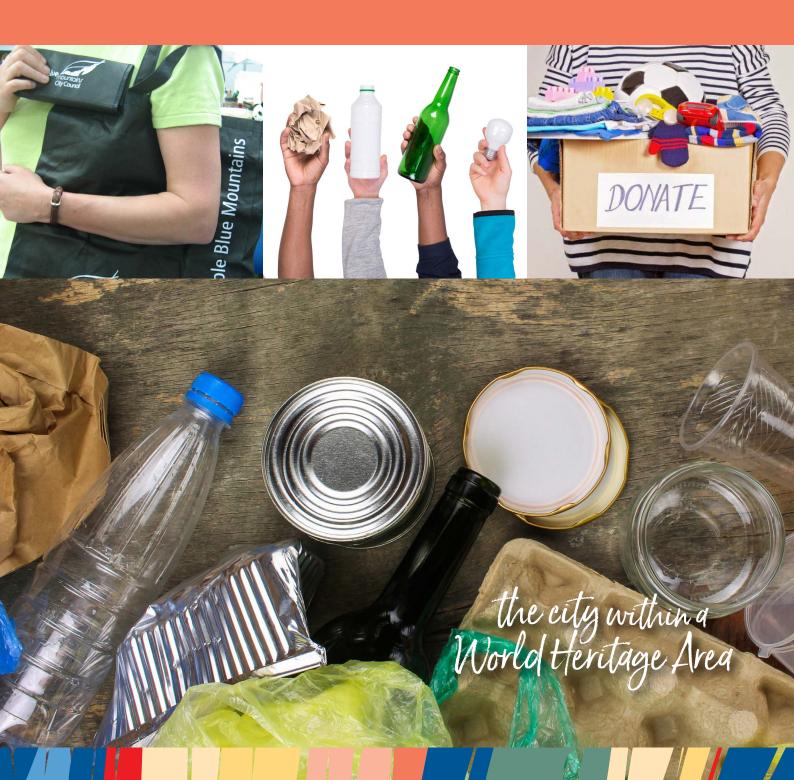


Towards Zero Waste

2022-2031



Document control

Document purpose

This document outlines Council's ambition to encourage a circular economy within our community over the next 10 years. It looks briefly at where we are at, where we want to be, and how we are going to get there.

Document lifespan

2022 to 2031

Document identification

Towards Zero Waste Strategy 2022-2031

Rebecca Scarpin

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Acknowledgement of *Ngurra* (Country)

The City of the Blue Mountains is located within the Country of the Dharug and Gundungurra peoples. Blue Mountains City Council recognises that Dharug and Gundungurra Traditional Owners have a continuous and deep connection to their Country and that this is of great cultural significance to Aboriginal people, both locally and in the region.

For Dharug and Gundungurra people, Country takes in everything within the physical, cultural and spiritual landscape—landforms, waters, air, trees, rocks, plants, animals, foods, medicines, minerals, stories and special places. It includes cultural practice, kinship, knowledge, songs, stories and art, as well as spiritual beings and people—past, present and future.

Blue Mountains City Council pays respect to Elders past and present, while recognising the strength, capacity and resilience of past and present Aboriginal and Torres Strait Islander people in the Blue Mountains region.

Executive summary

"A circular economy is an economic system aimed at minimising waste and promoting the continual use of resources".

NSW Waste and Sustainable Materials Strategy 2041, Stage 1: 2021-2027

This Strategy is part of a long journey by Council and the wider community to tackle the issue of waste and its impact on planetary health. As the population of the world increases, it is also becoming more urgent to reassess how we use limited resources in a finite world.

Landfills are a finite resource, and for Blue Mountains City Council, the highest source of greenhouse gas emissions - which means they must be carefully and proactively managed. Continuing to reduce the amount of waste we send to landfill remains the focus and where we will have the chance to make the biggest impact.

In 2021 Blue Mountains City Council became the first Council in Australia to recognise the Rights of Nature and incorporate them into strategic planning documents. This makes a powerful statement about Council's intent to be a best practice, environmentally responsible organisation in all aspects of its operations and decision making.

As part of Council's Towards Zero Waste Strategy we're working with our community to create a circular economy in which we value all that nature provides and don't allow any of it to be wasted.

From reducing food waste, which accounts for between 6-8% of global greenhouse emissions, to choosing products and materials that can be continually reused rather than discarded.

To prevent as many products and materials as possible ending up in landfill we have already been encouraging avoidance, reuse and recycling. Council has made significant improvements to the infrastructure and services that support resource recovery over time. This has resulted in significant success reducing the amount of material going to Blaxland landfill.

Without these continual improvements, our landfill would be full by 2023.

Council has taken a strategic and evidence-based approach to waste management. The projects outlined and completed as part of previous strategies have reduced waste to landfill to 24,000 tonnes per year. This has extended the life of the landfill site by over a decade to 2037.

This Towards Zero Waste Strategy builds on the successes of the past and embeds the principles of planetary health and a circular economy into the local waste systems. It outlines a new vision: "The Blue Mountains is recognised for leading the transition towards a zero waste community, through focusing on avoid, reuse, recycle and taking responsibility together to enable a circular economy" and a 10 year pathway to delivery of this vision in a sustainable, affordable, inclusive and equitable way.

The Strategy identifies five key themes to continue towards zero waste by improving reuse, recovery and recycling and enabling a circular economy.

These key themes guide the Action Plan:

- 1. Deliver services and grow infrastructure to support a transition towards zero waste;
- 2. Support community connection to drive a circular economy;
- 3. Implement economic measures to encourage a circular economy;
- 4. Support planetary health through compliance and best practice environmental management; and
- 5. Champion the local circular economy to policy makers to enable a zero waste future.

Introduction

About this Strategy

As the economy grows and the consumption of goods and services increases, the quantities and types of waste we produce have expanded and diversified. In response, waste management practices have been required to adapt to developing markets, changing policy, legislative requirements and community expectations.

While waste management in Australia is in transition, the most notable change is the traditional solutions, such as landfilling, are becoming less acceptable. As one of only two cities in the world located within a UNESCO declared World Heritage Area, Blue Mountains City Council recognises its stewardship responsibility in managing the City of Blue Mountains sustainably, within a landscape of global biodiversity and ecosystem significance.

The unique geography of our city also leads to our community being more connected to nature. This, in turn, has seen the community become more aware of the impacts of waste and pollution on planetary health. They are tuning in to the downsides of single-use products and packaging, and recognising the need to maximise the value of recovered materials. They also recognise the importance of developing resilience and sustainability at the local scale, rather than over-relying on global supply chains to provide products and process recyclables. The traditional produce- consume- dispose linear way of thinking (otherwise known as 'cradle to grave') is being replaced with a circular economy ('cradle to cradle'). The priority here is to change the materials we use so that we eliminate what needs to become waste and acknowledge that everything is a resource that can be reused.

This long-term strategy answers the key questions: where are we now in 2021/22, where do we want to be in 2031, and how do we get there? The answers are grounded in community priorities, council realities, regional discussions and state government waste policy, overlaid with the current and future waste changes and the evolution of best practice in the waste industry. The strategy builds on a strong foundation and history of success but also represents a step change in the way we manage waste as a community. We aim to work towards zero waste by pursuing high level strategies and transitioning solutions that recover value from the waste we cannot avoid.

Strategic context

The Towards Zero Waste Strategy 2022 – 2031 has been directly informed by the Blue Mountains Community Strategic Plan 2035, developed in consultation with the community.

The Blue Mountains Community Strategic Plan 2035 (CSP) is the community's plan for the future of the City of the Blue Mountains. It is the highest level, or leading, strategic plan for the Council. It was developed through extensive community engagement and research and outlines the community's vision, priorities and aspirations. Importantly, it addresses how we can best foster social and economic wellbeing while protecting and enhancing our World Heritage environment and overall planetary health.

Part of that vision includes an aspiration for the Blue Mountains to be 'recognised nationally and internationally as a creative model for sustainable living and learning about sustainable communities.'

This Strategy falls under Council's Key Direction 3 of Care: an inclusive, healthy and vibrant city.

The strategic planning focus supports a whole-of-Council approach to delivering services in our local government area.

Figure 1 below outlines the strategic planning context of the Council and the process of operationalising the strategy by pursuing high level strategies and transitioning solutions that recover value from the waste we cannot avoid.

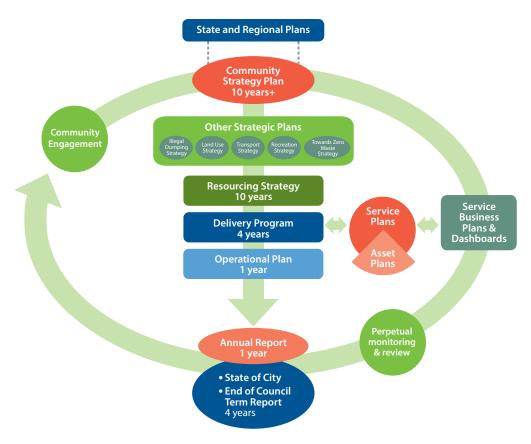
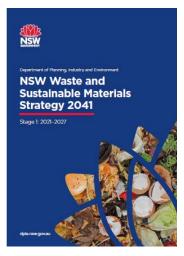


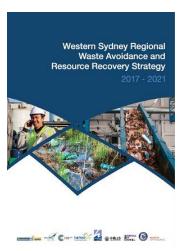
Figure 1: Strategic Planning Context

Related documents

The overall direction for waste and resource management cascades down through national, state and regional requirements. The documents below, collectively inform the scope for a strategy for Blue Mountains, having shared outcomes:







Strategic journey

Since the early 2000's Council has taken a strategic approach to waste and resource management. Council has been part of a long journey to deliver continual improvement to the waste service offered to our community. Figure 2 below outlines the key milestones on this journey.

Our journey to 2037*

This Strategy is part of a long journey by Council in continually improving the performance of the waste service.

| The Community Visioning Project involved over 6000 people in shaping Towards A More Sustainable Blue Mountains: A Map for Action 2000 –2025 |
|--|
| Options for Long-Term Waste and Resource Management Solutions |
| Strategic Waste Action Plan |
| Waste Avoidance and Resource Recovery Strategy 2014–16 |
| New Waste Service (introduction of garden organic bins) |
| Sustainable Blue Mountains 2025 updated with community and renamed Blue Mountains Community Strategic Plan 2035 (2017 edition) |
| Waste Avoidance and Resource Recovery Strategic Plan 2017–2021 |
| Towards Zero Waste Strategy 2022–2031 |
| |

^{*}Current estimate of end of life of Blaxland landfill, based on current disposal rates

Figure 2: Councils Journey to 2037



Methodology

This Strategy was developed using both the Circular Economy model and Waste Hierarchy Principle.

The Waste Hierarchy (Figure 3) champions the concept of sustainable waste management. It sets out the preferences for waste management solutions, stressing the importance of waste avoidance in the first place. It demonstrates preference for reuse before recycling and finally at the bottom of the hierarchy is disposal which is least preferable. It seeks to recover the highest value from materials.

