b>	<b>100%</b>

Figure 3: Population by Council LGA

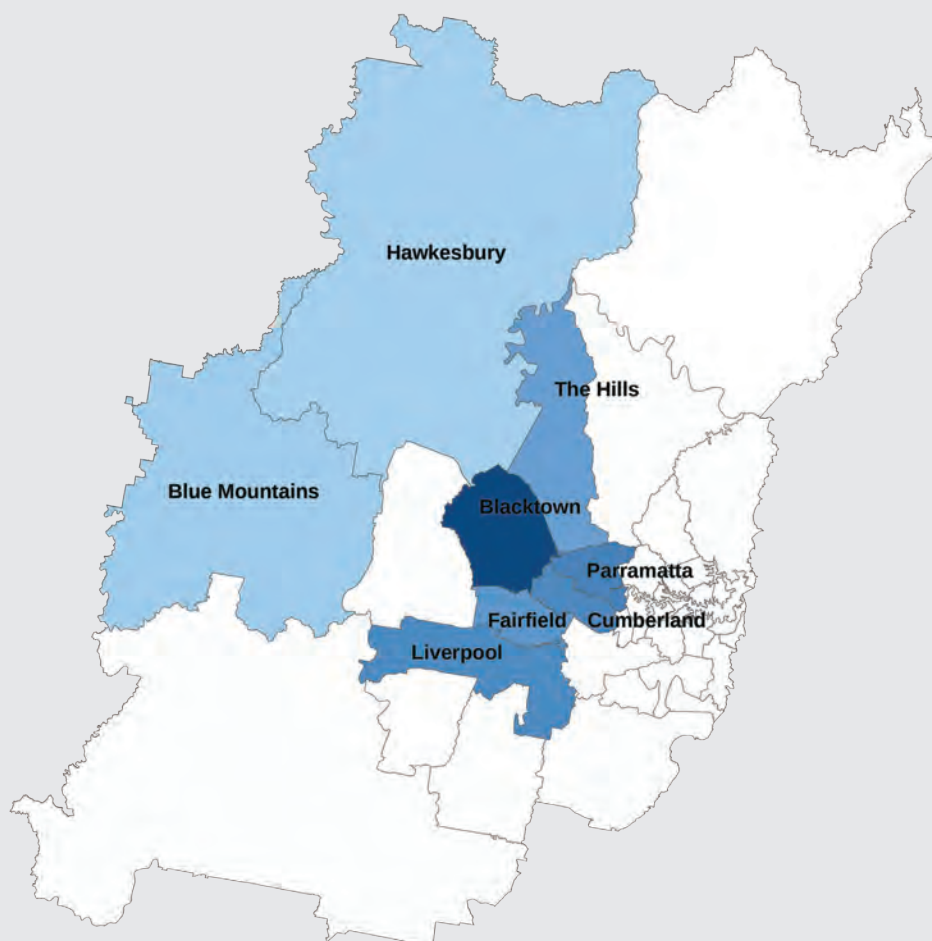


Figure 4: Map of the region showing councils coloured proportionally based on population



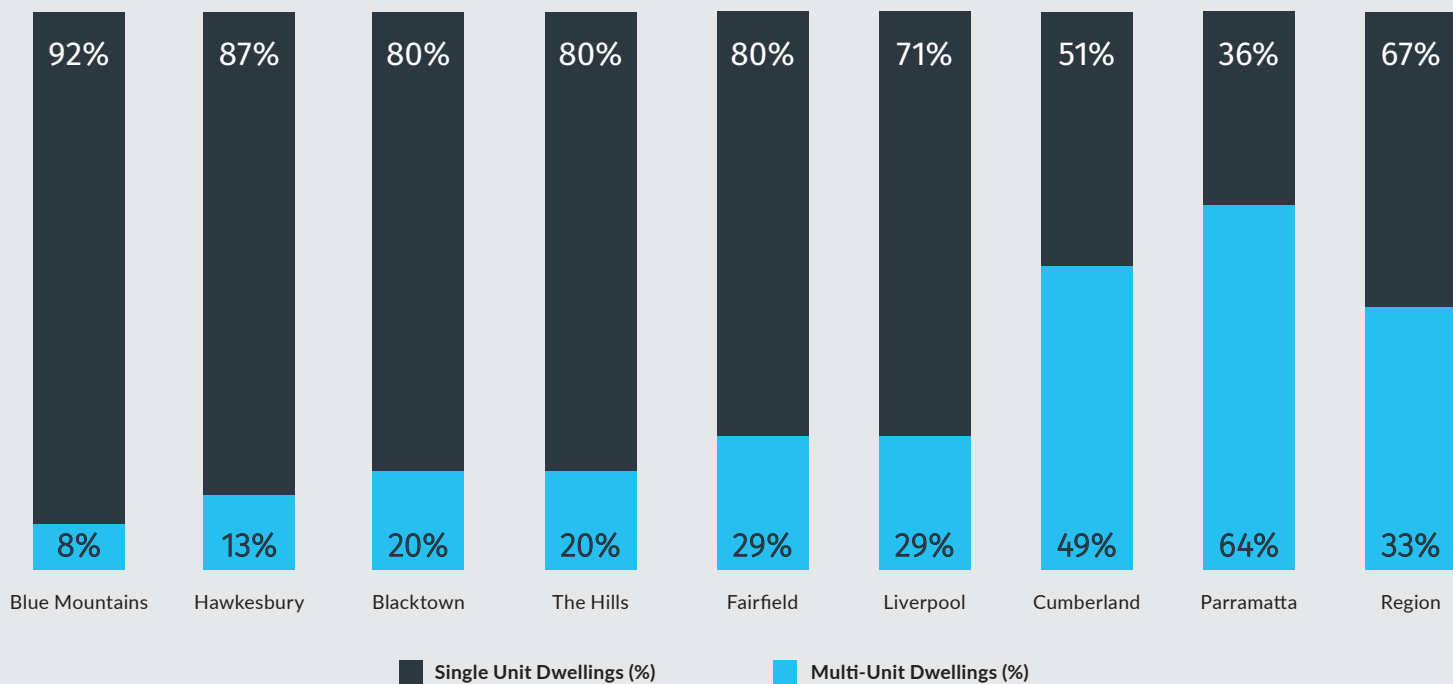


Figure 5: Percentage breakdown of SUDS vs MUDs



# Growth Forecast to 2041

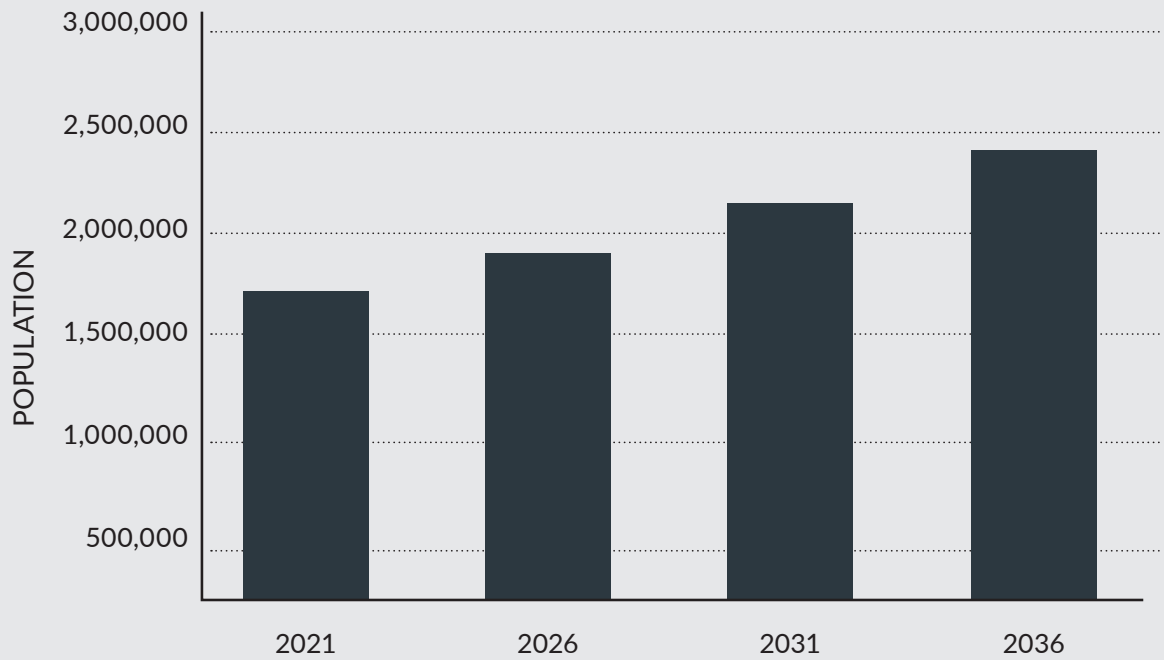


Figure 6: Forecast population growth, 2021 to 2041

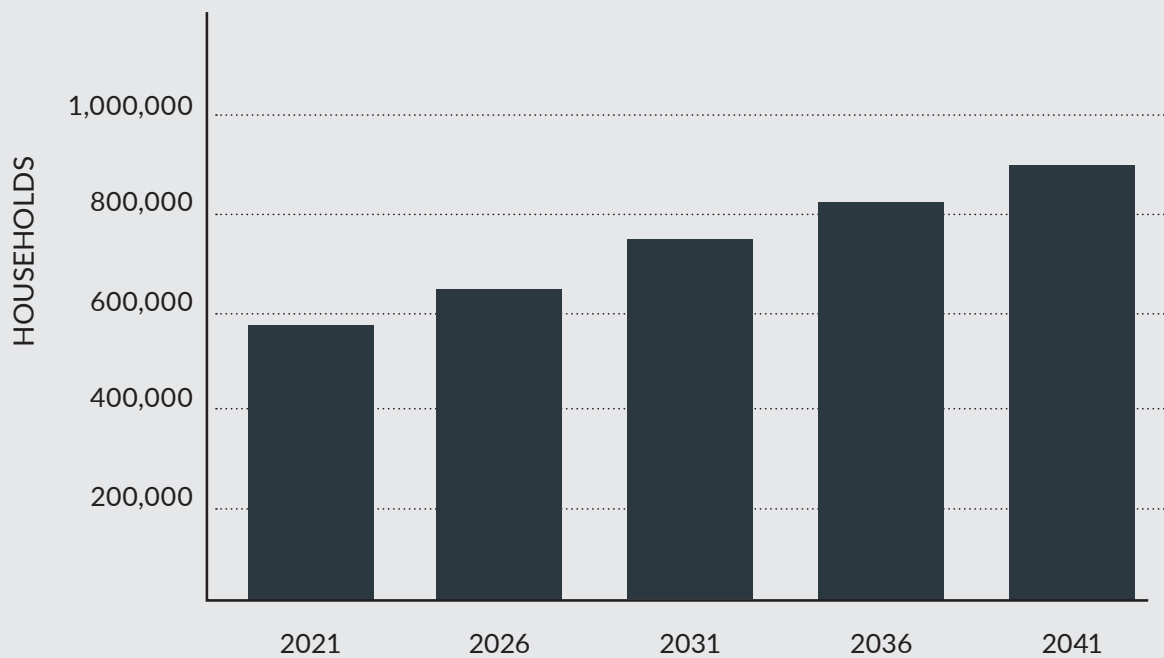


Figure 7: Forecast household growth, 2021 to 2041



## 2.3 Current Household Waste and Recycling Services



### 2.3.1 Kerbside Bin Collection Services

The majority of councils provide residents with a 3-bin kerbside collection system, which includes a residual waste (red lid) bin, commingled recycling (yellow lid) bin and garden organics (green lid) bin. Residents in Blacktown City, Fairfield City and in some areas of Cumberland currently have a 2-bin kerbside collection system (red lid and yellow lid bins).

