



Kiama Municipal Council Waste And Sustainable Materials Strategy 2024 – 2030

Strategic choices for a sustainable future





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Mayoral Message

It is my pleasure to present the Kiama Waste and sustainable materials strategy for 2024 – 2030. I am committed to enhancing our community's well-being and ensuring a sustainable future. Our beautiful coastal region deserves thoughtful planning and innovative solutions.

Xxxxx - extra mayoral notes...

Kiama is embarking on a transformative journey to become a leader in environmental stewardship and innovation. Our strategic priorities are designed to enhance the quality of life for our residents, optimise waste management, and reduce emissions, thereby fostering a resilient and vibrant community.

Priorities for this strategy include...

These initiatives represent our dedication to progress while maintaining a deep respect for the environment. Together, we will build a future for Kiama that is not only prosperous but also sustainable.

waste management and future proof infrastructure program that contributes to improving the environment and well-being of our community, which is focused on waste avoidance, resource recovery and landfill minimisation.



1. Introduction

Kiama Municipal Council is dedicated to progressing leading practice waste management for our vibrant community, aligning our ambitious strategies with the broader goals set by both Federal and State governments. This Waste Strategy emerges from a comprehensive review and update of the latest circular economy and resource management strategies, policies, and plans at the national and state levels. This strategy is our commitment to elevating waste management practices through a focus on waste avoidance, resource recovery, and the implementation of advanced waste treatment technologies. We're not just planning for today; we're looking forward to creating a lasting, sustainable impact that will resonate throughout our community and beyond.

This strategy will play a pivotal role in achieving the objectives outlined in Council's Community Strategic Plan 2022-2032 (Kiama Municipal Council, 2022) and will provide a guideline for the 6- year waste and resource recovery action plan, ensuring our delivery plan and operational goals are not just met but exceeded. We are enthusiastic about the role this strategy will play in advancing sustainable waste management practices that our community deserves.

Council understands the importance of collaboration, which is why we are committed to continuous engagement with you, our community, businesses and regional partners. Through ongoing education and transparent communication, we aim to empower individuals and businesses within our municipality to join us in this crucial movement towards sustainable waste and resource management. Together, we will meet the needs of today and pave the way for a greener, more sustainable tomorrow for our region.



1.1. Our geography

Kiama Municipal Council is a thriving coastal community just 120 km south of Sydney, with an area of 258 km2. We are blessed with pristine beaches along a breathtaking coastline, offering endless opportunities for rejuvenation and exploration. Nature lovers can embark on the Kiama Coast Walk, a 20-kilometer journey through various ecosystems that showcase the beauty and diversity of our region. With a quarter of our land dedicated to protected areas, our environment is not only cherished but also safeguarded for future generations to enjoy.

As a proud member of the Illawarra Shoalhaven Joint Organisation (ISJO), alongside Wollongong, Shellharbour, and Shoalhaven Councils, we are committed to working together towards a common goal. Our shared vision of a confident, vibrant, and productive region that prioritises sustainable waste management and the transition to a circular economy drives our collaborative efforts. Together, we are paving the way for a brighter and more sustainable future for our community.



1.2. Demographic trends

Kiama LGA has just over 20,500 properties, with statistics indicating 37% of homes are owned outright and 36.5% in the process of being bought. Our residents are deeply invested in their community, creating a stable and thriving local economy. 82% are free- standing dwellings with approximately 30% housing two occupants, 12% of dwellings are medium density, while only 2% are considered high density.

Development in the LGA is predicted to rise over the life of this Strategy, presenting Council with the need to prepare a Waste Strategy that can be implemented in tandem with this predicted growth.

Kiama is a community that embraces diversity, with 1.7% of our population proudly identifying as Aboriginal and/or Torres Strait Islander, and 14% born overseas. 89% of our residents are Australian citizens, highlighting a shared commitment to this beautiful place we call home.

Economically, the business landscape is flourishing with 1,986 enterprises, contributing to an impressively low unemployment rate of just 2.4%. This economic vitality supports 5,620 local jobs and fuels a tourism economy worth a staggering \$1.668 billion annually, showcasing Kiama as a beacon of success and a magnet for visitors.