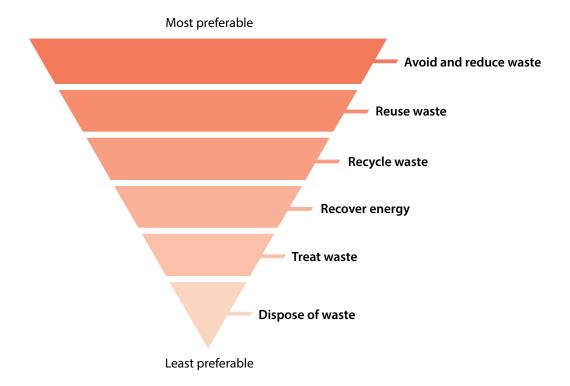


Figure 3: Waste Heirarchy

The circular economy model illustrates the actions and relationships that deliver the outcomes under the waste hierarchy. The model (Figure 4) proposes a system which minimises extraction, keeps materials in the economy for as long as possible and ensures they are able to be reused, repurposed or recycled at the end of their first life. It minimises environmental externalities and maximises use of renewable resources including energy.

Its key principles are:

- · Design out waste and pollution;
- · Keep products and materials in use; and
- · Regenerate natural systems.

A Circular economy can be achieved by:

- · Manufacturers design for recycling, disassembly and repair at the end of a product's life;
- Retailers being open to sell second hand and repaired or remodelled items;
- Consumers, including businesses and Council, buy recycled and select the optimal recovery pathway for end-of-life items; and
- · Council optimises resource recovery at its waste facilities.

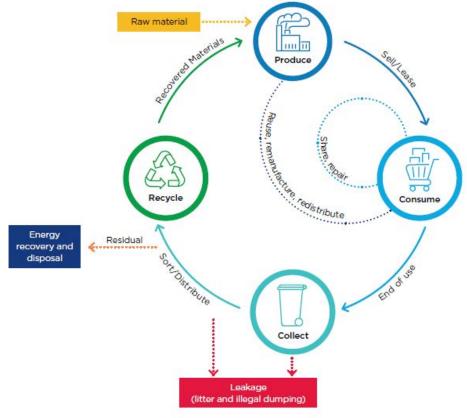


Figure 4: Circular Economy



Where are we now?



Demographics

The City of Blue Mountains is located on the western fringe of Metropolitan Sydney and is one of only two cities in the world surrounded by a World Heritage Area. This presents additional responsibilities, challenges and costs for the Council when it comes to waste and resource management.

Waste services need to be provided to over 34,000 households in 27 towns and villages spread over 100km. This ribbon-like development leads to higher kilometres travelled per bin collection than more compact local government areas and further transport distance to markets for recycled materials.

This influences the cost of providing kerbside services and recycling at the Resource Recovery and Waste Management Facilities (RRWMFs).

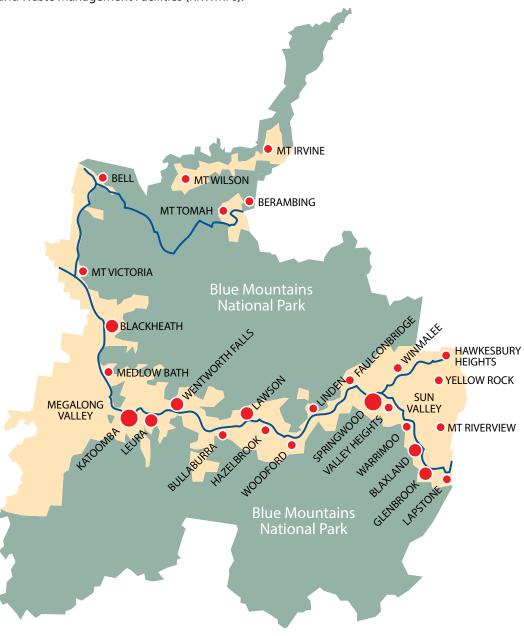


Figure 5: Blue Mountains LGA

Current services

Council offers an extensive range of services:

- · Household 3 bins garbage, recycling, garden organics;
- · Household Booked Waste Collection;
- Household Hazardous and Chemical Drop Off Services;
- · Business Recycling; and
- Resource Recovery and Waste Management Facilities (Katoomba and Blaxland).



Full details of the current waste services provided by Council and service outcomes in 2021/22 can be found in Appendix 1.



Generation rates

The National Waste Report 2020 confirms waste declined in Australia by 3.3% per capita over a 13-year period. The Blue Mountains community is continuing to divert valuable resources from going to landfill and striving towards zero waste.

The Blue Mountains community is generating 9.14Kg (2021 Waste Audit) of waste per household per week which is 16% below the state average of 12.38kg of waste per week.

The community's achievements in reducing the waste sent to landfill are shown on the following pages. Overall more than half (55%) of the community's waste is currently diverted from landfill.

Household Waste per Person per Year (kg) 500 400 200 2000-01 2012-13 2016-17 2019-20 Recovered Garden Vegetation

Figure 6: Household Waste

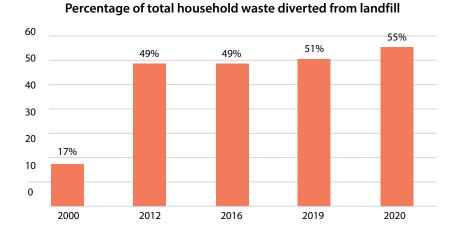
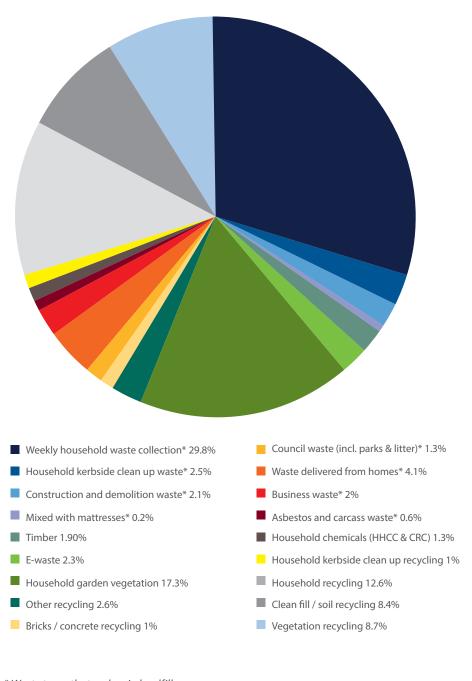


Figure 7: Household Waste Diverted

Waste volumes and composition

Council needs to manage 45,900 tonnes of materials that is generated from various sources across the Blue Mountains. Figure 8 below shows the total waste and recycling types generated in the Blue Mountains in 2020/21–52% of the total generated waste is recovered or recycled, with 24,000 tonnes still going to landfill.



^{*} Waste types that end up in landfill

Figure 8: Total Waste and Recycling Types for Blue Mountains City

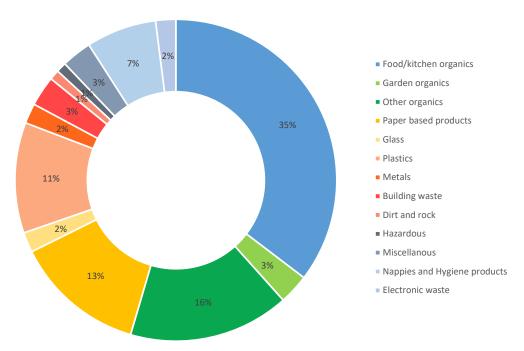


Figure 9: Composition of Household Garbage Bin

In figure 8 it is clearly seen that the weekly household waste collection (red garbage bin) makes up the largest portion of waste that is sent to landfill at nearly 30%. The contents of the red garbage bin is what needs to be focused on.

In October 2021, Council undertook a comprehensive audit that provided information on the household waste composition for each of the three kerbside bins in use across Blue Mountains LGA. Figure 9 shows the current composition of a typical red garbage bin that ends up in landfill. It shows that the highest proportion of material is food/kitchen organics at over a third of the bin. Reducing this organic component in household red bins will be a focus of this Strategy.



Challenges

Managing waste and recycling in a unique city often presents a number of unique challenges that include:

Social

Throw-away society

A key environmental challenge is to reduce waste generation rates and address the ever increasing "throw-away" society that has emerged in recent decades so that we improve the health and longevity of our landfill. While waste generation rates are low in Blue Mountains when compared to the state averages, generation rates are still unsustainable. At current generation rates improvements are needed to ensure the greatest possible level of resource recovery to significantly move towards zero waste. This problem is exacerbated as councils are the endpoint of waste generation in the current model. This means that councils have to deal with the consequences of decisions made by ourselves, our community, and critically, the manufacturing and retail industries. The decisions we all make can have huge impacts on how effectively we can manage and recover waste, yet Council has no control and very little influence on many of these decisions.

· Ageing demographics

The Blue Mountains Council has a higher portion of persons aged 60 or older than Greater Sydney with the most recent statistics showing this group make up 27% of the community. Over the last four years this age group has seen the most growth and it is anticipated that it will continue to increase into the future. More people choosing to retire in the Blue Mountains area and younger people are moving out of the Blue Mountains to start careers and families.

The age structure of our city means a higher demand for support to use the waste and recycling services. Examples of this include assistance with placing bins out to kerbside for collection on a weekly basis, additional bin capacity to meet medical concerns above the standard service and assistance with bundling and tying green waste for collection under the Booked Service.

Community expectations

The community of Blue Mountains is highly engaged and environmentally aware. This offers a strong opportunity for a transition to zero waste and support of a circular economy. However, it can lead to expectations for services and infrastructure that are not realistic for a local government area the size of Blue Mountains. It is difficult to compare the Blue Mountains to any other area in Sydney, NSW or even Australia. At times our community expects services they have seen offered in neighbouring councils or from a council area they have lived in previously. It is not always feasible at a reasonable cost for our residents.

Community engagement

Council has the ongoing challenge of keeping our community informed about available services, how to use them correctly and engaging and influencing our community to motivate for waste avoidance and reuse choices – all of which are essential to get the best outcome from the services. As mentioned earlier, the community is our most important partnership to ensure success.

• Changed Work Arrangements

Covid-19 has seen a change to work arrangements with a significant increase in people working from home. With increased time spent at home, including the increase in consumption, household waste and recycling is set to increase. Waste that would have been generated at the business is now being generated at home and placed in household bins. Furthermore, with increased time at home, people are doing more cleaning and sorting of household items that need to be disposed of.

Environment

As one of only two cities in the world located within a UNESCO declared World Heritage Area, Blue Mountains City Council recognises its stewardship responsibility in managing the City of Blue Mountains sustainably, within a landscape of global biodiversity and ecosystem significance. A major component of this is managing waste sustainably.

Governance

The last four years has seen Federal and NSW Government bring in changes to regulation and policy, and introduce new schemes that have resulted in challenges for the way we manage our waste and recycling here in the Blue Mountains. These include:

Introduction of the Container Deposit Scheme

The NSW container deposit scheme, Return and Earn, is the largest litter reduction scheme introduced in NSW. Return and Earn began rolling out across NSW on 1 December 2017 in response to the Premier's goal of reducing the volume of litter in the state by 40% by 2020. The scheme offers 10 cents for the return of eligible items. While the scheme has been a success, this has resulted in less eligible containers in kerbside recycling as residents use reverse vending machines to receive credit for their glass and plastic bottles and aluminium cans. Council recognises that while this is an Extender Producer Responsibility (EPR) scheme it has limited scope. It does not yet support circular economy as well as it could if all containers were included.