Councils with a 3-bin system provide residents with either a 120 litre or 140 litre red lid bin collected weekly, 240 litre yellow lid bin and 240 litre green waste bin collected fortnightly.

Councils with a 2-bin system provide the majority of their residents with a 240 litre red lid bin collected weekly and a 240 litre yellow lid bin collected fortnightly.

### 2.3.2 Kerbside Clean Up Services

All councils provide a kerbside clean up service for bulky household items. The service characteristics vary by the number of collections offered per household each year and whether they are scheduled or on-call/pre-booked.

Council	Residual Waste (red lid bin)		Recycling (yellow lid bin)		Garden Organics (green lid bin)		Kerbside Clean Up Service
	Bin Size	Collection Frequency	Bin Size	Collection Frequency	Bin Size	Collection Frequency	Collection Frequency per Annum
Blacktown City Council	240 L	Weekly	240 L	Fortnightly	No Service		12
Blue Mountains City Council	140 L	Weekly	240 L	Fortnightly	240 L	Fortnightly	2
Cumberland City Council	240 L	Weekly	240 L	Fortnightly	240 L	Fortnightly	4
Fairfield City Council	240 L	Weekly	240 L	Fortnightly	No Service		2
Hawkesbury City Council	240 L	Weekly	240 L	Fortnightly	240 L	Fortnightly	1
The Hills Shire Council	140 L	Weekly	240 L	Fortnightly	240 L	Fortnightly	2
Liverpool City Council	140 L	Weekly	240 L	Fortnightly	240 L	Fortnightly	4
City of Parramatta	140 L	Weekly	240 L	Fortnightly	240 L	Fortnightly	4

Figure 8: Standard kerbside collection service for single unit households

### 2.3.3 Drop-off and Mobile Collection Services

Councils provide options for residents to recycle or safely dispose of problematic household waste materials such as e-waste, bulky items, gas bottles, paint cans, batteries, green waste, asbestos and large volumes of household recyclables through local permanent drop-off sites and mobile collection services.

There are five Community Recycling Centres (CRCs) within the region located at Katoomba, Blaxland, South Windsor, North St Marys, Liverpool, and a mobile CRC collection service for residents of Cumberland, City of Parramatta and Blacktown City. Councils facilitate household chemical clean out collections and many also provide e-waste collections and small item drop-offs within council facilities. Three councils operate drop-off facilities within their landfills or recycling centres.

### 2.3.4 Household Waste and Recycling Generation

In 2020/21, the region collected 706,627 tonnes from council kerbside bins, household clean up, drop-off and mobile services. Of this waste, 62% was kerbside residual waste, 16% was kerbside commingled recycling, 11% was kerbside separated garden organics and the remaining 11% was collected from bulky waste clean up and drop-off services. From 2015/16 to 2020/21, there was a 9% increase in total waste generation (Figure 9).



Waste Stream	2020/21 (Tonnes)	2020/21 (Kg per person per week)
Residual Waste (red lid bin)	435,374	5.0
Recycling (yellow lid bin)	111,956	1.3
Garden Organics (green lid bin)	80,499	0.9
Clean up	61,710	0.7
Drop-off	17,088	0.2
<b>TOTAL</b>	<b>706,627</b>	<b>8.1</b>

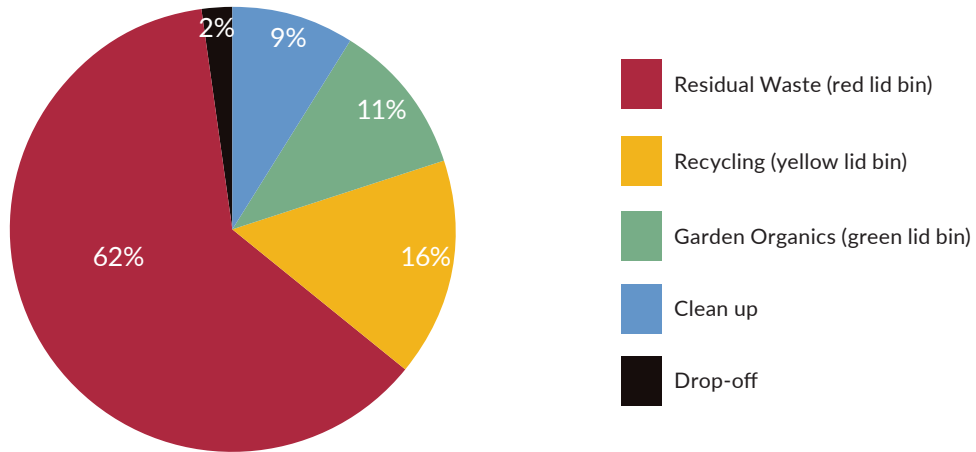


Figure 9: Breakdown of Waste Streams (%) in 2020/21

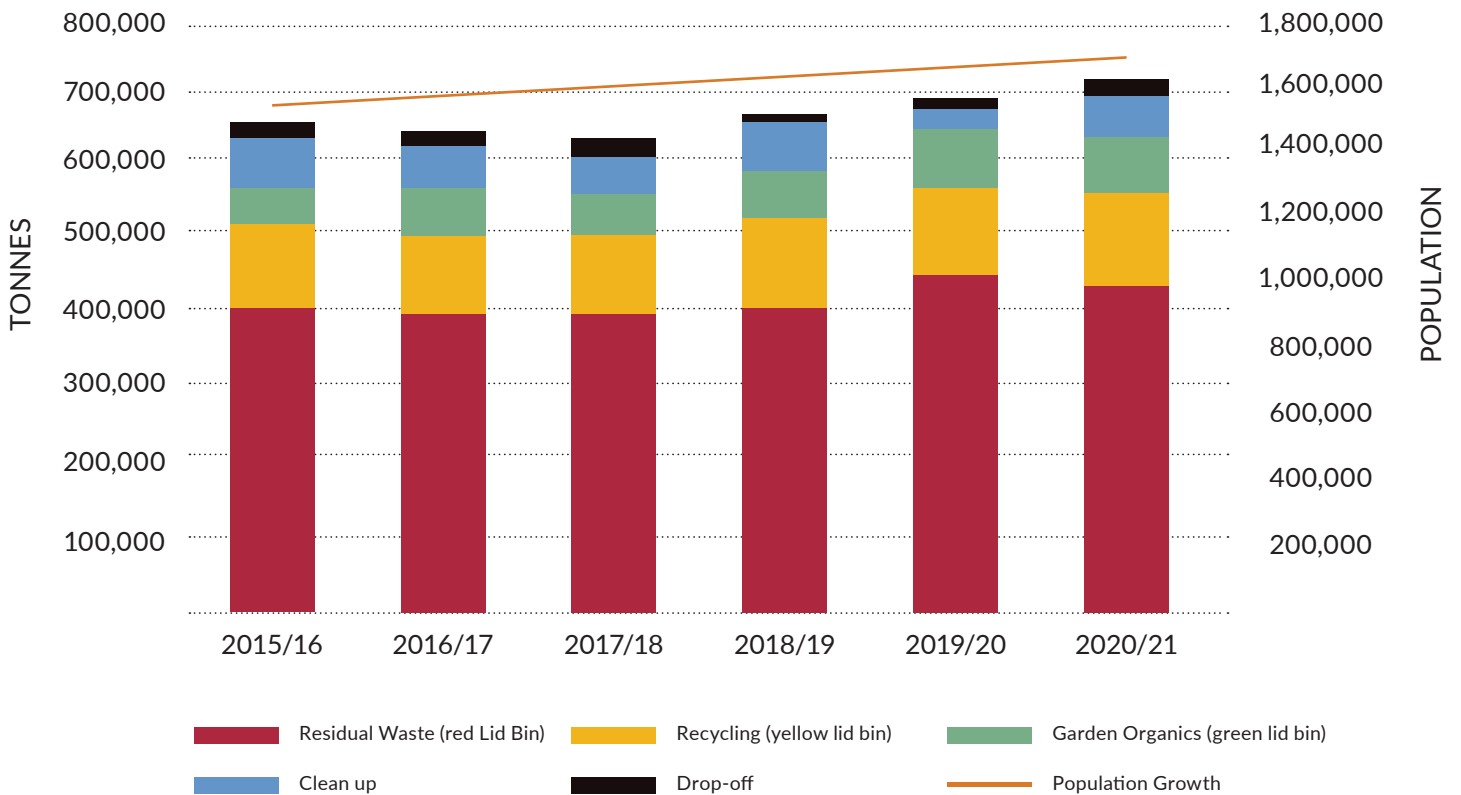


Figure 10: Waste generation in tonnes vs population growth, 2015/16 to 2020/21

Waste generation per capita showed a moderate reduction to 2018/19 (Figure 11), which aligns with the national trend in the National Waste Report, while the rebound in 2019/20 and 2020/21 was likely caused by the impacts of Covid-19 as people spent more time at home.

The recycling generation per capita has been consistent over the last five years, while the garden organics, clean up and drop-off generations per capita have fluctuated. Annual fluctuations linked to garden organics are often influenced by rainfall levels. The fluctuations observed in clean up and drop-off generation are driven by resident participation, such as increased clean up tonnages recorded during Covid-19 lockdowns in 2020/21.