It is important to acknowledge Kiama's successful tourism industry and proximity to Sydney results in significant spikes in population during weekend, public holiday and school holiday periods, translating to spikes in waste generation in both residential and public place waste streams.

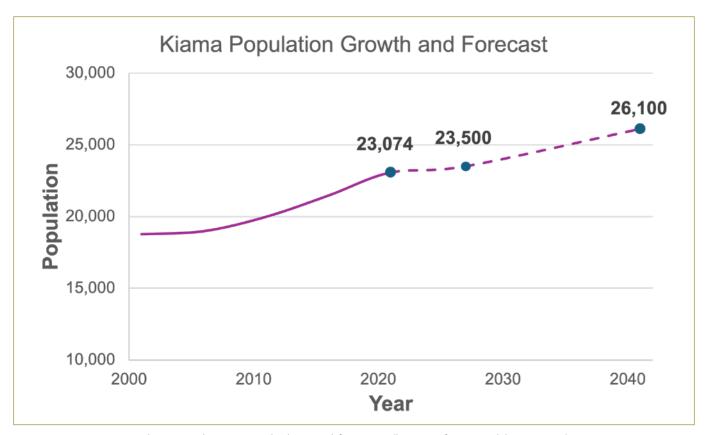


Figure 1: Kiama population and forecast (https://forecast.id.com.au/).

2. Where Are We Now?

2.1. Core Waste Services

Kiama Council is proud to offer a wide range of services that have evolved in recent decades to cater to the unique needs of our community. Council pioneered the implementation of food organics combined with garden organics (FOGO), the envy of local government organisations across NSW. Statistics have demonstrated that annual tonnages of residual waste sent to landfill have decreased significantly.

Council has had the municipality divided into 10 urban and 2 rural waste zones (Figure 3) for over a decade. As a result, Council has been capable of continuous improvement through the evolution of tailored services that promote sustainability and encourage active participation in recycling and composting.

In urban areas, households benefit from a comprehensive three-bin collection service for general waste, recyclables, and organic materials. This not only supports sustainability through resources recovery and diversion from landfill, but it also empowers residents to make a positive impact on the environment. Rural households also receive a two-bin collection service that emphasizes responsible resource management.

The Minnamurra Waste and Recycling Facility is managed by Council and regulated by the Environment Protection Authority (EPA). It receives customer drop-off green waste to be processed into compost and metals for recycling.

Additionally, the Community Recycling Facility, established in 2016 provides a safe space for the recycling of household problem waste.

As part of our commitment to community engagement and environmental stewardship, following the termination of the free kerbside pickup, all residentially rated properties have access to two scheduled Household Bulky Waste Drop Off events each year. These events not only provide a way to dispose of large items but also educate and raise awareness about responsible waste disposal practices. Council sets an example as the only Council in NSW that models and encourages reuse as a key component of the bulky waste service.

Ongoing delivery of these initiatives promotes a culture of sustainability and environmental responsibility that will lead to a cleaner and healthier future for our Municipality.



2.1.1. Urban and Rural Residential Waste Service

Council provides urban households with a three-bin collection system:

Urban residents have the option to upsize or downsize their service provision upon request, to which changes in applicable fees and charges apply. The standard urban waste collection service is illustrated below. Council strategically provides a weekly collection of the 240L yellow and green bins to promote and facilitate the source separation of materials in the household. Residents have evolved their own waste management practices based on limitations the 140L fortnightly collection presents. Tonnages diverted from landfill reflect this system is working well and Council should continue to educate and promote this approach.

Rural properties receive a two-bin fortnightly collection alternating between 240L residual landfill waste and 240L co-mingled recycling, working on the assumption that rural properties have adequate land to facilitate composting of food and garden organics.



Figure 3: The urban standard bin service.

2.2. Waste tonnages

Approximately 10,074 tonnes of materials were collected through the kerbside service in 2022 - 23. Approximately 7,175 tonnes were recycled through the comingled and FOGO bins representing a 71% resource recovery rate, significantly higher than the state average.

The table and graph below demonstrate the distribution of materials collected each month, revealing a significant increase in weight in the FOGO bins during the warmer months and a rise in both residual waste and recycling during the holiday season.