National China Sword Policy

Recycling contracts in Australia came under threat after China implemented its National Sword Policy on January 1, 2018, which restricted the importation of 24 categories of solid waste and limited contamination of those materials to less than 0.5 per cent. This resulted in waste processors across the country, including Council's recycling processor, trying to find new markets to prevent a disruption to kerbside collection services. Unfortunately, the outcome has meant increased costs to process kerbside recycling and tighter contractual conditions with regard to contamination levels.

Mixed Waste Organic Output (MWOO) Regulation

In October 2018, NSW EPA revoked the general and specific Resource Recovery Orders and Resource Recovery Exemptions for the application of MWOO to land due to risks associated with chemical and physical contaminants. While this did not have a direct impact on Blue Mountains Council at the time, as waste was not being processed under an order or exemption, future impacts are that alternate options for treatment of waste are reduced and the perceived risk of moving to an alternative technology (than landfill) has significantly increased.

Waste Export Ban

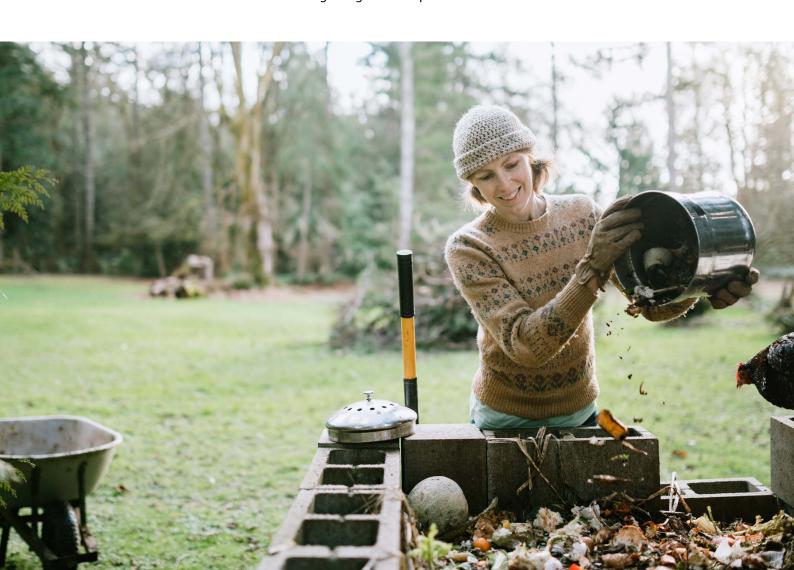
In early December 2020, Australia took an important step towards addressing the ongoing effects of the 2018 waste crisis. The federal parliament passed legislation banning the export of unprocessed waste overseas via the *Recycling and Waste Reduction Act 2020*. The new law provides an impetus to reconfigure local infrastructure to reprocess and re-manufacture recyclables onshore. It should create local demand to reuse these recovered materials in infrastructure, packaging and products as part of a move towards a circular economy.

• Food and Garden Organics (FOGO) Mandate

Under the newly released Waste and Sustainable Materials Strategy 2041, the NSW Government has committed to halve the amount of organic waste sent to landfill and achieve net zero emissions from organics in landfill by 2030. To help achieve this target, the NSW Government is mandating food and garden organics collection for all NSW households and select businesses. For Blue Mountains City Council this will mean going to tender for a FOGO service to begin in July 2026, when the current contracts expire. This will be one of the most significant actions of this Strategy that help us achieve our vision to transition the community towards zero waste and a circular economy.

• Independent Pricing and Regulatory Tribunal (IPART) NSW

In August 2020, IPART released a discussion paper on domestic waste charges (DWC) levied by local councils. The paper identified a wide variation in charges across councils. While the intent originally was to regulate waste charges, this is now being reconsidered by IPART following consultation and feedback. Blue Mountains Council believes transparency for customers and residents when calculating all waste fees and charges annually is the priority. This will show how the charges reflect the reasonable and efficient costs of providing waste services while meeting all legislative requirements.



Financial

All waste services, infrastructure and operations are funded by either the Domestic Waste Management Charge (DWMC) on every residential rated property or gate fees at the Waste Management Facilities.

At approximately \$24 million per year (excluding infrastructure improvements), the Waste Resource Service accounts for the highest expenditure of the Council.

Council endorsed the Six Strategies for Financial Sustainability to ensure ongoing financial sustainability as seen below in Figure 10.

When implemented simultaneously, these six key strategies ensure a financial sustainable Council, living within its means and balancing service provision levels to available funding whilst managing risks. The Waste Resource Service must align with these six strategies when planning for the future of waste and recycling services.

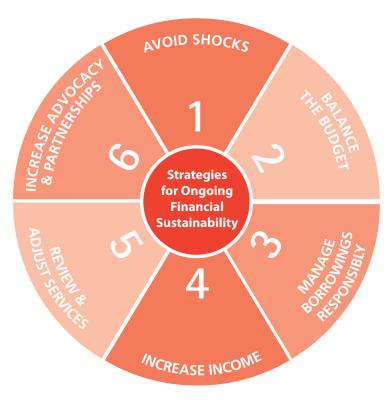


Figure 10: Six Strategies for Financial Sustainability

The Blue Mountains community however, do not have a Resource Recovery and waste disposal option beyond 2037. At current waste generation rates, this is when the landfill at Blaxland Resource Recovery and Waste Management Facility will be full. To date, an acceptable and cost effective alternative beyond 2037 has not been identified and under this Strategy, preliminary work will begin on actioning this. Further details are given in the Current Funding Model section provided in Appendix 2.

Natural disasters

Council acknowledges that because of human induced climate change the incidence and severity of natural disasters will continue to increase. This presents two challenges:

- 1. The local infrastructure for disaster clean-up of waste volumes is not sustainable. Services are provided to support properties to prepare year round, with Council not having the capacity to provide additional/free services for last minute property preparation during emergencies like bushfire or during/following natural disasters. In addition our facilities are not licenced to accept friable asbestos after a bushfire.
 - Council continues to review its disaster waste management, planning response and procedures to mitigate and respond to this potential pressure on Blaxland RRWMF. In addition, a review of the funding for natural disaster waste will be an action to address in this Strategy.
- 2. Council must ensure the waste infrastructure is resilient to natural disasters where possible. This will ensure ongoing service continuity and avoid significant financial shock.

Contractual obligations

Council needs to enter into long term contracts for collection and processing of waste and recycling to ensure best value for money and to guarantee security for both Council and the contractor. Currently, Council is under contract until 2026 for the collection and processing of the household recycling bin and garden organics bin. This means that during the life of this Strategy there is an opportunity to make a change to the current bin configuration. Council will use the next three years to look at the collection and processing options available for household waste and analyse these in terms of risk and what will give us the best social, environmental and financial outcome. Following this, Council will procure services accordingly. The option of a Food and Garden Organics (FOGO) Service will be tendered for at this stage as per the Council resolution in 2020 and the NSW Waste and Sustainable Materials Strategy 2041 Stage 1: 2021-2027 mandating all NSW households to have FOGO by 2030.

Risk

Waste and resource management is a high risk area given the extent of services provided, financial value in resources and equipment, and the compliance requirements of operating waste and recycling services, including a landfill licence. This Strategy has been prepared with consideration given to the risks identified in Council's Corporate Risk Register for the Waste and Resource Recovery Service. While many of these risks are mitigated by current management strategies, some residual risk remains.

A high level Risk Register relevant to this Strategy can be found in Appendix 3 that includes potential risk causes and impacts.

Opportunities

Managing materials and resources in a unique city often presents a number of opportunities that include:

Our community

People love living in the Blue Mountains because of the natural environment and sense of community. Our residents and businesses feel strongly that they are part of a close knit community.

Residents are highly engaged and environmentally aware, which means a strong opportunity for a transition to zero waste and support of a circular economy.

To make zero waste a reality, we all need to work together.

Our proximity

The relative proximity of the Blue Mountains LGA to Sydney, coupled with its unique urban and natural environment create an atmosphere that is difficult to find elsewhere. In addition, we are unique and fortunate to have Sydney Metropolitan Councils to our East and NSW Regional Councils as neighbours to our West. This creates the opportunity for partnerships to work, learn and share with each other on waste and resource management.

Landfill and transfer station ownership

Blue Mountains City Council is one of only a few councils in Sydney that operate two licenced resource recovery and waste facilities. These facilities include a landfill located in the lower mountains and a transfer station in the upper mountains. These two locations ensure equitable access to local services given the elongated geography of our LGA.

These assets are so valuable to our community for the following reasons:

- Transporting our waste to a landfill outside the City will increase the DWMC* for residents
 due to increased transport, profit percentages placed on privately owned landfills and Sydney
 metro levy rates (\$147.10/tonne vs \$84.70/tonne in 2021-22);
- Council has the opportunity to control its own resource recovery from landfill mixed loads
 can be sorted further improving recycling, reducing costs and ensuring best value direction
 of resources. Mixed waste would all be landfilled at a private facility resulting in negative
 social, environmental and financial impacts;
- Proximity principle a sustainable community should manage as much of their own material as possible;
- Flexibility for service level increase in response to fires or other unplanned situations;
- Residents would not have access to local drop off services;
- Access to asbestos and other special wastes requiring disposal would be lost to our community – with a need to take them to Sydney instead;
- Local employment opportunities; and
- The ability to adapt our facilities to support and deliver on circular economy and planetary health ambitions.

^{*} Further explanation of DWMC in Appendix 2

Wider context

The NSW Government has wide-ranging responsibilities for laws and regulations that impact on waste management operations and practices. The waste compliance regime that council must adhere to is complex and diverse, ranging from community strategic planning, procurement, finance and charges, planning and development control, landfill licencing, landfill levies, reporting requirements, pollution control, use of waste materials and waste transport. These are examples of the extent to which waste management is governed.

Current legislation that particularly influences Council's waste management and operational services include:

- NSW Local Government Act 1993;
- NSW Waste Avoidance and Resource Recovery Act 2001; and
- NSW Protection of the Environment Operations Act 1997.

There are many more which are spread across all levels of government, including those on a regional and local level. These are detailed in Appendix 4 - Council's Legislative and Policy Responsibilities.

Future trends

Our current population is just over 79,000 individuals, but there is a prediction that by 2036 this will increase to close to 83,000. Annual visitation rates to the Blue Mountains are expected to be between 6 and 6.6 million by 2038 – a 33% increase on present levels. While this is not a significant increase when compared to other local government areas, more people means more materials for the City to manage.

The improvements implemented in recent years are described in Appendix 5. Without these improvements, our landfill would be full by 2023. The projection over the next three years is that the annual tonnage of waste to landfill will continue to decrease despite population increase. Figure 11 demonstrates the three-year projection of this waste reduction trend, anticipating a further 5,000 tonne reduction of waste to landfill by 2024/25.