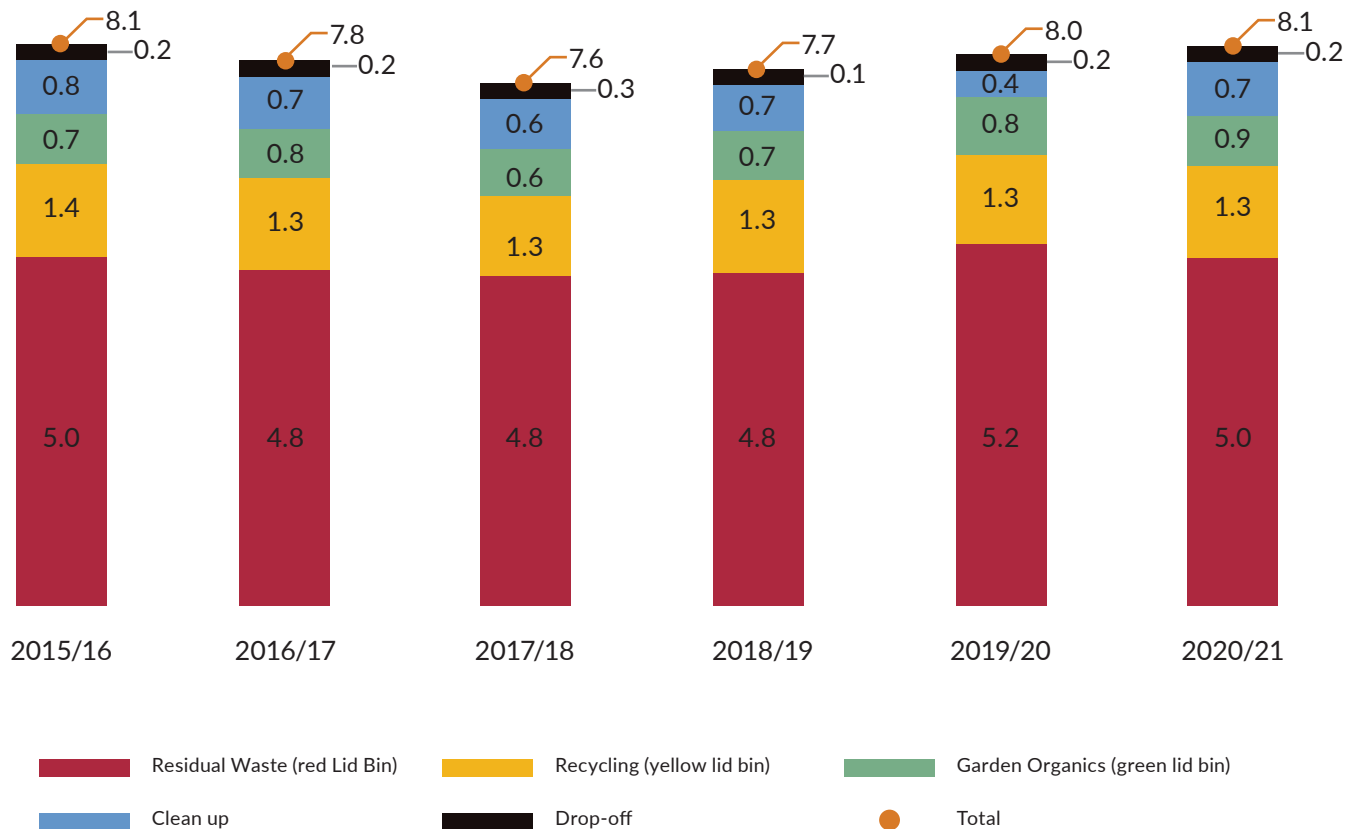


Figure 11: Waste generation in kilograms per person per week, 2015/16 to 2020/21

### 2.3.5 Household Recycling and Landfill Diversion Performance

The region diverted approximately 42% of waste from landfill in 2020/21, which is 3% lower than the NSW average of 45% for Municipal Solid Waste (MSW). It is also significantly lower than the NSW target of an 80% average across all waste streams by 2030. The regional recycling and landfill diversion performance is dependent on how well residents avoid, reduce and recycle waste, together with council collection and processing services. Associated targeted educational and engagement programs play a significant role in improving resource recovery.

Comparison against the 2015/16 baseline (Figure 12) showed a 10% reduction in landfill diversion. This reduction is primarily an outcome of the NSW EPA 2018 regulatory reforms that prohibited the land application of Mixed Waste Organic Material (MWO) produced by the processing of residual (mixed) waste from a number of western Sydney and other councils. Councils that were sending their residual waste for processing in Alternative Waste Treatment (AWT) facilities were diverting around 60% from landfill, but this has halved to around 30% as a result of this regulatory change.

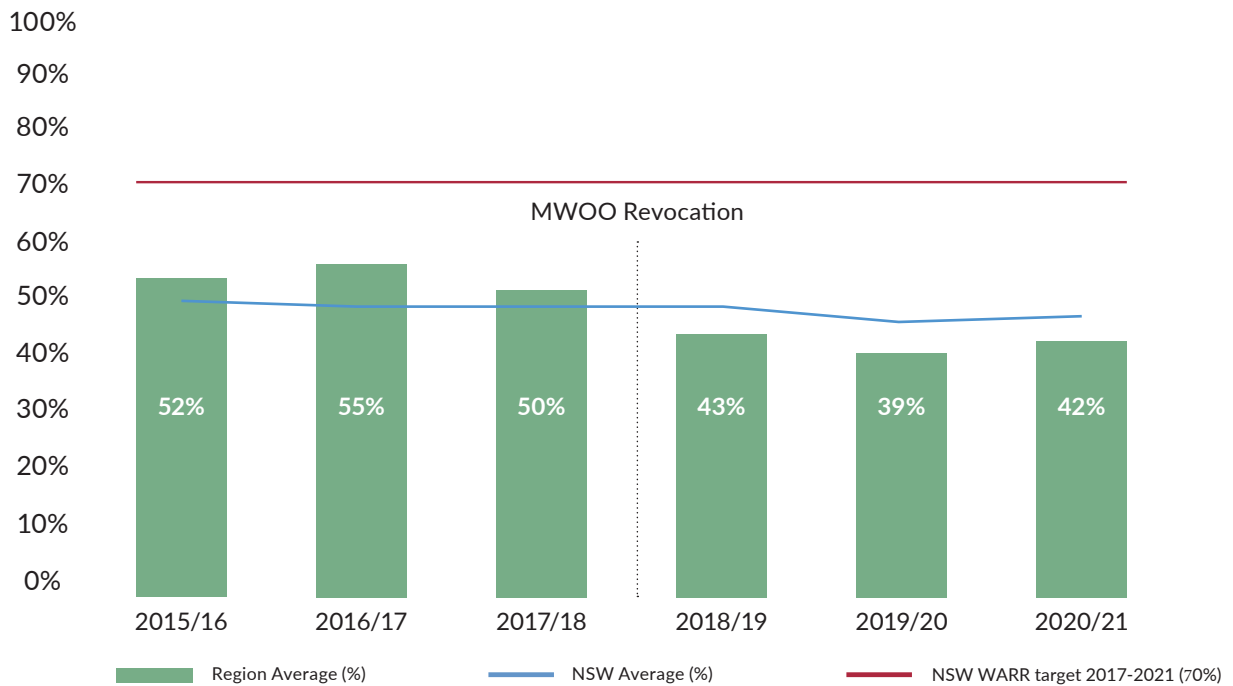


Figure 12: Household Landfill Diversion Rates (%) per Annum

### 2.3.6 Waste Composition

Bin composition audits help councils better understand what is being disposed of and identify opportunities to improve source separation and resource recovery. The incorrect disposal of recyclable materials in the residual waste (red lid) bins and the contamination in recycling (yellow lid) and garden organics (green lid) bins represent a loss of resource value. Loads with high contamination can be rejected by recycling facilities and require landfilling, which is more costly and the least preferred outcome for the environment.

The most recent regional review<sup>32</sup> of councils' waste audits provided information on the waste composition (by weight) for each of the three kerbside bins in use across the region. The key findings are captured below.

#### Residual Waste (red lid) Bin:

- Residents are still throwing considerable quantities of recoverable materials into the residual waste bin.
- Up to 47% of the collected red bin waste from the eight councils is organic material. Around 17% of this bin is comprised of commingled recyclable materials (rigid plastics, paper and cardboard, metals and glass).

#### Recycling (yellow lid) Bin:

- The average contamination level of the recycling bin in the region is 15%. Some councils have contamination levels as low as 7% and some as high as 26%.
- Contamination levels are generally higher for multi-unit dwellings and social housing, in comparison to single unit dwellings.

#### Garden Organics (green lid) Bin:

- The average contamination level of the garden organics bin in the region is 2%.

<sup>2</sup> WSROC Regional Waste Audit Data Assessment Report (2018)

## Residual Waste (red lid) Bin



**47% of the collected red bin waste from the eight councils is organic material**

Based on these findings, the introduction of FOGO collection services across the region by 2030 will provide an opportunity to divert up to 47% of available food and garden organics from council residual waste bins to the organics bin. Diverting high portions of food and garden organics will require education and engagement with residents, along with monitoring and evaluating of performance prior, during and after implementation of FOGO services.

Councils have been working with residents to reduce recycling contamination for many years. Bin inspection efforts and education programs are effective tools for improving recovery rates and reducing contamination. However, further efforts are required to reduce the recycling bin contamination level of 15% to a more acceptable level being under 10%.

### 2.3.7 Waste Trends and Projections

Total waste generation over time is aligned to population growth. As all eight participating councils are expected to experience increases in population, councils are likely to see a corresponding increase in overall waste generation (see Figure 13.)

Total household waste generation for the region is expected to grow from 706,000 tonnes in 2020/21 to approximately 890,000 tonnes by 2030/31, and more than one million tonnes by 2040/41.

The make-up of these streams will change with the implementation of FOGO collection services, which will commence in 2024/25 for some councils and is expected to be implemented across the region by 2030. The source separation of food and garden organics by householders will increase the organics waste stream collected in the green bin from 11% to 24% by 2040/41. This change in household separation of waste will also result in a reduction in the residual waste portion contributing to the total waste stream, reducing from 62% to 49%.



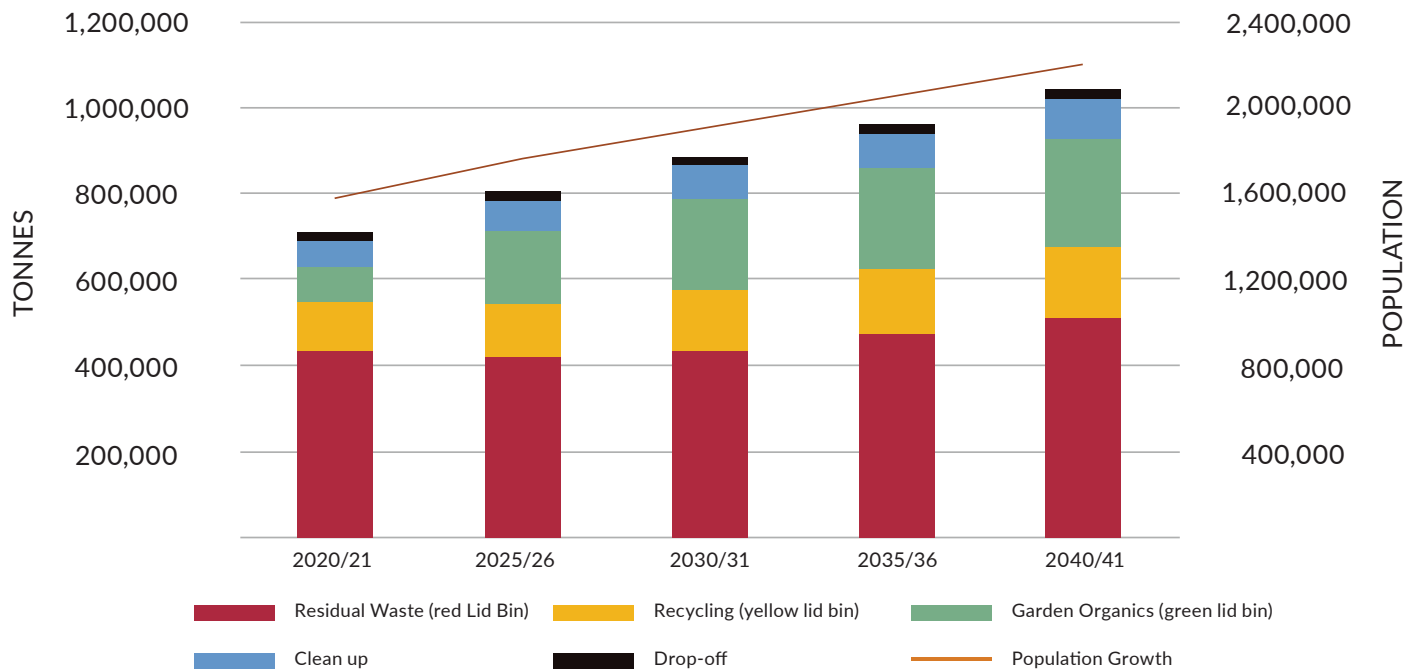


Figure 13: Total household waste generation (in tonnes) projection, 2020/21 to 2040/41<sup>3</sup>

### 2.3.8 Modelling Future Diversion Rates

High-level modelling of two key waste management options was undertaken to compare landfill diversion and carbon abatement against the 2020/21 regional average and the NSW recovery target of 80% recovery across all waste streams by 2030. Two scenarios were modelled to 2031/32 and assume FOGO implementation by 2030 across all councils.