Waste Type	Total Tonnages for 2022-2023	Total Weekly Tonnages	Total Weekly Kilograms	Total Weekly Average Kilograms per Household
Residual Waste 9,624 bins	2,898.55	55.74	55,741.35	5.46
Comingled Recycling 9,604 bins	2,345.19	45.10	45,099.81	4.83
Food/garden organics - 9,051 bins	4,829.89	92.89	92,882.50	10.43
Waste Type	10,073.63	193.72	193,723.65	20.72

Table 1: Kiama Council residential waste and recycling generation per household 2022-23.

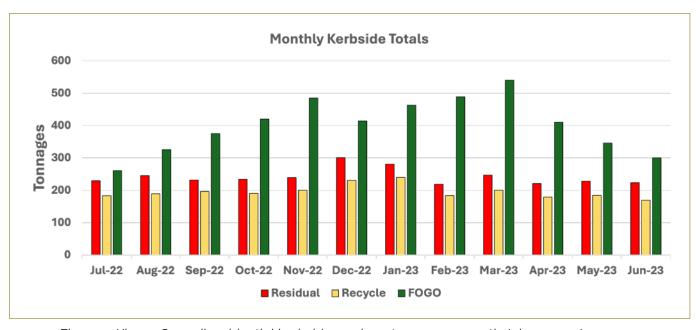


Figure 4: Kiama Council residential kerbside services, tonnes per month July 2022 – June 2023.

2.2.1. Residential Residual Waste

During the 2022-23 period, 2,899 tonnes of materials were collected from urban and rural households through the residual waste bin, accounting for 29% of all waste and resources collected.

Based on data collected through a waste audit undertaken in June 2022, 12% of the contents were recyclable through the co-

mingled recycling bin (paper, plastic, metals) and 17% could have been recycled through the FOGO service. This data highlights an area for improvement and would significantly reduce the volume of waste sent to landfill, highlighting the need for ongoing waste education and promotion of waste diversion opportunities through recycling and reusing materials.

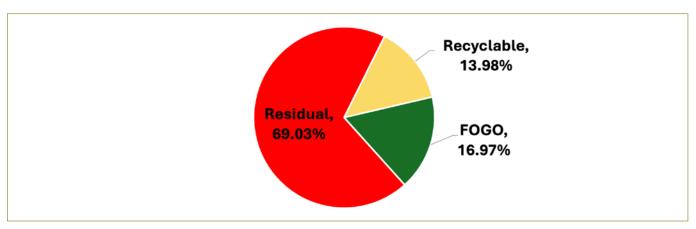


Figure 5: 2022 Waste Audit analysis of materials in the kerbside residual waste bin.

2.2.2. Residential Recycling

In 2022-23, 2,345 tonnes of material was collected from urban and rural households through the comingled recycling bins, accounting for 23% of all waste and resources collected. Based on the June 2022 kerbside audit, contamination in the co-mingled recycling bin averages 5% by weight and is primarily made up of non-recyclable plastics.

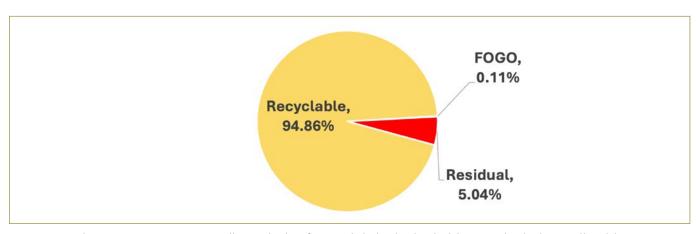


Figure 6: 2022 Waste Audit Analysis of materials in the kerbside co-mingled recycling bin.

2.2.3. Residential Food and Garden Organics

In 2022-23, 4,830 tonnes of food and garden organics was collected which represents 48% of all waste and resources collected. 2022 Waste Audit results indicate contamination in the FOGO bin was the

lowest out of the three bins, with only 1% by weight reported through the audit. Seasonal fluctuations in garden organics are seen, with higher generation observed in the summer months.