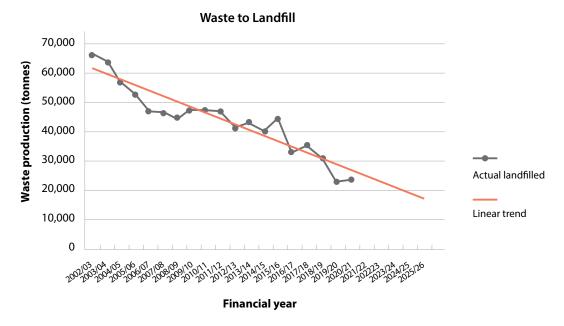


Figure 11: Prediction of Waste Reduction Trend



Where do we want to be?



Vision

The Blue Mountains is recognised for leading the transition towards a zero waste community, through focusing on avoid, reuse and recycle and taking responsibility together to enable a circular economy.

Objectives

Council is aiming to achieve the following objectives through the implementation of this Strategy:



Embed a circular economy by focusing on avoid, reuse, recycle then landfill



Comply with legislation including a focus on environmental management



Maintain ongoing value for money



Ensure flexibility to respond to emerging opportunities



Have a high level of community engagement



Ensure local landfill capacity beyond 2037

Overall targets

Council is aiming to achieve the following targets through the implementation of this Strategy to demonstrate a transition towards zero waste and a circular economy:

- Reduce the amount of materials sent to landfill per person;
- Increase the overall recovery rate of materials;
- Reduce the amount of waste collected via household garbage bins;
- Increase the proportion of materials recovered via the booked waste service;
- Increase safe disposal of hazardous waste via the CRCs and Chemical Clean Out days;
- Increase safe and correct disposal of Construction and Demolition Waste (C&D);
- Ensure local landfill capacity beyond 2037;
- Maintain opportunities for community interaction and number of avoidance and reduction initiatives delivered;
- · Maintain community satisfaction with household bin service;
- Waste Resource Service continues to be self funding with a healthy reserve balance;
- Increase the number of grants and amount of recognition awarded to the Waste and Resource Recovery Service;
- · Waste fees and charges accepted by the community;
- Compliance and environmental management at Resource Recovery and Waste Management Facilities;
- · Best practice waste management at new developments; and
- Increased recognition as a leading and influential organisation in circular economy, planetary health and sustainability.



How will we get there?

Given the context discussed earlier, Council has five themes to inspire and influence the community and facilitate the transition towards a zero waste society:

1. Deliver services and grow infrastructure to support a transition towards zero waste

Council is committed to providing and improving existing waste and recycling services and providing best value zero waste services and infrastructure.

2. Support community connections to drive a circular economy

Engaging, influencing and building partnerships with our community to drive a circular economy.

3. Implement economic measures to encourage a circular economy

Develop and implement pricing policy and economic measures that support and further encourage transition to zero waste and a circular economy.

4. Restore planetary health through compliance and best practice environmental management

Going above and beyond legislative requirements to ensure we are restoring planetary health as we move towards zero waste and a circular economy.

5. Champion the local circular economy to policy makers to enable a zero waste future

Influencing decision and policy makers and regulators to help enable long term vision of a zero waste future, circular economy, innovation and new technologies.

Action in these five themes will deliver the Strategy vision and objectives. This will include ongoing actions from previous years around a commitment to maintaining and improving services as well as new and moving actions that include:

- Focusing on avoiding single-use materials;
- Exploring circular economy opportunities in the business sector;
- Re-establishing waste facility tours and annual events;
- Reviewing options to increase reuse through partnerships and the local sharing economy;
- Exploring potential community programs to promote use of reusable products; and
- Moving to a FOGO service from July 2026.

Action plan

The Strategy Action Plan has been developed by Council to deliver in detail on the Strategy Vision, Objectives and Targets.

Actions are detailed by focus area, and timeframes for implementation are shown, as are the relative objectives each action is linked to. The strategy's six objectives are numbered below and listed for reference:

- 1. Enable a circular economy by focusing on avoid, reuse, recycle before landfill
- 2. Comply with legislation including a focus on environmental management
- 3. Maintain ongoing value for money
- 4. Ensure flexibility to respond to emerging opportunities
- 5. Have a high level of community engagement
- 6. Ensure local landfill capacity beyond 2037

| Action Plan Themes | Actions | Objectives Addressed | Timeline |
|--|--|-------------------------|---------------------|
| 1. Deliver services and grow infrastructure to support a transition towards zero waste | 1.1 Continue to provide the current household three bin system and booked waste service until contract expiry | All | 2025/26 |
| | 1.2 Local provision of Resource Recovery and Waste Management Facilities (RRWMFs) at Blaxland and Katoomba | All | Ongoing |
| | 1.3 Maintain year round collection of low toxic hazardous wastes (i.e. paints, batteries, smoke detectors etc.) at both RRWMFs | All | Ongoing |
| | 1.4 Provide regular Chemical Clean Out Services to meet the community demand | All | Ongoing |
| | 1.5 Undertake an option analysis to identify the best collection and processing options for household waste streams from July 2026 to deliver zero waste | All | 2023/24- 2024/25 |
| | 1.6 Prepare tender documents for collection and processing of household bins and potentially business bins from July 2026 to include FOGO | All | 2024/25 |
| | 1.7 Ensure service delivery caters to the needs of residents with mobility concerns and in diverse housing types | 1,2,3,5,6 | 2022/23 |
| | 1.8 Establish threshold for economic collection of larger communal bins in multi-use development and residential flat buildings | 2,3,4,5 | 2023/24 |
| | 1.9 Undertake an options analysis to identify best value solutions to manage household materials that do not fit in bins, including community consultation on willingness to pay. | All | 2023/24 |
| | 1.10 Ensure Blaxland RRWMF accommodates C&D waste disposal and supports reuse and recycling for local builders | All | 2022/23 |

| Action Plan Themes | Actions | Objectives Addressed | Timeline |
|--|---|-------------------------|---------------|
| | 1.11 Maximise fleet efficiency with an on board fleet software system | All | 2022/23 |
| | 1.12 Investigate an online system for all waste requests to improve customer service | 3,4,5 | 2024/25 |
| | 1.13 Continue the provision of strategically placed park and street litter bins | All | Ongoing |
| | 1.14 Reduce greenhouse gas emissions from the Waste and Resource Recovery Service | 2,3 | Ongoing |
| 1. Deliver services and grow infrastructure to support a transition towards zero waste | 1.15 Finalise and implement after the Resource Recovery and the Waste Management Facility Asset Infrastructure Program | 2,3,4 | Ongoing |
| | 1.16 Secure local waste disposal capacity by completing the landfill liner environment protection works at Blaxland RRWMF | 2,3,4,6 | 2023/24 |
| | 1.17 Secure waste disposal options post local landfill life of 2037 | All | 2029/30 |
| | 1.18 Finalise the future use and undertake works to relinquish the landfilling licence at Katoomba RRWMF | 1,3,4,5 | 2024/25 |
| | 1.19 Build climate resilience through a review of current infrastructure design to ensure suitability for future climate change impacts | 2,3,4,5,6 | 2022/23 |
| | 1.20 Explore options to further drive the circular economy through reuse and recycling at the RRWMFs, – subject to regulations, market, cost effective technology and transport options – including natural disaster waste where possible | 1,3,4,5,6 | Ongoing |
| | 1.21 Ensure the RRWMFs meet and where possible exceed their EPL conditions | 1,2,5,6 | Meets |
| | 1.22 Strengthen long term financial planning around capital works and acquisition planning | 2,3,4,6 | Ongoing |
| | 1.23 Maintain best value through further reviews and improvements to service delivery, including agility and innovation | All | Ongoing |
| | 1.24 Comply with any new or changed federal or state legislation | All | Ongoing |
| | 245 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 12455 | 0 : |
| | 2.1 Explore circular economy opportunities in the business and not-for-profit sectors | 1,3,4,5,6 | Ongoing |
| 2. Support community connections to drive a circular economy | 2.2 Focus on promoting organic diversion for households and businesses | 1,3,5,6 | 2022- 2026 |
| | 2.3 Re-establish waste facility tours and annual events | 1,4,5,6 | 2022/23 |
| | 2.4 Facilitate participation and compliance in use of recycling and garden organic bins | 1,3,4,5,6 | Ongoing |

| Action Plan Themes | Actions | Objectives Addressed | Timeline |
|--|--|-------------------------|---------------|
| 2. Support community connections to drive a circular economy | 2.5 Develop a recognition/champion program for community actions contributing towards a circular economy | 1,5,6 | 2022/23 |
| | 2.6 Investigate opportunities for a smaller waste bin to incentivise those who produce less waste and are moving towards zero waste | 1,3,5,6 | 2022/23 |
| | 2.7 Provide and promote services that support community to prepare their properties for bushfires | 1,2,3,4,5 | 2022/23 |
| | 2.8 Promote recovery and recycling progress and outcomes to embed community confidence in their actions | 1,5,6 | Ongoing |
| | 2.9 Focus on avoid and reuse through existing programs and explore new innovative community programs to promote reusable products. | 1,3,4,5,6 | Ongoing |
| | 2.10 Enable volunteer support and promotion of the reuse shed and the TOOLO Repair Café at RRWMFs | All | 2022/23 |
| | 2.11 Review and update community engagement methods for a circular economy and explore new ways to reach and inspire community | 1,3,5 | Ongoing |
| | 2.12 Engage with schools and universities to partner in events, promote innovation and best practice | 1,3,5 | Ongoing |
| | 2.13 Implement education actions of the Illegal Dumping Strategy 2020-2025 | All | 2022- 2025 |
| | 2.14 Increase reuse through partnerships and the local sharing economy | 1,2,3,5,6 | 2022/23 |
| | 2.15 Implement any relevant actions of the NSW Government Strategy | 1,3,4,5,6 | 2022- 2027 |
| 3. Implement economic measures to encourage a circular economy | 3.1 Set fees and charges to enable the circular economy, address required capital works and prevent adverse environmental and WHS outcomes | All | Ongoing |
| | 3.2 Review options for funding the management of waste generated through natural disaster | All | 2022/23 |
| | 3.3 Explore alternative revenue options for funding council waste and resource recovery services | 2,3,5 | Ongoing |
| | 3.4 Manage the NSW Government's Better Waste and Recycling Fund (or similar) to resource strategic actions | All | Ongoing |

| Action Plan Themes | Actions | Objectives Addressed | Timeline |
|---|---|-------------------------|----------|
| 4. Restore planetary health through compliance and best practice environmental management | 4.1 Review and improve the development controls to transition towards zero waste from demolition, construction and ongoing life of new developments | 1,2,3,5,6 | 2022/23 |
| | 4.2 Investigate the feasibility to increase resourcing to ensure waste service compliance amongst the community and development control for best practice waste management | All | 2024/25 |
| | 4.3 Ensure Council takes a lead as a zero waste organisation, embedding best practice among its operations and staff | 1,2,3,6 | Ongoing |
| | 4.4 Improve environmental performance by upgrade of the water management system at Katoomba RRWMF | 2,3 | 2022/23 |
| | | | |
| 5. Champion the local circular economy to policy makers to enable a zero waste future | 5.1 Contribute to consultation processes, including making submissions relating to the review of legislation, regulation and strategy | All | Ongoing |
| | 5.2 Actively participate in regional waste forums such as WSROC, NetWaste and Western Sydney Parklands | 1,2,3,6 | Ongoing |
| | 5.3 Actively pursue regional waste partnerships and funding that helps enable long term vision, circular economy and new technologies | 1,3,6 | Ongoing |
| | 5.4 Lobby on current and emerging issues that will have a positive impact to zero waste and circular economy (e.g. phase out of single-use plastic, EPR schemes for problem wastes, new technologies) | All | Ongoing |

How will we know if we have been successful?