The current regional average diversion from landfill rate was 42% in 2020/21. The introduction of FOGO services and improved clean up recovery will see the regional average recovery rates reach 45% by 2031/32, with potential to reach 52% recovery if increased household food waste capture and clean up recovery can be achieved. Implementing this change will have a net carbon abatement of almost 8,000 tonnes of carbon dioxide equivalent (tCO<sup>2</sup>-e).

The region is unable to achieve an 80% diversion rate without processing residual waste through an Energy from Waste (EfW) facility. By diverting residual waste from landfill to EfW processing, in addition to the increased recovery from introducing FOGO services, the region may reach a diversion rate of 82% by 2031/32. Sending residual waste to EfW also generates less carbon emissions compared to landfill, which would help the region achieve an additional net carbon abatement benefit of close to 120,000 tCO<sup>2</sup>-e.

### 2.3.9 Waste and Recycling Collection, Processing and Disposal Contracts

Western Sydney councils use a combination of in-house staff and external contractors to carry out kerbside bin collection and household clean up services.

Blue Mountains and Hawkesbury manage and operate their own landfills for disposal of its residual waste, but all other major waste streams across councils are processed and disposed by the private sector.

Councils also offer additional minor waste collection services such as bulky cardboard, batteries, white goods, mobile phones, mattresses, and medical sharps waste.

Figure 14 summarises councils’ processing and disposal contracts and their expiry dates through to 2028.

<sup>3</sup>Modelled using EPA published organics capture rates

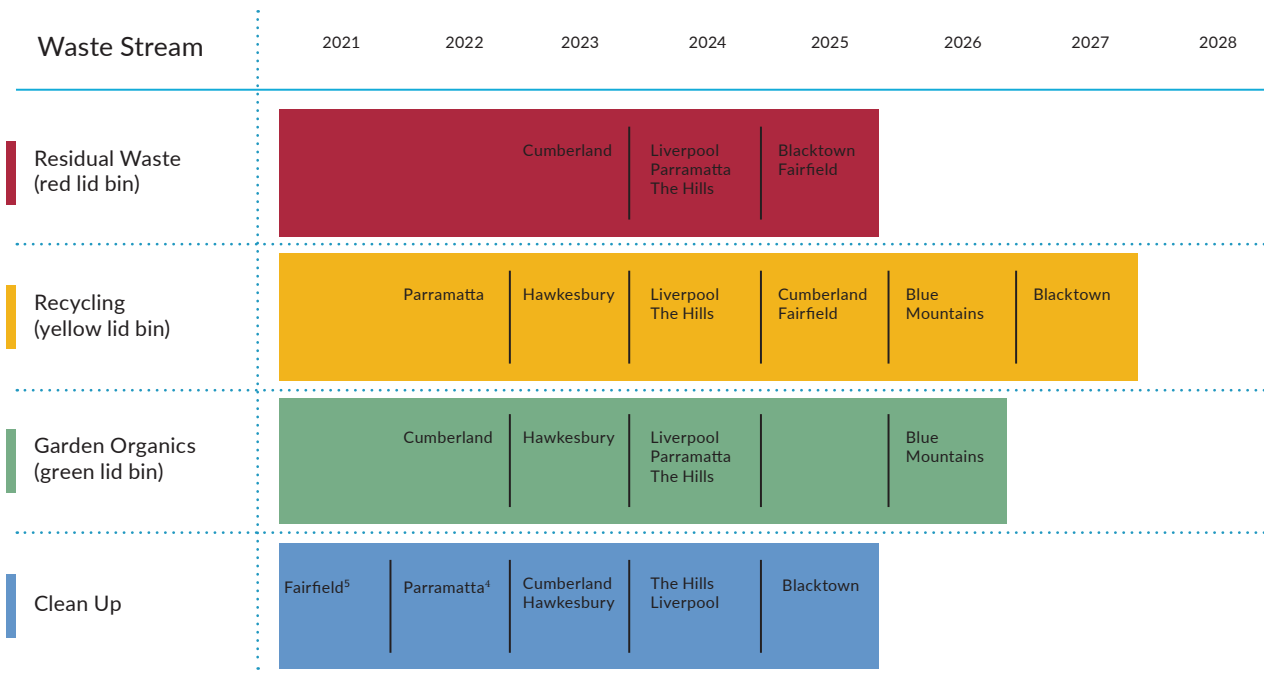


Figure 14: Expiry year for council processing and disposal contracts<sup>5</sup>

### 2.3.10 Waste and Recycling Infrastructure

Greater Sydney is facing a raft of growing pressures on its ability to manage waste and resource recovery. These vary by stream but include emerging capacity constraints, over-reliance on a small number of facilities, changing technology requirements, increasing exposure to natural disasters and limited competition in key segments such as transfer stations and putrescible waste landfill.

These systemic factors present real risks to the ongoing security, efficiency and affordability of council waste services, which has underpinned the identification of waste infrastructure as a priority area in the Strategy.

Analysis for the NSW Waste and Sustainable Materials Strategy 2041<sup>6</sup> indicates growing pressure on landfill capacity for residual waste streams and a pressing need to develop facilities capable of managing the food-enriched organics stream that will increase through to 2030 (Figure 15).

Stream	Status	Market detail
Residual waste	Medium-term	Putrescible landfill dedicated to Greater Sydney exhausts in 2038, while any new facilities are likely to require transfer outside of Sydney
Commingled recycling	Long-term	Supply and demand for capacity are matched, but three proposed recycling facilities will ensure sufficient capacity for +15 years
Organics (FOGO/FO)	Short-term	Up to one million tonnes per annum of new advanced organics processing capacity needed to service Greater Sydney by 2030
Clean-up	Short-term	Non-putrescible landfill dedicated to Greater Sydney exhausts in 2028 (excluding Queensland transfer).

Figure 15: Greater Sydney waste infrastructure status

<sup>4</sup> Currently in contract negotiations

<sup>5</sup> Contract extension periods are not indicated in Figure 14. Blue Mountains (residual waste and clean up) and Hawkesbury (residual waste) dispose at their council-owned landfills.

<sup>6</sup> Waste and Sustainable Materials Strategy - A guide to infrastructure needs, 2021, NSW EPA

## RESIDUAL WASTE

Greater Sydney is served by two dedicated landfills for the main putrescible waste stream, being Lucas Heights Landfill and the rail-connected Woodlawn Landfill more than 160km south of Sydney. Combined they have a licenced capacity to receive 1.75 million tonnes of putrescible waste a year.

Under current conditions, the remaining airspace in these two facilities is expected to be consumed by 2038 when considered as a system, although licence and practical limits on Woodlawn will prevent it taking all Sydney residual waste when Lucas Heights closes in the mid-2030s. Alternatives to Lucas Heights will therefore be required within the next decade.

The only known projects to replace Lucas Heights are two proposed EfW facilities, with combined capacity to process up to 800,000 tonnes per annum (tpa) of putrescible municipal and commercial waste:

- Woodlawn Advanced Energy Recovery Centre (380,000 tpa)
- Parkes Special Activation Precinct, estimated 400,000 tpa (project is subject to competitive tender by the NSW Government).

Non-putrescible landfill within greater Sydney is forecast to be fully consumed by 2028, although this assumes all non-putrescible waste for disposal goes to Sydney landfills and does not factor in new development.

Access to disposal and processing facilities is also a heightened risk due to the confluence of facilities potentially located outside Sydney and more frequent and intense natural disasters. The resilience of Sydney waste services requires a network focus on transfer stations, inter-connections and end facilities (Figure 16).

## ORGANICS

The mandated introduction of food waste collection (with or without garden organics) is driving a fundamental reset in the organics processing sector as existing garden organics composting facilities cannot manage food waste.

Up to 1 million tpa of advanced organics processing capacity will be needed to service Greater Sydney by 2030, which is expected to be a combination of in-vessel composting and anaerobic digestion. Compared to the current context, a greater share of processing capacity is likely to be developed outside the metropolitan area due to larger facility scales, high Sydney land prices and the required growth in agricultural markets for FOGO compost. Dedicated FOGO transfer capacity will be required.

A number of planned facilities to transfer and process FOGO and FO are in the pipeline (Figure 17) but significantly more are required. The timing and scale of development in the organics infrastructure fleet for Sydney presents change risks and increased costs for councils.

## COMMINGLED RECYCLING

Sydney's kerbside commingled recycling is processed by two key operators of Materials Recovery Facilities (MRFs), with limited surplus in total capacity. This high concentration in the market presents challenges in terms of competitive tendering and innovation. However, this dynamic is expected to moderate in coming years, with three MRFs in the development pipeline and two major operators entering the market.

Putrescible Waste - Current and Proposed Facilities

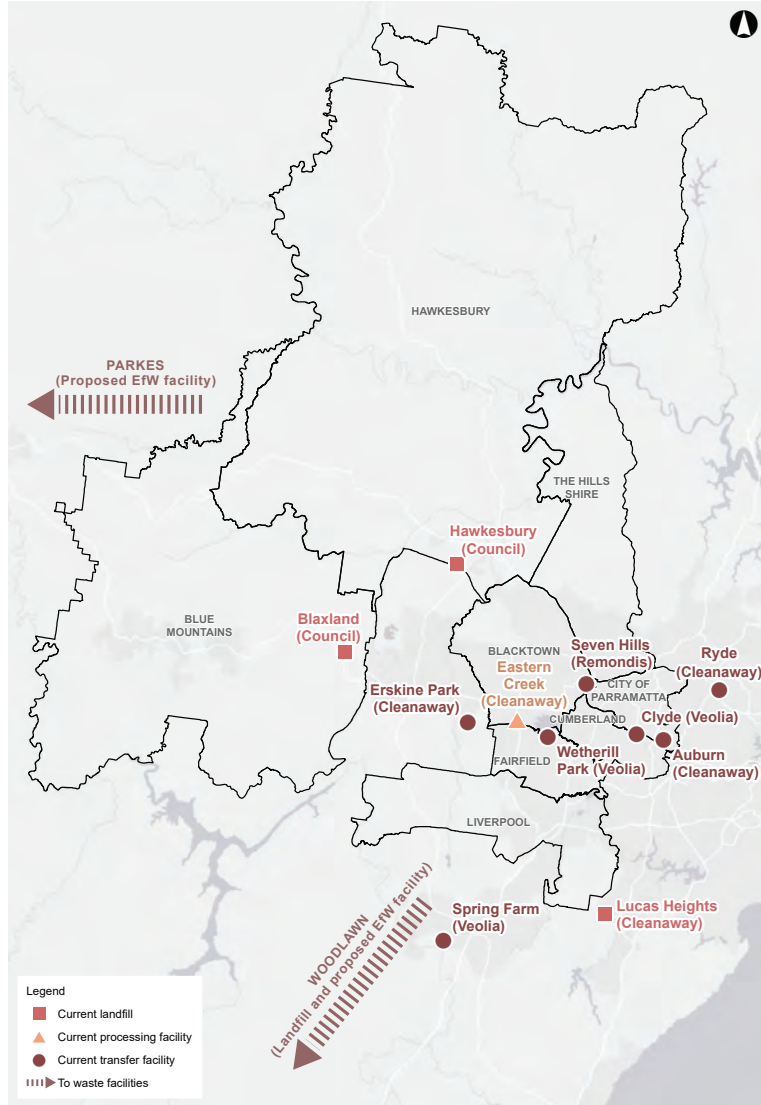


Figure 16: Putrescible waste facilities serving Western Sydney

Food and Garden Organics - Current and Proposed Facilities



Figure 17: Food and garden organics facilities able to serve Western Sydney

### 2.3.11 Community Education and Behaviour Change Campaigns

Councils offer a range of waste and recycling education and engagement programs to help residents to avoid and reduce waste, optimise their use of council services and minimise incorrect disposal activities such as littering and illegally dumping.