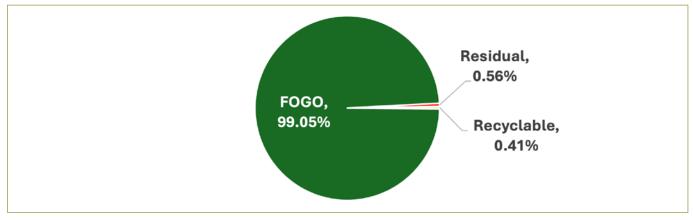


Figure 7: 2022 Waste Audit analysis of materials in the urban kerbside FOGO bin.



2.3. The Community Recycling Centre

Residents have a multitude of options available for diverting waste from landfill and contributing to resource recovery. For items that cannot go into your kerbside collection service, Council manages the Community Recycling Centre (CRC), located at the Minnamurra Waste and Recycling Facility.

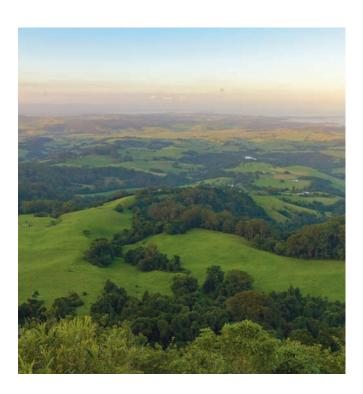
MUNICIPAL COUNCIL Community
Recycling Centres Waste matters Drop off your household problem waste for recycling You can drop off: Gas bottles and Motor and Paint fire extinguishers other oils Fluoro globes Household and Smoke and tubes car batteries detectors Computers **Textiles** Ink cartridges and televisions* Mixed Polystyrene X-rays recyclables (No. 6 only) Only household quantities accepted 20kg or 20L maximum container size. Please transport your materials carefully. Dangerous goods and items other than those listed will not be accepted. *Kiama residents only Kiama Community Recycling Centre is located at: 446 Riverside Drive, Minnamurra Hours: Mon to Sat: 8am-4pm (closed public holidays) Call Kiama Municipal Council on 02 4237 5148 or visit www.epa.nsw.gov.au/recyclingcentres

Figure 8: Images of Household Problem Waste as defined by the NSW EPA.

The following additional items are received at the Minnamurra Waste and Recycling Facility free of charge:

- Scrap metal such as aluminium, copper, and brass as well as whitegoods (dishwashers, washing machines, dryers) are received free of charge and recycled off-site.
- Electronic Waste, processed for resource recovery off-site.
- Ink Cartridges and Mobile Phones.
- · Aerosols (including spray paint).
- · X Rays.
- · Clothing in reusable condition.
- And domestic quantities of polystyrene and cardboard.

Charges apply to the disposal of items containing refrigerant gasses (for example fridges, freezers and air conditioners). The harmful greenhouse gasses are removed prior to processing and recycling of metal components.



Council is dedicated to providing convenient and accessible recycling options to our residents. For more information on acceptable materials and guidelines for recycling, please visit Council's website or contact Customer Service.

In 2022-23, our community made an outstanding contribution to sustainability by recycling an impressive 5310 tonnes of materials at the CRC.

Among the most recycled items were car batteries, paint, and gas bottles. The peak time for recycling items through the CRC was during December and January, with a 35% increase in materials recycled (based on weight) compared to the monthly average.

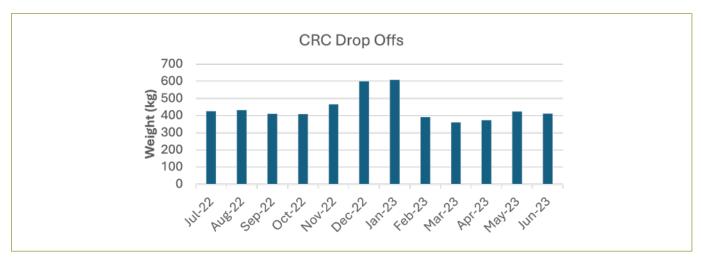


Figure 9: Monthly variations in usage of the CRC facility.