Measures

Deliver services and grow infrastructure to support a transition towards zero waste

- A decrease in the overall waste generation per person on 21/22 figures;
- An increase in the percentage of material recovered from the kerbside services on 21/22 figures;
- A decrease in hazardous waste found in kerbside services on 21/22 figures; and
- · Reducing the overall percentage of waste to landfill resulting in secured local landfill.

Support community connections to drive a circular economy

- Increase in the number of avoidance and reduction initiatives delivered on 21/22 figures;
- · Increase in the number of community events held on 21/22 figures;
- Increase in the number of collaborative projects with community groups on 21/22 figures;
- · A reduction in contamination of recycling and garden organic bins on previous audit; and
- Maintain high satisfaction of the garbage bin and recycling collection as in the 2020 community survey.

Implement economic measures to encourage a circular economy

- Fees and charges set to provide financial incentive to sort and recover/recycle waste before disposal;
- · Number of successful grant applications;
- Completed capital works projects as outlined in the Delivery and Operational Plans;
- · Maintain affordable services in line with the self-funding model; and
- Maintain high satisfaction of the garbage bin and recycling collection as in the 2020 community survey.

Enhance planetary health through compliance and best practice environmental management

- Annual completion of operational compliance plan reporting;
- A reduction in construction and demolition waste sent to landfill on 21/22 figures;
- Best practice waste management at new medium density development in accordance with the Development Control Plan; and
- Revised and updated Towards Zero Waste Strategy 2022-2031.

Champion the local circular economy to policy makers to enable a zero waste future

- · Percentage of available consultations involved in;
- Percentage of attendance at relevant forums; and
- · Number of lobby actions.

Evaluation methodology

Council will monitor and evaluate this Strategy. The evaluation process will consider performance against targets as listed above under each theme, as well as costs and benefits.

Results will be reported each year via the Council's existing annual reporting process. This will include a review of funding requirements.

The Towards Zero Waste Strategy will be reviewed bi-annually, including an assessment of progress against the objectives and targets.



Implementing this Strategy

Resourcing

To move the Blue Mountains community towards zero waste we need to ensure there are adequate resources. The implementation of this Strategy will be funded by the Domestic Waste Management Charge applied to all properties rated residential, gate fees collected at the RRWMFs and grant funding. Services, infrastructure, operations, engagement, strategic planning and compliance are funded by either of these three funding sources. Further detail on the funding model including constraints and opportunities can be found in Appendix 2.

Reporting and ownership

The Waste and Sustainability team will undertake the ongoing monitoring of the Strategy implementation and review.

Partnerships

Our biggest partnership is with the local community. Transitioning towards a zero waste society, and viewing waste as a resource that enables the circular economy is highly dependent on our community. Council, as an integral part of our community, can model zero waste operations and create demonstration sites as part of its Planetary Health Initiative. It can also provide services and support to engage the wider community to help achieve this transition. Critically, we all need to understand that in a finite world with an increasing population our resources are limited and must not be wasted.

Partnerships also extend outside the organisation to other councils within the region, Western Sydney Regional Organisation of Councils (WSROC) and NetWaste and to the Department of Planning, Infrastructure and Environment (DPIE).

Through the Planetary Health Initiative we are partnering with leading university and other research organisations to explore best practice solutions for transitioning to a zero waste society.

Glossary

For clarity, a few key definitions relevant to the context of this Strategy are presented below in order to ensure consistent understanding throughout this document.

Circular Economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended. Such a model is aimed at eliminating waste and the continual use of resources.

Extender Producer Responsibility (EPR) simply means that those who created the product (producers and manufactures) should make sure it is correctly disposed of and recycled in an easier manner and less costly way. As a result of this, the system itself make the product life cycle circular, produce less waste and done in a more efficient manner. EPR schemes will be crucial as the community identify new and emerging waste types as increasingly difficult and costly to dispose of.

Household Waste is all waste created by households which includes garbage, recyclables and garden organics that councils collect and receive. Council services include kerbside bin collections, kerbside clean-up collections and household drop-off facilities.

Food Organic and Garden Organic (FOGO) is a collection service that combines garden organics and food organics in one bin. It includes fruit and vegetable scraps, leftovers from meals, meat, fish, bread, egg shells, dairy products, coffee grounds and tea bags as well as garden waste including leaves, small twigs and branches and lawn clippings. By collecting these materials together in a single bin, high quality compost can be produced and there is avoidance of Council's greatest contributor to greenhouse gases - methane generated from organics material decomposing in landfill.

Waste Generation Rates estimate the amount of waste created by residences or businesses over a certain amount of time (day, year, etc.). Waste generation includes all materials discarded, whether or not they are later recycled or disposed of in a landfill.

Zero Waste is a set of principles that attempts to encourage a lifestyle that ensures as many products and materials are reused, rather than ending up in landfill. It does not mean no waste is ever produced or sent to landfill, however it does mean trying to prevent anything from ending up in landfill. Certain items (like asbestos) will always need to be landfilled, but only these essential items go to landfill, everything else is recovered where ever possible. Zero waste is, in essence, a whole lifecycle change – from the design and manufacturing processes to rethinking the purchasing decisions we make, and evaluating whether what we are consuming will produce waste or not. The overall goal is to keep materials in circulation for as long as is possible, by ensuring numerous valuable lifecycles. Instead of discarding resources, the aim is to create a system whereby all of them are able to be reused again at their highest value.

Reference list

Blue Mountains City Council (2017) Blue Mountains Community Strategic Plan 2035

Blue Mountains City Council (2017) Delivery Program 2017-21 and Operational Plan Year Four 2020-2021

Blue Mountains City Council (2017) Resourcing Strategy 2017-2027

Blue Mountains City Council (2017) Waste Avoidance and Resource Recovery Strategy 2017-2021

NSW Environment Protection Authority (2021) NSW Waste and Sustainable Materials Strategy 2041, Stage 1: 2021-2027

WSROC (2017) Western Sydney Regional Waste Avoidance and Resource Recovery Strategy 2017-2021



Appendices

Appendix 1. Waste Services Provided by Council and Service Outcomes in 2020/21

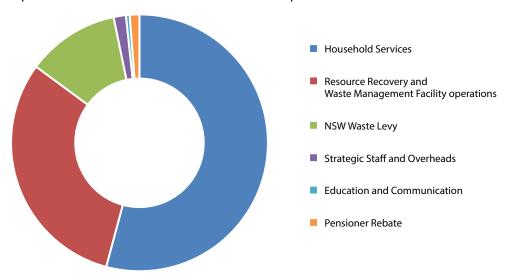
| Household waste collection | Household waste collection | | | | | | | | |
|---|----------------------------|---|--|--|--|--|--|--|--|
| Current service level | Provided by | Funded by | Key service outcome | | | | | | |
| 140 litre garbage bin collected weekly Different bin size or additional bin on a user pays basis | Council staff | Fully funded by Domestic Waste Management Charge | 34,352 households provided with a garbage collection service. With 31,707 having a 140L service and 2,645 having a 240L service. | | | | | | |
| | | | 17,996 tonnes (227 kg per capita) of household waste collected. | | | | | | |
| Household recycling collection | | | | | | | | | |
| Current service level | Provided by | Funded by | Key service outcome | | | | | | |
| 240 litre co-mingled recycle bin collected fortnightly Different bin size or additional bin on a user pays basis | Contract | Fully funded by Domestic Waste Management Charge | 34,352 households provided with a recycling collection service. With 897 having a 140L service, 32,046 a 240L service and 1,409 having a 360L service. 7,076 tonnes (89kg per capita) of household recycling collected. | | | | | | |
| Household garden organics | collection | | | | | | | | |
| Current service level | Provided by | Funded by | Key service outcome | | | | | | |
| 240 litre garden organic bin collected fortnightly Additional bin on a user pays basis | Contract | Fully funded by Domestic Waste Management Charge | 34,352 households provided with a garden organics collection service. With all having a 240L service. | | | | | | |
| dec. pays subis | | | 11,470 tonnes (144 kg per capita) of household garden organics collected. | | | | | | |

| Household booked kerbside waste collection | | | | | | | |
|---|---|---|--|--|--|--|--|
| Current service level | Provided by | Funded by | Key service outcome | | | | |
| Kerbside waste collection (up to 4m³) | Council staff | Fully funded by Domestic Waste | 1,893 tonnes bulky waste material collected, of which | | | | |
| 2 services a year | | Management Charge | 679 tonnes was recycled. 35.9% recovered. | | | | |
| Additional service on a user pays basis | | | 33.9% recovered. | | | | |
| Community Recycling Centr (low toxic items i.e. paint, ba | e atteries, smoke | detectors etc) | | | | | |
| Current service level | Provided by | Funded by | Key service outcome | | | | |
| Blaxland RRWMF open 7 days a week, 8am - 4.45pm. Katoomba RRWMF open 10am- 4pm Mon-Fri & 10am – 2pm Saturdays | Contract | NSW EPA | 42,192 kg received at Katoomba and 3,400 kg received at Blaxland after one months operation as opened in May 2021 | | | | |
| Household chemical cleano (high toxic items i.e. acids, h | ut drop-off serv erbicides, pool | rice chemicals etc) | | | | | |
| | | | | | | | |
| Current service level | Provided by | Funded by | Key service outcome | | | | |
| 1 x 1 day plus 1 x 2 day drop- offs at Katoomba RRWMF | Provided by Contract | Funded from facility gate fees | 114 tonnes of household liquid and hazardous wastes over the 4 services. | | | | |
| 1 x 1 day plus 1 x 2 day drop- | • | Funded from | 114 tonnes of household liquid and hazardous wastes | | | | |
| 1 x 1 day plus 1 x 2 day drop- offs at Katoomba RRWMF 2 x 4 day drop off at Blaxland | Contract | Funded from facility gate fees 1 day funded by NSW EPA | 114 tonnes of household liquid and hazardous wastes over the 4 services. 3,649 customers used this | | | | |
| 1 x 1 day plus 1 x 2 day drop- offs at Katoomba RRWMF 2 x 4 day drop off at Blaxland RRWMF | Contract | Funded from facility gate fees 1 day funded by NSW EPA | 114 tonnes of household liquid and hazardous wastes over the 4 services. 3,649 customers used this | | | | |
| 1 x 1 day plus 1 x 2 day drop- offs at Katoomba RRWMF 2 x 4 day drop off at Blaxland RRWMF | Contract ner waste collec | Funded from facility gate fees 1 day funded by NSW EPA tion | 114 tonnes of household liquid and hazardous wastes over the 4 services. 3,649 customers used this service. Key service outcome 345 x 240L garbage bins serviced weekly and 269 x | | | | |
| 1 x 1 day plus 1 x 2 day drop- offs at Katoomba RRWMF 2 x 4 day drop off at Blaxland RRWMF Non-rateable properties oth Current service level Scheduled collection of waste | Contract ner waste collect Provided by Council staff | Funded from facility gate fees 1 day funded by NSW EPA tion Funded by Waste service | 114 tonnes of household liquid and hazardous wastes over the 4 services. 3,649 customers used this service. Key service outcome 345 x 240L garbage bins | | | | |
| 1 x 1 day plus 1 x 2 day drop- offs at Katoomba RRWMF 2 x 4 day drop off at Blaxland RRWMF Non-rateable properties oth Current service level Scheduled collection of waste | Contract Provided by Council staff (garbage bins) Contractor (recycle and garden | Funded from facility gate fees 1 day funded by NSW EPA tion Funded by Waste service | 114 tonnes of household liquid and hazardous wastes over the 4 services. 3,649 customers used this service. Key service outcome 345 x 240L garbage bins serviced weekly and 269 x 240L recycling bins and 39 x 240L garden organic bins | | | | |
| 1 x 1 day plus 1 x 2 day drop- offs at Katoomba RRWMF 2 x 4 day drop off at Blaxland RRWMF Non-rateable properties off Current service level Scheduled collection of waste from non-rateable bins | Contract Provided by Council staff (garbage bins) Contractor (recycle and garden | Funded from facility gate fees 1 day funded by NSW EPA tion Funded by Waste service | 114 tonnes of household liquid and hazardous wastes over the 4 services. 3,649 customers used this service. Key service outcome 345 x 240L garbage bins serviced weekly and 269 x 240L recycling bins and 39 x 240L garden organic bins | | | | |