Councils have identified that contextually based targeted education programs and initiatives are generally more effective in contributing to behaviour change at the household level than high-level mass-produced education materials. Councils also take great care to ensure their community education efforts address highly transient populations and the rising proportion of residents living in apartment buildings. Pressure on housing prices have people moving to western Sydney from other areas of Sydney, creating an observable change in average age, education and environmental awareness within some council areas.

Being home to a large culturally and linguistically diverse (CALD) population including new migrants to Australia, some councils develop their education programs and collateral to use visual communication and contain information in languages other than English.

## 2.4 FOGO Position for Each Council

Figure 18 shows NSW and Sydney organics collection services currently operating and planned in each council. All Sydney metropolitan councils with the exception of Blacktown City, Fairfield City and Bayside Council offer separate collection of garden organics. Penrith City and Randwick City are the only two councils that currently offer FOGO services.

For western Sydney councils, plans to transition to a FOGO service are already underway, with implementation between 2024 and 2030 (Figure 19). Councils are in the process of evaluating and determining service models that best suit community needs.

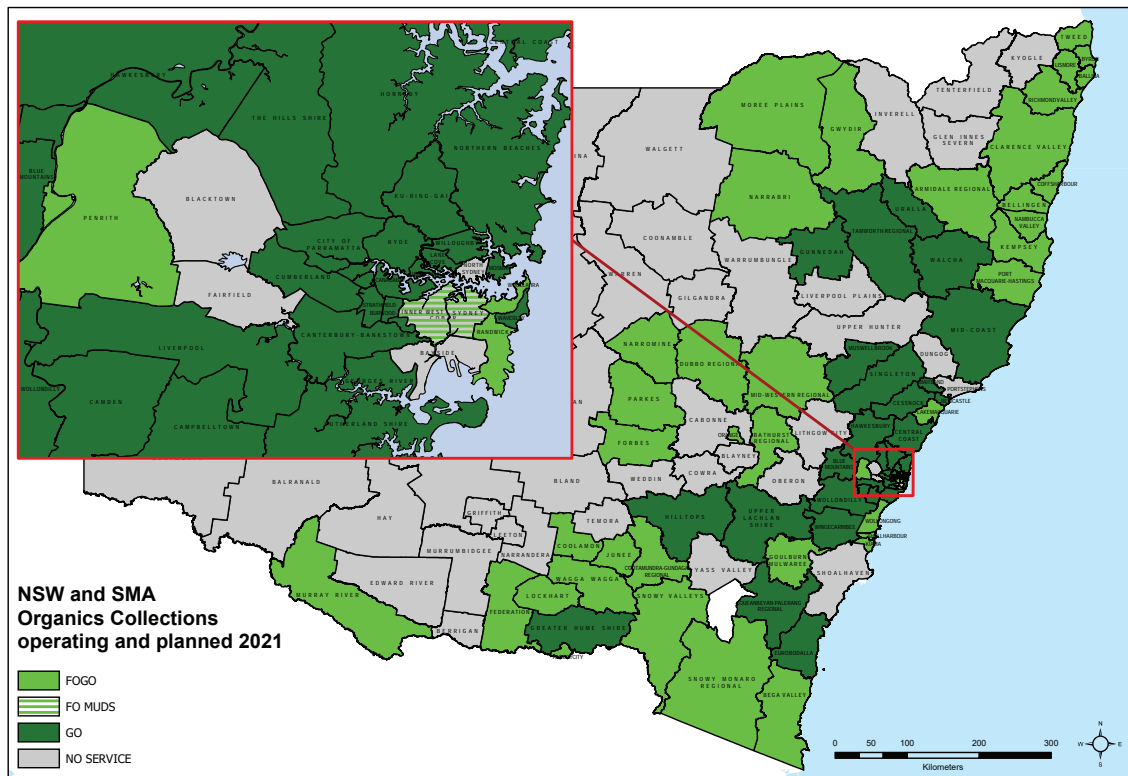


Figure 18: NSW and Sydney organics collections (operating and planned 2021)

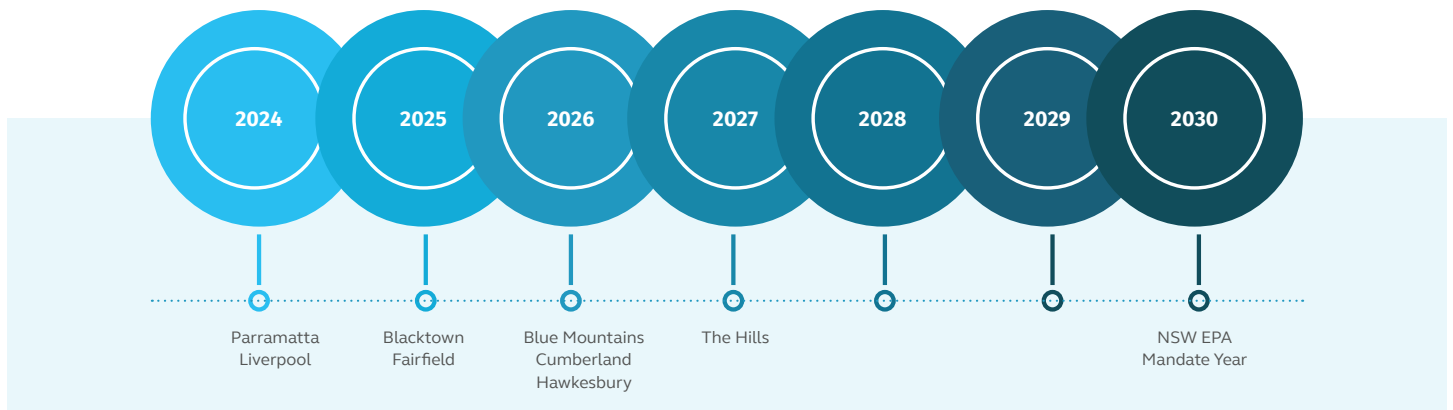


Figure 19: Planned FOGO implementation year for each council (commencement date to be determined by council resolution)





# 03

## WHERE DO WE WANT TO GET TO?

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This section outlines the desired future state of waste management in the region. It includes a clear vision, specific objectives, themes, and achievable targets aligned with state-level policies and directives.

## 3.1 Vision

Working together to shape western Sydney's future where the region is supported to avoid waste, circulate materials in the economy and protect our communities and environment from waste pollution.

## 3.2 Regional Targets

The region recognises the importance of setting strategy targets that maintain consistency with NSW WaSM targets. It is for this reason, the region agreed to set strategy targets that commit it to work towards achieving the WaSM Strategy targets and enhance collaboration. The progress towards the following targets will be monitored to ensure that the region is on track to achieving these.

### Regional Targets:

- Increase opportunities for waste avoidance and reduction in the region by 2027
- Transition to a FOGO or FO service by 2030 across the region
- Work towards an 80% average resource recovery rate from all waste streams by 2030
- Work towards diverting 50% of organics from landfill by 2030
- Identify and respond to all relevant advocacy opportunities regarding waste infrastructure
- Increase opportunities for the responsible disposal of household problem waste across the region by 2027
- All litter prevention programs maintain majority participation by councils
- Majority of councils have a documented process/procedure for emergency waste management by 2027
- Maintain majority participation in regional collaboration programs

## 3.3 Regional Actions

Four themes underpin delivery of the strategy vision, each with their own set of objectives, targets and actions. These cover a range of local and state priority work areas and set out the foundation for regional waste and recycling practices over the next 5 years.

### 3.3.1 Theme 1: Avoid and Reduce Waste

Waste avoidance and reduction is the top option in the waste hierarchy as it saves natural resources and avoids the use of additional resources to manage the product supply chain and end of life.

Reducing the amount of waste generated by households is difficult for councils and regional groups as waste generation is inherent to an economic system premised on growth and consumerism.

Councils help residents avoid and reduce waste by using community education, communication campaigns and other behaviour change initiatives. The NSW ban on single use plastics will also help councils phase out this waste stream. WSROC will investigate further opportunities to avoid and reduce waste in council waste services.

**Relevant Theme 1 Actions:**

- |     |   |
|-----|---|
| 1.1 | Investigate waste avoidance and reduction opportunities in council waste services |
|-----|---|

**Driving Regional Circular Economy Transformation**

Transforming from a linear to circular economy will involve challenging and changing ingrained ways of thinking, investing and operating. Future planning, innovation and collaboration are key tools on this journey.

WSROC will form a circular economy working group with councils to exchange learnings and experiences and deliver updates on circular economy policy, innovation and infrastructure. The working group will help drive circular economy transformation through the following actions:

**Relevant Theme 1 Actions:**

- |     |  |
|-----|--|
| 1.2 | Promote council frameworks, procurement guidelines, and/or decision-making tools to better understand and embed circular outcomes in council procurement processes |
| 1.3 | Investigate opportunities to further capture reusable items in council waste services  |
| 1.4 | Deliver regional education campaign to promote resident use of second-hand marketplaces and local charities  |

**3.3.2 Theme 2: Recover Resources**

Where avoiding and reducing waste is not possible, the second priority is to maximise options for reuse, recycling, reprocessing and energy recovery. The region plans to achieve this by addressing the shortage in critical infrastructure, transitioning to FOGO services, updating waste planning instruments to support maximum recovery of resources and driving circular economy transformation.

**Meeting Waste Infrastructure Needs to 2030 and Beyond**

A strong pipeline of critical infrastructure investment is urgently needed to maintain and improve capacity to collect, sort, process and dispose of waste.

The infrastructure needs analysis supporting the WaSM Strategy estimates that putrescible landfills that accept household waste from Greater Sydney are likely to reach capacity by 2038, at our current rates of generation and recycling. Non-putrescible landfills, which accept inert commercial and construction as well as household clean up waste in Greater Sydney, will reach capacity by 2028 under business as usual.

The NSW mandate of FOGO collections to all households by 2030 will significantly increase the volume of organics entering the recycling system and will require additional organics transfer and processing infrastructure to recover this material.

Ensuring the right waste and circular economy infrastructure is in the right place will be critical to recover, reuse and extend the life of most waste materials. While infrastructure planning and investment is largely driven by the NSW Government and industry, WSROC has an important role to play in working closely with relevant stakeholders to ensure the needs of councils are considered.

**Relevant Theme 2 Actions:**

2.1	Engage with NSW Government stakeholders to ensure regional infrastructure needs and opportunities are prioritised
2.2	Engage with government stakeholders to develop a coordinated initiative to advocate for reform around waste infrastructure, including mitigating risks by underwriting councils' waste processing contracts, the development of a NSW Waste Infrastructure Strategy and designation of waste management as an essential service
2.3	Investigate opportunities for council led waste infrastructure development within the western Sydney region

**Transitioning to Food Waste Collection by 2030**

The introduction of FOGO and FO collection services will divert a large portion of organics from landfill, reducing carbon emissions. It will instead be converted to organic-rich compost for application in home, urban and agricultural uses.

For western Sydney councils, plans to transition to a FOGO service are already underway, with implementation between 2024 and 2030. WSROC will coordinate regular meetings and form a FOGO working group with councils to exchange learnings and experiences and to work together to address the following challenges involved with successful implementation:

- **Addressing the shortage of organics processing infrastructure in Sydney:** The current shortage of facilities in the SMA for processing and/or transferring FOGO, and uncertainty in the pace and shape of development, is the biggest concern for councils, which risk being unable to process FOGO and potentially bearing high costs of landfilling instead.
- **Consistent education and contamination management:** The greatest challenge reported by producers of FOGO-derived compost is meeting the Australian Standard and any NSW Government specifications to certify quality compost, particularly parameters related to contamination. Compliance with certification standards ensures market confidence and subsequently greater availability of markets for product. WSROC will investigate opportunities to apply consistent messaging through regional delivery and reduce costs through collaborative implementation.
- **Improving FOGO regulation and support systems:** WSROC will advocate on behalf of councils to ensure the needs and capabilities of councils are considered in the formation of policy, regulation, grants and programs which support councils to deliver FOGO services in their communities. WSROC will also investigate opportunities to reduce cost of supporting FOGO infrastructure and services, such as bin caddies, liners, education and contamination management.
- **Grant funding:** The NSW Government has allocated \$46 million over five years to help the transition to FOGO collection, including rolling out new services, developing more processing capacity and a state-wide education campaign to help households adapt and improve their recycling habits. WSROC will support councils with identifying and developing grant applications to help fund delivery of council FOGO services.





**Relevant Theme 2 Actions:**

2.5	Partner with councils to advocate for regional needs and characteristics to be considered in regulations and guidelines for the provision of FOGO / FO services
2.6	Explore a regional joint procurement initiative to purchase household FOGO equipment and support services
2.7	Provide FOGO data analysis support tools, such as conversion of FOGO from weight to volume to support service delivery and compost buy-back
2.8	Support councils with identifying and developing grant applications that work towards successfully delivering FOGO and other council waste services
2.9	Assist councils with understanding the application of Australian Carbon Credit Units (ACCUs) as an income source to help transition to a FOGO service

**Updating Waste Planning Controls**

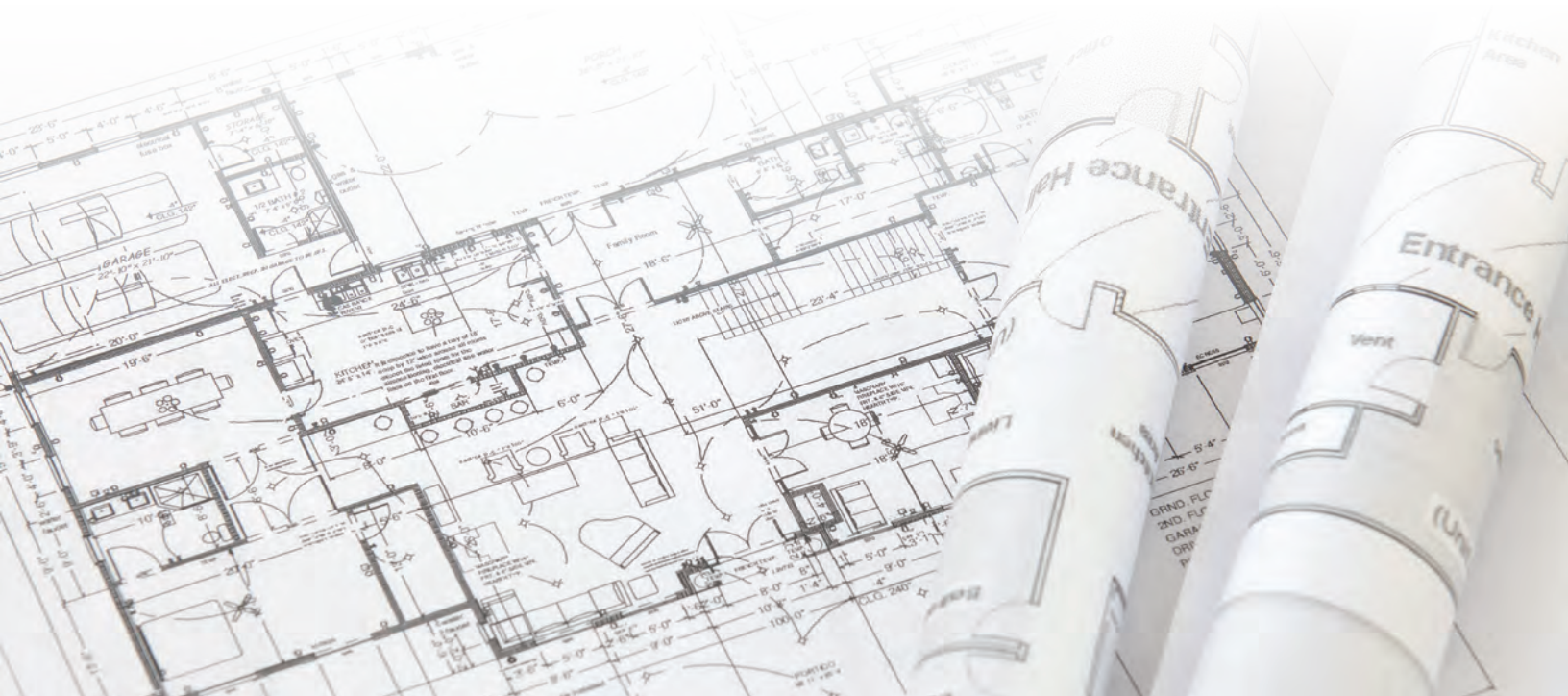
Councils have identified an opportunity to embed new circular economy considerations in the waste minimisation and management plans they require as part of the development application process. Most councils already influence the end-of-use management of building waste, but this could be further adapted to cover materials coming on to site by influencing developers to make a commitment to use recycled content.

Also, councils expecting growth in high density development have expressed concerns about implementing FOGO services in multi-unit dwellings. Traditionally, high-rise buildings require chute systems for the transportation of garbage and recycling. Integrating FOGO in chute systems may be operationally challenging and will therefore require further investigation into best practice models for managing and transporting FOGO in new developments.

WSROC will assist councils update their waste planning controls to include circular economy considerations and integrate best practice models for the management of FOGO in new developments.

**Relevant Theme 2 Actions:**

2.10	Assist councils to update planning controls to incorporate FOGO services and promote improved FOGO controls in state planning documents and plans
2.11	Assist councils to implement circular considerations in councils' planning controls as part of the development application process





### 3.3.3 Theme 3: Protect the region from waste pollution

Pollution from waste can be caused by mishandling problem waste, illegal dumping and littering. Natural disasters driven by climate change have also caused major disruptions to waste collection services in NSW by limiting access to landfill. These significant disruptions have required additional clean up efforts and alternative transfer, processing and disposal measures.

If poorly managed, these waste streams can cause significant damage to the natural environment and threaten the health and wellbeing of our community and impose additional costs to ratepayers.

#### **Building Resilience to Climate Change Impacts on Waste Services**

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Bureau of Meteorology highlight that natural disasters are occurring at a more frequent rate due to climate change. Western Sydney is more vulnerable to this. In recent years, unprecedented flooding, storms and bushfire have significantly impacted council waste collection services and landfill infrastructure in NSW.

Interruptions to the provision of landfilling services at Sydney's key Woodlawn and Lucas Heights landfills due to extreme rainfall also impacted western Sydney councils' waste services in 2022. Nationally, we have seen other critical emergencies impact services, including facility fires and transport disruptions.

State and local government both have critical roles in planning for and managing disasters. Within state coordination frameworks, councils are integral to how well regions withstand and respond to disasters.

Councils are responsible for addressing climate risk in their communities, including implementation of sustainability, climate and resilience strategies. Strategies to address emergency waste management for some councils in the region are at early stages, potentially exposing councils to social, operational, financial and environmental related risks. Uncontrolled waste management practices in a natural disaster context can lead to unsafe actions that can hinder emergency response efforts, and endanger lives, and constrain the critical waste management services that their communities expect following a disaster.



WSROC will support relevant councils to prepare and maintain Emergency Waste Management Plans (EWMPs) or document existing disaster preparedness procedures to be used prior, during and after an emergency situation. The EWMPs will need to address factors such as the facilities that can be used in an emergency, the type and quantity of waste that each facility can accept and appropriate locations for temporary storage facilities should they be required.

WSROC will also participate in state and metropolitan initiatives to identify relevant waste infrastructure at risk of natural disasters or emergency response.

### Relevant Theme 3 Actions:

3.1	Participate in state initiatives to identify relevant waste infrastructure at risk of natural disasters
3.2	Support relevant councils to develop emergency waste management plans

## Managing Problem Waste

Household problem wastes include items such as gas bottles, paint cans, car and household batteries, motor and cooking oils, and smoke detectors. They can be disposed of safely through council drop-off facilities and mobile collection services, including dedicated Community Recycling Centres partially funded by the NSW EPA. However, when disposed of incorrectly in regular kerbside bins they can contaminate other waste streams and cause fires in waste collection trucks and facilities. WSROC will coordinate regional education initiatives to promote council's CRCs and investigate further opportunities to target and divert high-risk problem waste (such as lithium batteries and butane canisters) from council kerbside services.

Management of asbestos is a major ongoing issue in western Sydney, which is sometimes referred to as the heart of Sydney's 'fibro belt'. The prevalence of asbestos-containing products in the region, combined with the public perception that asbestos disposal is expensive and time consuming, has led to illegal dumping and poor disposal practices across the region. WSROC will advocate for reduced cost and increased access to disposal for households as an incentive towards safe disposal of asbestos waste and prevention of illegal dumping.





**Relevant Theme 3 Actions:**

3.3	Advocate for reduced costs of household asbestos disposal services
3.4	Investigate further opportunities to target and divert high-risk problem waste from council kerbside services
3.5	Coordinate regional education initiatives to promote the region's Community Recycling Centres (CRCs)

**Preventing Illegal Dumping and Littering**

Illegal dumping of waste and littering pose a risk to human health and the environment. They reduce amenity in our neighbourhoods and burden councils with high clean up costs and poor amenity.