| Provision of Resource Recovery and Waste Management Facilities | | | | | | | |
|---|---------------|---|---|--|--|--|--|
| Current service level | Provided by | Funded by | Key service outcome | | | | |
| Blaxland RRWMF open 7 days a week, 8am – 4.45pm. Katoomba RRWMF open 10am – 4pm Mon – Fri & 10am – 2pm Saturdays Provided for Blue Mountains residents and businesses only. | Council staff | RRWMF gate fees | 80,983 vehicles visited the two RRWMFs. 46,000 (approx.) tonnes of material was delivered to the RRWMFs, with approximately over 50% recycled. | | | | |
| Community engagement ar | nd education | | | | | | |
| Current service level | Provided by | Funded by | Key service outcome | | | | |
| Education to the community is delivered in several forms: Council's website; Weekly Gazette advertisement; Newsletters; Resource Recovery Guide; Workshops; Social media; Info stalls at local markets; Waste App; Programs i.e. compost Hub & Get Grubby; Booked waste service flyers. | Council staff | Fully funded by Domestic Waste Management Charge NSW government funding | Due to natural disasters and Covid19 through 2019/20 our focus was on numerous service level changes and keeping the community informed. Along with these reactive service changes there were also planned major changes to the booked waste service and opening hours of Katoomba RRWMF. | | | | |
| Strategic planning and adv | осасу | | | | | | |
| Current service level | Provided by | Funded by | Key service outcome | | | | |
| Council strategically plans for waste services and assets and actively participates in relevant consultation processes to advocate for improved waste outcomes in the Blue Mountains | Council staff | Fully funded by Domestic Waste Management Charge and and RRWMF gate fees | Consultation with EPA and regional waste groups NetWaste and WSROC. Drafting this Strategy, service reviews and advocacy to IPART. | | | | |
| Major upgrade of facilities | | | | | | | |
| Current service level | Provided by | Funded by | Key service outcome | | | | |
| Council project manages the major capital works projects relating to waste assets and infrastructure | Council staff | RRWMF user fees | Commenced construction of landfill liner. | | | | |

Appendix 2. Current funding model

Council's Waste and Recycling Service is a self-funding model based on a 'user pays' approach. This allows for true costing, to allow for transparency and avoids drawing on general rating revenue that is needed for other services across the City. Various fees and charges are set at a rate that will generate income equal to total expenditure needed to operate the service. In 2020/21, this expenditure was approximately \$24.355 million, excluding major infrastructure improvements. The chart below summarises this expenditure.



Below are the components of the waste expenditure.

Income

Each financial year, RRWMF gate fees are formally adopted in Council's Fees and Charges. Gate fees are set to ensure full cost recovery of operating the RRWMFs – that is, a 'user pays' system.

These costs include:

- Contracts
- Staff (operational, management, strategic planning)
- · Utilities such as electricity, water and sewerage
- · Leachate disposal to sewer
- · Licence fees
- · Fleet/equipment and fuel
- · Environmental monitoring
- Site and equipment maintenance
- · NSW Government Waste Levy
- · Loan repayments for previous infrastructure projects
- Communications

Increasing regulation has led to increased operating costs compared with previous decades. Almost 80% of these costs are fixed, regardless of how much waste is received.

Gate fees are then set according to the type of waste material. Mixed residual waste is the most costly to manage and is therefore priced higher than other materials that can be recycled. This pricing structure provides a financial incentive to sort waste materials prior to delivery to the RRWMF, thereby increasing recycling.

As intended, this has helped drive less waste going to landfill each year. Paradoxically, this success (less waste) has led to less income (from decreased customers) and a need to recover similar, or growing operating costs (mainly fixed) from fewer customers – thereby increasing the per tonne gate fee. Thus, as better recycling or waste diversion is achieved, the higher the costs to customers will become. This is illustrated below:

Example illustrating the 'Paradox of Success'

| Total operating cost | Gate fee for mixed waste | | Actual tonnes received | Income deficit (\$) | Impact on RRWMF financial reserve balance (\$) | Following year's fee for mixed waste (based on less tonnes) |
|----------------------------|-----------------------------|--------|------------------------------|------------------------|--|---|
| 14,400,000 | \$320/tonne | 45,000 | 40,000 | 1.6M | 1.6M | \$400/tonne |

The other main source of income to offset operating costs is the Domestic Waste Management Charge (DWMC), also formally adopted each year in Council's Fees and Charges. The NSW Local Government Act 1993 requires that the DWMC be applied to all rated properties to which the service is available. It also requires that the value of the DWMC is based on a "reasonable cost calculation". Therefore, the DWMC is calculated to cover the cost of providing the household services which include bin provision, collection, processing, education and promotion.

Council is also able to seek grant funding for certain initiatives, particularly from the NSW Government's current "Waste Less, Recycle More" funding package. This includes the Better Waste and Recycling Fund, worth approximately \$110,000 per year to Council until the end of 21/22 financial year. The Waste Less Recycle More funding package has now finished. The NSW EPA is currently consulting with local government about the future of this funding under the new Waste and Sustainable Materials Strategy 2041. The amount allocated for local government initiatives is only around 10% of what the Better Waste & Recycling Fund has been for the past decade.

Finally, Council can earn some income from the sale of material recovered from the RRWMFs for recycling such as metals and cardboard. As these materials operate in a commodity market, the value Council receives fluctuates. Sometimes there is no income or indeed an expense to have these recycled.

Expenditure

The expenditure for the Waste Resource Service relates to the provision of the services outlined in Appendix 1. In summary, these are:

- · Household kerbside services
 - Garbage collection
 - Recycling collection
 - Garden Organics collection
 - Booked Waste Service
- Blaxland and Katoomba Resource Recovery and Waste Management Facilities (RRWMFs)

Loan repayments

Council currently has a number of loan repayments associated with the improvements to waste infrastructure outlined in Appendix 6. Council's waste fees and charges also generate income to meet this expense.

Loan repayment costs relate to the following infrastructure projects:

- Construction of the Katoomba Resource Recovery Centre and Transfer Station;
- Construction of Blaxland Landfill Cell B, Stages 1,2,3 and 4; and
- Construction of the Blaxland RRWMF gatehouse and Resource Recovery Centre.

At the time of raising these loans, Council endorsed the business case for these improvements as providing good value for money.

Reserves

Council needs to maintain financial reserves for risks associated with providing the Waste Resource Service.

The operation of Resource Recovery and Waste Management Facilities is a high cost function of the Council. It also relies upon high cost infrastructure. Therefore, there is a need to maintain a Resource Recovery and Waste Facility Reserve that will enable continued operation in situations that could otherwise require the temporary closure of the sites and therefore cease this essential service. In addition, the Reserve is used to prepare for future infrastructure and site remediation costs.

Council also maintains a Domestic Waste Reserve, to ensure that any unforeseen expenses relating to the household services can be funded from Domestic Waste Management Charge (DWMC) income, and not general revenue. For example, if more waste were collected than budgeted for, this Reserve could be used to fund the unbudgeted disposal costs. This Reserve is also used for any cost savings in providing the household waste services as DWMC revenue is restricted and must only be used to fund household waste services. These are consistent with the requirements of the *NSW Local Government Act 1993*.

Appendix 3. Resource Recovery and Waste Management Service Risk Register

| RISK ID: SER26 | RISK REVIEW | V DATE: | RISK REPORTING | DATE: | | | | | | | |
|---|-------------------------------------|-----------------------------|--|----------------|---|----------|---|-----------------|------------------|-----------------------|-----------------------|
| | June 2021 | | October 2021 | | | Overall | l Current Risk Ra | ting | | HIGH | |
| Risk Name: Resource Recovery & Waste Managemen | nt Service | | | | | | | | | | |
| Business Unit: Cultural & Community Services | | | | | | Та | rget Risk Rating | | ' | MEDIUM | |
| Risk Description: | | | | | | Wit | hin Risk Appetite | • | | NO | |
| Failure to provide a diverse range of waste services for commercial and industrial customers, in meeting public | | | | | 0 | verall (| Controls Effective | eness | SATI | SFACTORY | , |
| As well as investigating new technologies to meet the advocating on the community's behalf in response to F | challenges of v | waste ma | nagement within th | e City and | | | Likelihood | | | LIKELY | |
| as carbon tax liabilities and waste levies. | ederal and St | ale Gover | Timent policy on is | sues sucii | | | 1 | Current Conse | quences Rating | 5 | |
| | | | | | P | eople | Environmental | Financial | Compliance | Reputation | Service Delivery |
| | | | | | In | npact | Impact | Impact | Impact | Impact | Impact |
| | | | | | HI | GH 17 | HIGH 21 | LOW 5 | MEDIUM 14 | MEDIUM 13 | MEDIUM 12 |
| | | | | | | | | | | B: | 0 |
| Potential Risk Causes | | Potent | tial Risk Impacts | | | | Existing | Risk Controls | | | Controls ctiveness |
| Failure to generate sufficient Revenue at the gate to cover the operational costs | Contract | t breach a | or political damage nd/or service delivery | impacts | | Budge | t review processes | | | SATI | SFACTORY |
| Insufficient funding to undertake key waste related capital projects Decreasing revenue, due to General waste generation | Externa | | ety of staff and comm tions/ reviews and inc | | | | in training levels to e | | f have awareness | vareness SATISFACTORY | |
| rates decreasing per capita within the LGA 4) Ever changing Legislation requirements | Staff he resource | alth and sa e allocation | afety, wellbeing and uns to respond to unre | asonable | | | ry engagement v | | | | |
| Changes in strategic planning by regulating agencies such as EPA Saset management (aging, near capacity) Failure to retain a viable and skilled workforce | 6. Financia | er/complair al and or in | nant management ma Itellectual loss to Cou delivery (partial closu | itters ncil | | | ling Contractors (rs Association (ALC ce | | | | SFACTORY |
| Failure to retain a viable and skilled worklote Failure to maintain community support for Councils facilities | Environ activities | | m as a result of oper | ational | | Implen | mentation of Asset m | anagement pro | gramme | NEEDS | ATTENTION |
| 9) Landfill life will end in 2037 | douville | | | | Maintain appropriate levels of Community community and Education. | | | | y communication | SATI | SFACTORY |
| | | | | | | - Staf | itment to continuous ff and community of systems | | | | BFACTORY |
| | | | | | | (Availa | igate other waste able technology and il systems in partner | d opportunities | | | ATTENTION |
| | | | | | | Waste | Audits | | | SATI | SFACTORY |
| | | | | | | Strate | gic Operational Plans | S | | SATI | SFACTORY |
| Additional Risk Treatment Actions / Strategies | | Respor | nsible Manager | | | Cui | rrent Progress | | | | usted Completior |
| | | | | | | | | | Date | | Date |
| Implementation of fleet technology across the branch | | Dome | stic collections | Early stages | s of (| | ment – identifying sp eeds analysis | ecifications an | a | | |
| Improved productivity through changes in Plant and work processes | | Waste Fa | acilities within the LGA | Ongo | ing r | eviews | aligned to asset mar | nagement | | | |
| Use of technology to identify improved landfilling strategies ar | nd practices | Waste Fa | acilities within the LGA | Early stages | s of o | | ment – identifying sp eeds analysis | ecifications an | E | | |
| | | | | | | | | | | | |