Illegally dumped wastes across the region are mostly household clean up wastes (especially in high density residential areas), building wastes (including contaminated soils and green waste) and hazardous waste such as asbestos.

Some councils are members of the Western Sydney Regional Illegal Dumping (RID) Squad, which provides support in carrying out investigations and prosecuting offenders. Others manage it in-house.

Illegal dumping enforcement can be a challenge for councils. WSROC will advocate for legislative reforms to strengthen council enforcement powers.

Projects undertaken through the previous WSROC Regional Litter Plan 2016-2021 have been effective in raising awareness of the behaviours, costs, public health and environmental impacts associated with littering. WSROC will develop a new regional litter Plan and supporting projects for 2022-2027 to deliver ongoing litter prevention measures.

The positive impacts of the NSW Container Deposit Scheme (CDS) on litter in public places will also be monitored and continually supported by WSROC.

**Relevant Theme 3 Actions:**

3.6	Develop and implement a regional litter strategy and implementation plan for 2022-2027
3.7	Advocate for legislative reforms to strengthen councils illegal dumping and waste crime enforcement powers
3.8	Continue to support the Container Deposit Scheme (CDS)



### 3.3.4 Theme 4: Strategic Collaboration

WSROC will continue to support information sharing and strategic collaboration across western Sydney. It will coordinate meetings for councils to exchange learnings and experiences, disseminate updates on infrastructure, innovation and policy, compile submissions to advocate for the needs of the region, and deliver region-wide communication campaigns and collateral.

Some councils have residents that are difficult to reach by traditional education methods. Using alternate approaches to reach hard to engage residents will be the focus of regional delivery. These include non-English speakers, transient communities and renters, new migrants, social and community housing and residents living in high rise apartments. It will be important to deliver regional education campaigns that help the community understand their new FOGO services and reduce contamination of both existing recycling and organics kerbside bins.

Councils expressed their preference for maintaining collection and processing contracts at an individual level for established services (residual waste, commingled recycling and garden organics). Most of these services are under long-term contracts and are at different periods of the contract lifecycle. WSROC will continue to explore joint procurement opportunities for councils for smaller waste streams and services where value can be obtained.

#### Relevant Theme 4 Actions:

4.1	Maintain the Western Sydney Waste Managers meetings
4.2	Maintain regular circulation of a western Sydney regional waste strategy newsletter
4.3	Compile regional submissions to advocate for the needs of councils and represent councils in the delivery of waste management programs
4.4	Coordinate appropriate meetings and working groups with councils to exchange learnings and experiences and deliver updates on policy, innovation and infrastructure
4.5	Deliver region-wide communication campaigns and resources to support simple and consistent educational messaging in hard-to-reach communities
4.6	Explore cost-effective joint procurement opportunities







# 04

## STRATEGIC OBJECTIVES

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This section provides an understanding of how the Strategy themes and objectives are aligned with each priority area of the NSW Waste and Sustainable Materials Strategy.



# VISION

Working together to shape the Western Sydney's future where the region is supported to avoid waste, circulate materials in the economy and protect our communities and environment from waste pollution.

## REGIONAL RESPONSE

### THEME 01 Avoid and Reduce Waste



#### OBJECTIVES

- To increase opportunities for waste avoidance and reduction across the region
- To reduce organics waste to landfill across the region

#### WaSM Priority

- Reduce carbon emissions through better waste and materials management

### THEME 02 Recover Resources



#### OBJECTIVES

- To improve resource recovery rates across the region
- To reduce carbon emissions across the region
- To embed circular economy considerations in council procurement and planning instruments
- To meet the region's waste infrastructure needs to 2030 and beyond

#### WaSM Priority

- Reduce carbon emissions through better waste and materials management
- Meeting our future infrastructure and service needs

### THEME 03 Protect the Region



#### OBJECTIVES

- To improve the capture of problem waste and other targeted household waste across the region
- To prevent illegal dumping and litter across the region
- To build resilience to climate change impacts on waste services across the region

#### WaSM Priority

- Protect the environment and human health from waste pollution

### THEME 04 Strategic Collaboration



#### OBJECTIVES

- To foster enhanced regional collaboration

#### WaSM Priority

- Meeting our future infrastructure and service needs
- Reduce carbon emissions through better waste and materials management
- Protect the environment and human health from waste pollution



# 05

## HOW ARE WE GOING TO GET THERE?

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This section contains the action plan for achieving the waste management objectives over a 5-year period. It includes details on resource allocation, monitoring and evaluation, reporting, and measurement against targets, KPIs, and timeframes.

## 5.1 Funding and Resourcing

WSROC will receive regional coordination support funding from the NSW EPA each year to fund staff and project administration to 2027. However, the annual allocation is slightly less than received in previous years, reducing project staffing.

The NSW EPA has also changed the broader local government funding model with cessation of the non-contestable funding that had been provided to regional waste groups for regional strategy implementation under the Better Waste and Recycling funding program. Under the new competitive grant program, WSROC will need to apply to the NSW EPA for contestable grant funding to deliver most projects within the Strategy. WSROC is working to identify relevant grant programs through the NSW and Australian government and other private programs. It is expected that the most accessible will be through the NSW EPA's Waste and Sustainable Materials Delivery Program, with more detail to be released in 2023.

WSROC and western Sydney councils will continue to utilise their strong working relationships with other councils, regional waste groups, the NSW EPA and other industry stakeholders to share information, resources and reduce duplication of effort. WSROC and councils will continue to build relationships with other project partners including state government agencies, community groups and infrastructure providers.

The reduction in core and committed funding has influenced the type and quantum of work able to be delivered in the 2022-27 Strategy.

## 5.2 Monitoring, Reporting and Review

The implementation of the Action Plan will be monitored and evaluated against targets, key performance indicators and timeframes and reported annually by WSROC to the NSW EPA and participating councils.

The Action Plan is a working document and will be revised and updated regularly to consider:

- Changes in policy, legislation or regulatory frameworks
- Funding opportunities
- Changing needs of councils and communities
- Availability of new technology, infrastructure and research
- Significant changes in the quantity and composition of waste relative to what has been projected.

WSROC will facilitate a range of working groups to develop and deliver regional projects.



# Action Plan 2022-2027

The Strategy Action Plan has been developed in consultation with participating councils to deliver on the Strategy objectives and targets. Actions are detailed by four themes and include key performance indicators and delivery timeframes.

**Timeframe Legend:**

- Action Commencement Year
- Action Continuation in Following Years

## Theme 1: Avoid and Reduce

<b>Objectives</b>	<ul style="list-style-type: none"> <li>To increase opportunities for waste avoidance and reduction across the region</li> <li>To reduce organics waste to landfill across the region</li> </ul>				
<b>Targets</b>	<ul style="list-style-type: none"> <li>Increase opportunities for waste avoidance and reduction in the region by 2027</li> </ul>				
Action No.	Actions	Key Performance Indicator	Delivery Timeframe		
			Yr 1 2022/23	Yrs 2 - 3 23/24 & 24/25	Yrs 4 - 5 25/26 & 26/27
1.1	Investigate waste avoidance and reduction opportunities in council waste services	<ul style="list-style-type: none"> <li>Number of projects</li> <li>Number of resources shared</li> </ul>			
1.2	Promote council frameworks, procurement guidelines, and/or decision-making tools to better understand and embed circular outcomes in council procurement processes	<ul style="list-style-type: none"> <li>Number of resources/projects delivered</li> <li>Number of engagements</li> </ul>			
1.3	Investigate opportunities to further capture reusable items in council waste services	<ul style="list-style-type: none"> <li>Number of projects</li> <li>Number of information shares</li> </ul>			
1.4	Deliver regional education campaign to promote resident use of second-hand marketplaces and local charities	<ul style="list-style-type: none"> <li>Number of resources developed</li> <li>Reach of resources</li> </ul>			

## Theme 2: Recover Resources

<b>Objectives</b>	<ul style="list-style-type: none"> <li>To improve resource recovery rates across the region</li> <li>To reduce carbon emissions across the region</li> <li>To embed circular economy considerations in council procurement and planning instruments</li> <li>To meet the region's waste infrastructure needs to 2030 and beyond</li> </ul>				
<b>Targets</b>	<ul style="list-style-type: none"> <li>Transition to a FOGO or FO service by 2030 across the region</li> <li>Work towards an 80% average resource recovery rate from all waste streams by 2030</li> <li>Work towards diverting 50% of organics from landfill by 2030</li> <li>Identify and respond to all relevant advocacy opportunities regarding waste infrastructure</li> </ul>				
Action No.	Actions	Key Performance Indicator	Delivery Timeframe		
			Yr 1 2022/23	Yrs 2 - 3 23/24 & 24/25	Yrs 4 - 5 25/26 & 26/27
2.1	Engage with NSW Government stakeholders to ensure regional infrastructure needs and opportunities are prioritised	<ul style="list-style-type: none"> <li>Number of engagements</li> </ul>			
2.2	Engage with government stakeholders to develop a coordinated initiative to advocate for reform around waste infrastructure, including mitigating risks by underwriting council's waste processing contracts, the development of a NSW Waste Infrastructure Strategy and designation of waste management as an essential service	<ul style="list-style-type: none"> <li>Number of activities documented</li> <li>Number of stakeholders engaged</li> <li>Delivery of coordinated advocacy initiative</li> <li>Number of supported changes to planning controls</li> </ul>			



## Theme 2: Recover Resources (cont)

Action No.	Actions	Key Performance Indicator	Delivery Timeframe		
			Yr 1 2022/23	Yrs 2 – 3 23/24 & 24/25	Yrs 4 - 5 25/26 & 26/27
2.3	Investigate opportunities for council led waste infrastructure development within the Western Sydney region	<ul style="list-style-type: none"> <li>Number of initiatives to support councils</li> <li>Number of projects/activities</li> </ul>			
2.4	Investigate areas for a regional approach to FOGO education that will assist councils through increased consistency and reduced costs	<ul style="list-style-type: none"> <li>Number of education programs delivered</li> <li>Number of resources delivered</li> </ul>			
2.5	Partner with councils to advocate for regional needs and characteristics to be considered in regulations and guidelines for the provision of FOGO / FO services	<ul style="list-style-type: none"> <li>Number of submissions/representations</li> <li>Number of meetings (facilitated and representative)</li> </ul>			
2.6	Explore a regional joint procurement initiative to purchase household FOGO equipment and support services	<ul style="list-style-type: none"> <li>Number of initiatives explored</li> <li>Number of contracts delivered</li> </ul>			
2.7	Provide FOGO data analysis support tools, such as conversion of FOGO from weight to volume to support service delivery and compost buy-back	<ul style="list-style-type: none"> <li>Number of resources produced</li> </ul>			
2.8	Support councils with identifying and developing grant applications that work towards successfully delivering FOGO and other council waste services	<ul style="list-style-type: none"> <li>Number of grants identified (and distributed)</li> <li>Number of grants supported</li> <li>Number of hours assisting councils</li> </ul>			
2.9	Assist councils with understanding the application of Australian Carbon Credit Units (ACCUs) as an income source to help transition to a FOGO service	<ul style="list-style-type: none"> <li>Number of initiatives delivered</li> </ul>			
2.10	Assist councils to update planning controls to incorporate FOGO services and promote improved FOGO controls in state planning documents and plans.	<ul style="list-style-type: none"> <li>Number of resources developed</li> <li>Number of engagements with state agencies</li> <li>Number of supported changes to planning controls</li> </ul>			
2.11	Assist councils to implement circular considerations in councils planning controls as part of the development application process	<ul style="list-style-type: none"> <li>Number of resources developed</li> <li>Number of engagements with state agencies</li> <li>Number of supported changes to planning controls</li> </ul>			