Appendix 4. Council's Legislation and Policy Responsibilities

The development of this Strategy has taken into account relevant Federal and State legislation, policies, targets and recent changes to waste legislation impacting the direction of waste avoidance and resource recovery in the Blue Mountains. These are described below.

| LEGISLATION/ POLICY | DESCRIPTION | LOCAL IMPLICATIONS | STATUS |
|---|--|--|------------------------------|
| FEDERAL | | | |
| National Waste Policy | The Policy sets out the aims, principles to guide actions, key directions and priority strategies. The Policy targets outcomes for national waste management and resource recovery policy for the next decade. | The framework will aim to support efficient industry based schemes for collecting and recycling end of life products. | Current |
| Australian Packaging Covenant (APC) | The Australian Packaging Covenant is an agreement between companies in the supply chain and all levels of Government to reduce the environmental impacts of consumer packaging. The focus of the covenant is on sustainable packaging design, recycling of used packaging and reduction of litter from packaging. | The APC sees the food & beverage industry seeking to maintain the cost of recycling on communities, not producers of the packaging. | Current |
| The Environment Protection and Biodiversity Conservation Act 1999 | The Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance. | Governs our management of the federally listed endangered ecological swamp on the Katoomba RRWMF. | Current |
| STATE | | | |
| The NSW Local Government Act 1993 | This Act establishes the third tier of government (local) in NSW and prescribes how local government is to operate. | Defines Council responsibilities regarding waste removal, treatment and disposal; the preparation of local policies; the powers to charge residents for waste services; the requirements for tendering services; how councils are to be accountable for their decisions. | Currently under review |

| LEGISLATION/ POLICY | DESCRIPTION | LOCAL IMPLICATIONS | STATUS |
|---|---|---|---------|
| Integrated Planning and Reporting Framework | The NSW Local Government Act 1993 currently sets out an Integrated Planning and Reporting framework which aims to strengthen Councils' strategic focus for a minimum timeframe of ten years | Development of a Community Strategic Plan (Sustainable Blue Mountains 2035), which includes objectives relating to waste & resource management for the Blue Mountains. | Current |
| The Biodiversity Conservation Act, 2016 | The Biodiversity Conservation Act 2016 and Biodiversity Conservation Regulations 2018 provide greater protection for biodiversity, particularly threatened species and threatened ecological communities. | Governs our management of the state listed endangered swamp forest on the Blaxland RRWMF. | Current |
| NSW Waste Avoidance and Resource recovery Act 2001 | The NSW Waste Avoidance and Resource Recovery (WARR) Act is the framework legislation that provides for the development of a NSW waste strategy, which includes targets for waste reduction, resource recovery and the diversion of waste from landfill disposal. | WARR Strategy sets targets for diversion from landfill for different waste streams, including municipal. | Current |
| NSW Protection of the Environment Operations Act 1997 | The Protection of the Environment Operations (POEO) Act is the central environmental protection legislation for NSW and sets out broad responsibilities for local councils acting in a regulatory capacity. The objects of the Act include measures for the protection of the environment through various regulatory frameworks and enforcement powers. Two particular provisions currently in force in NSW influencing waste management decision making include: - Section 144AA: offences relating to the imposing of penalties for misleading or inaccurate information regarding waste reporting. - Section 88 imposes a levy on each tonne of material deposited in a landfill. The amount of the levy is set by regulation until 2016, for LGAs in certain areas. | Council is in a regulated area and is therefore required to pay the S88 Levy to the State Government. In 2019-20 this is \$82.70 per tonne of waste landfilled. Council must hold Environmental Protection Licences (EPL), issued by the EPA to operate its two RRWMFs. Conditions of the licence protect the surrounding environment and Council can face enforcement action if conditions are not met. | Current |

| LEGISLATION/ | DESCRIPTION | LOCAL IMPLICATIONS | STATUS |
|--|--|--|---------|
| POLICY Environmental Planning and Assessment Act 1979 | Expansion, modification and establishment of new waste facilities will trigger the provisions of the Environmental Planning and Assessment (EP&A) Act and Regulations. Schedule 3 under the Environmental Planning and Assessment Regulation 2000 lists waste operations, including storage, composting, disposal and recycling which fall under the definition of "Designated Development". A Designated Development is subject to more rigorous assessment | As well as operating under an EPL, Councils RRWMFs have development approval conditions that must be complied with. Changes to facilities within the site can trigger further assessment. | Current |
| POEO (Waste) Regulations 2014 | via an Environmental Impact Assessment. The Waste Regulation sets out the provisions dealing with the operational characteristics of waste facilities, including waste storage and transportation, waste tracking and record- keeping, payment of the waste and environment levy, and exemptions of this levy. It also sets requirements for the management of hazardous wastes such as asbestos. | Adhering to the operational requirements of the POEO Act and the management of hazardous waste at RRWMFs. | Current |
| Premier's Priorities and the NSW Container Deposit Scheme | In September 2015, the NSW Government replaced the NSW 2021: A plan to make NSW Number One with a new state plan NSW Making It Happen and a list of Premier's Priorities. Focus areas for the waste sector previously included illegal dumping and increasing recycling. Under the new State Plan, litter has been identified as 1 of the 12 priority areas and sets a target to reduce the volume of litter by 40% by 2020. NSW introduced a container deposit scheme to help tackle litter in NSW from July 2017. Under the scheme 10c will be awarded on the return of empty eligible beverage containers to an approved collection depot or reverse vending machine. | Give consideration about where and how to participate in the CDS. | Current |

| LEGISLATION/ POLICY | DESCRIPTION | LOCAL IMPLICATIONS | STATUS |
|--|---|--|---------|
| NSW Waste and Sustainable Materials Strategy 2041 stage 1: 2021- 2027 | The Waste and Sustainable Materials Strategy 2021-2027 provides a high level framework for setting priorities and a long term direction for improved management of wastes and recycling under the circular economy model. | Council may be required to contribute to meeting State targets to be eligible for certain grants available under the Waste and Sustainable Materials Strategy 2041. | Ongoing |
| The Metropolitan Plan 2031, A Plan for Growing Sydney | The NSW Government's Metropolitan Strategy for Sydney 2031 (A Plan for Growing Sydney), divides the Greater Western Sydney area into three sub-regions. Blue Mountains are part of the North-West along with Blacktown, Hawkesbury and Penrith. It has identified Western Sydney as a significant growth area. The Plan notes the need for additional waste and recycling facilities to help manage demand as Greater Western Sydney grows. | Action 4.3.2 of the Plan requires that the DPE and the EPA, in participation with councils, identify additional land for waste management, reuse and recycling. | Current |
| The Greater Sydney Commission's District Plans | In 2016 the Greater Sydney Commission released a series of five District Plans. The plans set out the opportunities, priorities and actions for integrated planning for land use, transport and infrastructure. | Monitoring any implications for regional waste facility developments. | Current |
| Plastic Reduction and Circular Economy Act 2021 | The Plastic Reduction and Circual Economy Act implements the first stage of reforms outlined in the NSW Plastics Action Plan, aimed at reducing waste generation from harmful plastics. It also supports material circularity ensuing reponsibility for products across their lifecyle. | It would impose, initially, a ban on lightweight plastic bags, then several other single-use plastic items affecting us as an organisation who purchase products and have point of sales. This ban applies to all areas of Councils operations and events but will impact different areas to different extents. As an organisation, all meetings and events being held will need to have alternatives to single use plastics and all point of sale areas must not offer any banned items to the public. It would also allow for the imposition of product stewardship requirements and targets, require specific action by industry participants to address these, and enable strong enforcement actions. | Current |

| LEGISLATION/ POLICY | DESCRIPTION | LOCAL IMPLICATIONS | STATUS |
|---|--|--|---|
| REGIONAL | | | |
| NetWaste Strategic Plan | NetWaste is a voluntary alliance of Councils from Blue Mountains in the east to Broken Hill in the west. NetWaste delivers on collaborative waste projects and education strategies with the opportunity to share resources and knowledge, and coordinate planning at regional and sub-regional levels. | Council is an active participant in this Regional Waste Strategy. | Regional options currently being pursued. |
| Western Sydney Waste Managers Group | The Western Sydney Waste Managers Group is also an alliance of Councils in the region that meet on a regular basis to network and share ideas, resources and strategies. Blue Mountains City Council is also part of the Western Sydney Region for the NSW State Government 2021 Plan. NSW 2021 is the NSW Government's 10 year strategic business plan. | Council is actively participating in the development of a Western Sydney Regional Waste Strategy. | Regional options currently being pursued. |
| LOCAL | | | |
| Blue Mountains Community Strategic Plan 2035 | The Community Strategic Plan identifies the community's main priorities and aspirations for the future and to plan strategies for achieving these goals. The Community Strategic Plan is the highest level plan for the Council. It also guides other key stakeholders – other levels of government, local organisations and residents – living and working in the City of Blue Mountains. Each newly elected Council is responsible for reviewing and updating their Community Strategic Plan within the first twelve months of their term. | 2.2.a Encourage responsible resource use and low consumption environmentally aware lifestyles. 2.2.b Minimise waste – avoid, reduce, recycle and reuse. | Current |