## Theme 3: Protect the Region

Objectives	<ul style="list-style-type: none"> <li>To improve the capture of problem waste and other targeted household waste across the region</li> <li>To prevent illegal dumping and litter across the region</li> <li>To build resilience to climate change impacts on waste services across the region</li> </ul>				
Targets	<ul style="list-style-type: none"> <li>Increase opportunities for the responsible disposal of household problem waste across the region by 2027</li> <li>All litter prevention programs maintain majority participation by councils</li> <li>Majority of councils have a documented process/procedure for emergency waste management by 2027</li> </ul>				
Action No.	Actions	Key Performance Indicator	Delivery Timeframe		
			Yr 1 2022/23	Yrs 2 – 3 23/24 & 24/25	Yrs 4 - 5 25/26 & 26/27
3.1	Participate in state initiatives to identify relevant waste infrastructure at risk of natural disasters	<ul style="list-style-type: none"> <li>Number of projects delivered</li> <li>Number of engagements</li> </ul>			

### Theme 3: Protect the Region (cont)

Action No.	Actions	Key Performance Indicator	Delivery Timeframe		
			Yr 1 2022/23	Yrs 2 - 3 23/24 & 24/25	Yrs 4 - 5 25/26 & 26/27
3.2	Support relevant councils to develop emergency waste management plans	<ul style="list-style-type: none"> <li>Number of resources/projects delivered</li> </ul>			
3.3	Advocate for reduced costs of household asbestos disposal services	<ul style="list-style-type: none"> <li>Number of submissions/representations</li> <li>Number of grants received</li> </ul>			
3.4	Investigate further opportunities to target and divert high-risk problem waste from council kerbside services	<ul style="list-style-type: none"> <li>Number of opportunities investigated</li> </ul>			
3.5	Coordinate regional education initiatives to promote the region's Community Recycling Centres (CRCs)	<ul style="list-style-type: none"> <li>Number of education programs delivered</li> <li>Council engagement in education plan development/delivery</li> </ul>			
3.6	Develop and implement a regional litter strategy and implementation plan for 2023-2027	<ul style="list-style-type: none"> <li>Development of a regional litter strategy</li> <li>Delivery of regional litter projects</li> <li>Delivery of projects as per litter plan KPIs</li> </ul>			
3.7	Advocate for legislative reforms to strengthen councils illegal dumping and waste crime enforcement powers.	<ul style="list-style-type: none"> <li>Number of submissions/representations</li> </ul>			
3.8	Continue to support the Container Deposit Scheme (CDS)	<ul style="list-style-type: none"> <li>Number of initiatives</li> </ul>			

### Theme 4: Strategic Collaboration

<b>Objectives</b>	<ul style="list-style-type: none"> <li>To foster enhanced regional collaboration</li> </ul>		
<b>Targets</b>	<ul style="list-style-type: none"> <li>Maintain majority participation in regional collaboration programs</li> </ul>		
Action No.	Actions	Key Performance Indicator	Delivery Timeframe
4.1	Maintain the Western Sydney Waste Managers meetings	<ul style="list-style-type: none"> <li>Number of meetings held</li> <li>Number of people in the network</li> </ul>	Ongoing
4.2	Maintain regular circulation of a western Sydney regional waste strategy newsletter	<ul style="list-style-type: none"> <li>Number of newsletters prepared</li> </ul>	Ongoing
4.3	Compile regional submissions to advocate for the needs of councils and represent councils in the delivery of waste management programs	<ul style="list-style-type: none"> <li>Number of submissions prepared</li> <li>Number of meetings</li> <li>Number of letters prepared</li> </ul>	Ongoing
4.4	Coordinate appropriate meetings and working groups with councils to exchange learnings and experiences and deliver updates on policy, innovation and infrastructure	<ul style="list-style-type: none"> <li>Number of events</li> <li>Number of attendees</li> <li>Number of working groups</li> <li>Number of projects developed</li> </ul>	Ongoing
4.5	Deliver region-wide communication campaigns and resources to support simple and consistent educational messaging in hard-to-reach communities	<ul style="list-style-type: none"> <li>Number of resources produced</li> <li>Number of projects developed/delivered</li> <li>Level of use of resources by councils</li> <li>Measured reach of campaigns</li> </ul>	Ongoing
4.6	Explore cost-effective joint procurement opportunities	<ul style="list-style-type: none"> <li>Number of contracts/purchases investigated</li> <li>Number of activities documented</li> </ul>	Ongoing

# Year 1 - Action Plan 2022-2023

Theme 2: Recover Resources			
Objectives	<ul style="list-style-type: none"> <li>To improve resource recovery rates across the region</li> <li>To reduce carbon emissions across the region</li> <li>To embed circular economy considerations in council procurement and planning instruments</li> <li>To meet the regions waste infrastructure needs to 2030 and beyond</li> </ul>		
Targets	<ul style="list-style-type: none"> <li>Transition to a FOGO or FO service by 2030 across the region</li> <li>Work towards an 80% average resource recovery rate from all waste streams by 2030</li> <li>Work towards diverting 50% of organics from landfill by 2030</li> <li>Identify and respond to all relevant advocacy opportunities regarding waste infrastructure</li> </ul>		
Action No.	Actions	Key Performance Indicator	Delivery Timeframe
2.1	Engage with NSW Government stakeholders to ensure regional infrastructure needs and opportunities are prioritised	<ul style="list-style-type: none"> <li>Number of engagements</li> </ul>	Commenced November 2022 Ongoing
2.2	Engage with government stakeholders to develop a coordinated initiative to advocate for reform around waste infrastructure, including mitigating risks by underwriting council's waste processing contracts, the development of a NSW Waste Infrastructure Strategy and designation of waste management as an essential service	<ul style="list-style-type: none"> <li>Number of activities documented</li> <li>Number of stakeholders engaged</li> <li>Delivery of coordinated advocacy initiative</li> <li>Number of supported changes to planning controls</li> </ul>	Commence February 2023 Ongoing
2.3	Investigate areas for a regional approach to FOGO education that will assist councils through increased consistency and reduced costs	<ul style="list-style-type: none"> <li>Number of education programs delivered</li> <li>Number of resources delivered</li> </ul>	Commence March 2023 Ongoing
2.4	Partner with councils to advocate for regional needs and characteristics to be considered in regulations and guidelines for the provision of FOGO / FO services	<ul style="list-style-type: none"> <li>Number of submissions/representations</li> <li>Number of meetings (facilitated and representative)</li> </ul>	Commence February 2023 Ongoing
2.5	Explore a regional joint procurement initiative to purchase household FOGO equipment and support services	<ul style="list-style-type: none"> <li>Number of initiatives explored</li> <li>Number of contracts delivered</li> </ul>	May 2023
2.6	Provide FOGO data analysis support tools, such as conversion of FOGO from weight to volume to support service delivery and compost buy-back	<ul style="list-style-type: none"> <li>Number of resources produced</li> </ul>	May 2023
2.7	Support councils with identifying and developing grant applications that work towards successfully delivering FOGO and other council waste services	<ul style="list-style-type: none"> <li>Number of grants identified (and distributed)</li> <li>Number of grants supported</li> <li>Number of hours assisting councils</li> </ul>	Commenced October 2022 Ongoing
2.8	Assist councils with understanding the application of Australian Carbon Credit Units (ACCUs) as an income source to help transition to a FOGO service	<ul style="list-style-type: none"> <li>Number of initiatives delivered</li> </ul>	Commenced October 2022 June 2025
2.9	Assist councils to update planning controls to incorporate FOGO services and promote improved FOGO controls in state planning documents and plans.	<ul style="list-style-type: none"> <li>Number of resources developed</li> <li>Number of engagements with state agencies</li> <li>Number of supported changes to planning controls</li> </ul>	Commenced July 2022 Completed by December 2023

### Theme 3: Protect the Region

<b>Objectives</b>	<ul style="list-style-type: none"> <li>To improve the capture of problem waste and other targeted household waste across the region</li> <li>To prevent illegal dumping and litter across the region</li> <li>To build resilience to climate change impacts on waste services across the region</li> </ul>		
<b>Targets</b>	<ul style="list-style-type: none"> <li>Increase opportunities for the responsible disposal of household problem waste across the region by 2027</li> <li>All litter prevention programs maintain majority participation by councils</li> <li>Majority of councils have a documented process/procedure for emergency waste management by 2027</li> </ul>		
<b>Action No.</b>	<b>Actions</b>	<b>Key Performance Indicator</b>	<b>Delivery Timeframe</b>
4.1	Coordinate regional education initiatives to promote the region's Community Recycling Centres (CRCs)	<ul style="list-style-type: none"> <li>Number of education programs delivered</li> <li>Council engagement in education plan development/delivery</li> </ul>	Commenced September 2022 Ongoing
4.2	Develop and implement a regional litter strategy and implementation plan for 2023-2027	<ul style="list-style-type: none"> <li>Development of a regional litter strategy</li> <li>Delivery of regional litter projects</li> <li>Delivery of projects as per litter plan KPIs</li> </ul>	Commenced March 2023 Ongoing
4.3	Advocate for legislative reforms to strengthen councils illegal dumping and waste crime enforcement powers.	<ul style="list-style-type: none"> <li>Number of submissions/representations</li> </ul>	Commenced October 2022 June 2025
4.4	Continue to support the Container Deposit Scheme (CDS)	<ul style="list-style-type: none"> <li>Number of education programs delivered</li> <li>Council engagement in education plan development/delivery</li> </ul>	Commenced October 2022 Ongoing

### Theme 4: Strategic Collaboration

<b>Objectives</b>	<ul style="list-style-type: none"> <li>To foster enhanced regional collaboration</li> </ul>		
<b>Targets</b>	<ul style="list-style-type: none"> <li>Maintain majority participation in regional collaboration programs</li> </ul>		
<b>Action No.</b>	<b>Actions</b>	<b>Key Performance Indicator</b>	<b>Delivery Timeframe</b>
4.1	Maintain the Western Sydney Waste Managers meetings	<ul style="list-style-type: none"> <li>Number of meetings held</li> <li>Number of people in the network</li> </ul>	Bi-monthly
4.2	Maintain regular circulation of a western Sydney regional waste strategy newsletter	<ul style="list-style-type: none"> <li>Number of newsletters prepared</li> </ul>	Bi-monthly
4.3	Compile regional submissions to advocate for the needs of councils and represent councils in the delivery of waste management programs	<ul style="list-style-type: none"> <li>Number of submissions prepared</li> <li>Number of meetings</li> <li>Number of letters prepared</li> </ul>	Ongoing
4.4	Coordinate appropriate meetings and working groups with councils to exchange learnings and experiences and deliver updates on policy, innovation and infrastructure	<ul style="list-style-type: none"> <li>Number of events</li> <li>Number of attendees</li> <li>Number of working groups</li> <li>Number of projects developed</li> </ul>	Ongoing



*Advocating for the people of Western Sydney*