| LEGISLATION/ POLICY | DESCRIPTION | LOCAL IMPLICATIONS | STATUS |
|--|---|--|-----------|
| Blue Mountains Council Long Term Financial Plan | The Long Term Financial Plan presents the financial objectives, performance targets and strategies that the Council is proposing to meet the significant financial challenges it faces over the next 10 years. | Implementation of the following six key strategies over the next four years: Avoid shocks; Balancing the budget; Managing borrowings responsibly; Increasing income; Adjust service levels; and Increase advocacy and partnerships. | Current |
| Service Business Plan | Each Council service is required to have a Service Plan that clearly articulates affordable levels of service, which is regularly reviewed to ensure "best value" service provision to the community. This provides a platform for planning and prioritising resource allocation across all services in an informed and transparent manner. | The most recent Waste Resource Service Plan for 2013-2023 was completed in 2021. | Current |
| Asset Plans and Strategy | The Asset Management Strategy, Policy and Plans identify all built assets under Councils ownership and outline key areas of current funding gaps and associated risks. | The Landfill and Waste Asset Plan identifies a number of high risks that have now been placed on Council's Risk Register. | Current |
| Long Term Waste Strategy 2003 | Adopted by Council in April 2003, following the 'Options for Long-Term Waste and Resource Management Solutions 2003' study. This strategy outlines the infrastructure requirements to enable waste services to continue locally. | Strategy actions were to: Develop a new landfill cell at Blaxland WMF; Establish a waste processing facility at Blaxland; Build a transfer station at Katoomba WMF; Direct haulage of waste from upper Mountains to Katoomba for transfer to Blaxland WMF; and Direct haulage of waste from lower Mountains to new facility at Blaxland. | Completed |

| LEGISLATION/ POLICY | DESCRIPTION | LOCAL IMPLICATIONS | STATUS |
|--|--|--|-----------|
| Strategic Waste Action Plan 2005 | The SWAP 2005 built upon the research, surveys, consultations, strategies and policies undertaken/developed over a twelve year period (1993 to 2005). This SWAP identified the priority actions for Council over the short to medium term. | The primary outcome of the SWAP was to introduce a targeted waste action program in four key areas: Infrastructure; Treatment & Disposal; Research; and Education. | Completed |
| Strategic Waste Action Plan 2012 | In order to be eligible for State Government funding payment, Council needed to use a specific online tool to establish a SWAP for the household waste stream and have it adopted by Council. | Council committed to completing a local Waste Strategy which would consider options including a kerbside organic collection from homes. | Completed |
| Waste and Resource Recovery Strategy 2014-16 | Short term Strategy allows Council to respond and adapt to the dynamic state and federal legislative and policy environment surrounding waste and resource recovery, a diverse spectrum of community aspirations and expectations, and the emerging opportunities in the recycling and resource recovery industries. Also providing evidence based waste management options for the future. | Council completed a local Waste Strategy. | Completed |
| Waste and Resource Recovery Strategy 2017-21 | Short term strategy allows Council to respond and adapt to the Short term Strategy allows Council to respond and adapt to the dynamic state and federal legislative and policy environment surrounding waste and resource recovery, a diverse spectrum of community aspirations and expectations, and the emerging opportunities in the recycling and resource recovery industries. Also providing evidence based waste management options for the future. | Council completed a local Waste Strategy. | Completed |



Appendix 5. Recent improvements to the Waste Service

Waste Service Review

In May 2020 Council undertook a comprehensive review of Council's current waste services. The objective of this review was to identify a level of service that achieves:

- a self-funding service;
- strategic objectives (CSP, local, regional and state level Waste Strategies);
- the most affordable fees and charges possible; and
- · an acceptable level of service.

Several options were considered as part of the review, with reducing operating hours at Katoomba as the adopted option. This included fast tracking the RRWMF Reserve replenishment.

Changes to operating hours at Katoomba RRWMF commenced on 1 August 2020 and resulted in savings of \$1 million annually.

Booked Service Review

An extensive review was completed in early 2020 on the booked waste service. The review identified that the change to a booked waste service from a scheduled service in 2013 reduced service costs, increased resource recovery, improved operation and increased flexibility for residents.

With a booked bulky waste and chipping service in place since 2013 it was timely for a review. The future direction of the Booked Waste Service needed to be considered based on the financial analysis, usage trends, user feedback and increased resource recovery.

Five service level options were considered and a move to accept garden organics in the bulky service for recycling as part of one single booked service was adopted. This option offered value for money to the community, supports the needs of community, especially in response to bush fire preparedness and offers a safer and more efficient service going forward.

In addition, a trial will be conducted to collect good quality items and place them in Council's reuse sheds. This will enable good quality material being kept out of landfill, improving Council's recovery rates in line with local, state and regional strategies and policies.

The service change was implemented from 1 August 2020.

Changes to Katoomba RRWMF

In response to safety challenges being experienced, Katoomba RRWMF began operating as a small vehicle facility only from March 2020. This now means:

- Only vehicles up to 4.5 tonnes are permitted;
- · All waste must be unloaded by hand no tipping; and
- Construction and demolition waste is not accepted.

Katoomba RRWMF continues to accept mixed household waste, household recyclables, scrap metal, white goods, batteries, gas bottles, engine oil, paints, fluoro light globes, tyres, mattresses, garden organics, reusable furniture and other items.

Blaxland Community Recycling Centre (CRC)

A Community Recycling Centre (CRC), funded by the EPA, was established at Blaxland RRWMF in 2021. This is a free service to help residents, particularly our lower mountains community, safely dispose of household problem wastes like car and household batteries, fluorescent globes and tubes, paint, smoke detectors, gas bottles, fire extinguishers and oils.

The CRC adds to the comprehensive resource recovery services already in operation at Blaxland and aligns with those provided at Katoomba RRWMF.

Community education and workshops

A waste audit in 2019 identified that more than 33% of material in the household garbage bins was food waste. Part of Council's commitment to reducing food waste to landfill since 2014 has involved a number of community education and engagement projects, market stalls and workshops throughout the Blue Mountains.

Some include:

- · Composting, worm-farm and food waste short courses (online and face-to-face); and
- Compost Hub Initiative a community composting program connecting non-composting households with those that do compost to help divert food scraps from the red garbage bin.

Illegal Dumping Strategy

Council developed the Illegal Dumping Strategic Plan 2020-2025 which was adopted by Council in February 2020.

This Illegal Dumping Strategy is designed to focus on the nature and scale of illegal dumping in the City and to present clear and practical strategies for continuing to reduce its frequency and severity. The Strategy examines the current efforts Council is undertaking to tackle illegal dumping, it proposes a range of information gathering, education and enforcement measures to ensure this anti-social and illegal practice is further prevented, reduced and managed in the most cost-effective way.

Four specific objectives have been identified, which cover a range of activities to provide a clear direction for managing illegal dumping over the coming years:

- · Community education and awareness;
- Prevention, infrastructure and clean up;
- · Regulation and enforcement; and
- · Data, evaluation and monitoring.

This strategy also includes an Action Plan of the various tasks required to deliver against the objectives.

Appendix 6: Infrastructure Improvements to Landfill Sites (Existing and Legacy)

| When | Site | Description Of Improvement Works | Cost |
|----------------|----------------------------------|---|--|
| 2008 completed | Blaxland RRWMF | Clean water by-pass and leachate interception wall The clean water by-pass collects and pumps clean groundwater from above the landfill to the swamp below, ensuring its water supply. The leachate interception drain prevents leachate from entering the swamp and pumps it to the leachate collection dam. These systems protect the swamp from leachate contamination. | \$1.8M |
| 2008 completed | Blaxland RRWMF | Diversion of Cripple Creek Creek line now flows through a large, reinforced plastic pipe that is continuously welded and encased in water proof concrete, under the landfill. Protection of Cripple Creek from possible leachate contamination while preserving natural flow to downstream areas. | \$1.8M |
| 2009 completed | Blaxland RRWMF | Construction of landfill B stage 1 liner First of 5 stages to provide additional waste disposal space of 1,000,000m³. Stage 1 provided approx. 3 years of landfill space. A lined landfill contains all waste-reducing the risk of groundwater pollution. | \$3.85M |
| 2010 completed | Katoomba RRWMF | Construction of new lined leachate dam and stormwater drainage Provides additional leachate storage capacity and prevents contaminants entering the groundwater system. The stormwater drainage system ensures all storm water runoff is captured and sediment is removed prior to discharge from site. | \$6.3M Building and civil works \$1.7M Plant & Equipment |
| 2010 completed | Former Lawson landfill | Slope stability and remediation works Reduced risk of landslide, improved water quality and reduced weed growth impacts on the surrounding environment. | \$2.5M funded by the Environment Levy |
| 2010 completed | Former Blackheath landfill | Capping and remediation works Improved water quality and reduced weed growth impacts on the surrounding environment. | \$0.7M funded by the Environment Levy |

| When | Site | Description Of Improvement Works | Cost |
|---|-------------------|--|--|
| 2012 Aug completed | Blaxland RRWMF | Construction of landfill B stage 2 liner & excavation works for future landfill stage 4 Extension of landfill liner as per development requirements and preparation of stage 4 landfill space for future waste placement. Stage 2 provided approx. 2 years of landfill space. | \$1.9M |
| 2014 Completed | Blaxland RRWMF | Construction of landfill B stage 3 liner Extension of landfill liner as per development requirements, providing approximately 3-4 years of landfill space. | \$612,000 |
| 2015 Completed | Blaxland RRWMF | Landfill Gas Management System Improved environmental performance at the site including reduced carbon emissions and nuisance odour. Compliance with Environment Protection Licence odour requirements. Will continue to be expanded with landfill growth. | \$0 Contractual arrangement based on emission trading schemes and the carbon pricing mechanism |
| 2016 completed | Blaxland RRWMF | Construction of new gatehouse and weighbridge, small vehicle drop-off area, recycling, reuse and chemical collection shed for the Resource Recovery Centre Improve traffic flow, separation of large & small vehicles, improved recycling facilities, new gatehouse and sealed roadways. | \$4.5M |
| 2016 completed | Katoomba RRWMF | Build a loading-out platform for the garden organics collection (temporary storage and loading platform). | \$30,000 |
| 2016 completed | Katoomba RRWMF | Upgrade of stormwater and leachate store dams (excavation, lined dams). | \$450,000 |
| July 2081 Substantially completed | Blaxland RRWMF | Construction of landfill B stage 4 – 1A excavation and liner Extension of landfill liner as per development requirements, providing approximately 3-4 years of landfill space. Stage was 85% completed due to design and contract challenges. | \$2.6M |

| When | Site | Description Of Improvement Works | Cost |
|-------------------------|----------------------------------|---|----------------|
| May 2021 Completed | Blaxland RRWMF | Construction of Community Recycling Centre (CRC) | \$95,847 |
| | | Grant funded project to develop facilities for the recovery of problem wastes. Grant \$83,875 & Council \$11,972. | |
| To be completed in 2022 | Blaxland RRWMF | Completion of landfill B stage 4 – 1A liner OUTCOME: Finalise the installation of the liner to stage 4 – 1a. | \$250,000 est. |
| 2021/22 | Former Blackheath Iandfill | Slope stabilisation and restoration | \$370,000 |



Contact

Katoomba Office

2 Civic Place Katoomba NSW 2780

Phone: 02 4780 5000

Katoomba Office Postal Address

Locked Bag 1005 Katoomba NSW 2780

Council Email

council@bmcc.nsw.gov.au

Council Website

bmcc.nsw.gov.au

Have Your Say Website

yoursay.bmcc.nsw.gov.au