2.4.1. Waste trends and projections

By analysing the 2021/22 Waste and Resource Recovery (WARR) data and comparing with the insights gained from the 2022 waste audit, there are several opportunities for enhancing resource recovery across kerbside collections, drop-off facilities, and clean-up services.

The main areas for improvement are removing FOGO compliant materials in residual waste bins,

non-recyclable plastics in co-mingled recycling bins, and non-compliant organics in FOGO bins. These findings suggest that there is scope for continual improvement with further education around waste sorting practices to reduce contamination levels. Additionally, there is an opportunity to delve deeper into the generation and potential diversion of commercial waste within our community.

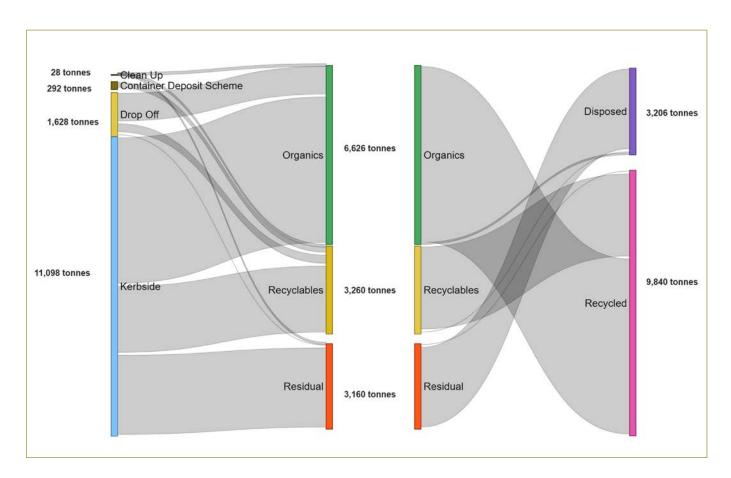


Figure 10: Visualisation of the flow of waste based on the NSW EPA WARR Data (2021-22).

2.4.2. Waste generation comparison

Over the past six years, Kiama has consistently maintained its generation of residual and recyclable waste within the range of 2-3 kg per capita per week. Notably, Kiama's rates for recyclable and FOGO waste generation surpass those observed across

New South Wales because many Council areas have not yet implemented a FOGO collection service. The data does indicate however that the inclusion of a FOGO bin for households does impact significantly on waste diversion rates.

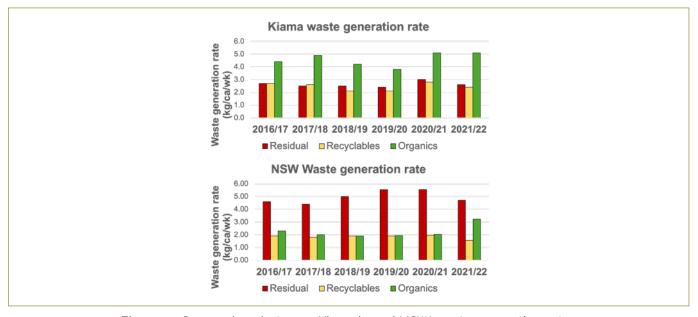


Figure 11: Comparison between Kiama's and NSW waste generation rates.



2.4.3. Waste forecast

With Kiama's population projected to reach 30,847 by 2041, the waste forecasts, aligned with current per capita waste generation rates and demographic trends, anticipate a proportional increase in waste volumes. This projection underscores the importance of continuing our efforts in waste reduction, resource recovery, and community education to ensure our waste and

resource recovery offerings continue to meet the needs of the community.

We are committed to engaging with our community and stakeholders to explore innovative solutions and strategies that align with our growth and sustainability goals.



Figure 12: Waste forecast for Kiama based upon current waste generation rates per capita and Kiama's population forecast.



2.5. Other Services and Programs

In addition to the services previously mentioned, Kiama Council also provides and supports the following services for the local community.

- Short Term Rental Accommodation (STRA) weekly waste service collection
- Free weekly Specific Waste Bin Collection Service (terms and conditions apply)
- User Pays On-Call Kerbside Clean Up Collection for urban households only.
- Public place residual waste and co-mingled recycling collection

The services listed below are provided to further facilitate diversion of waste from landfill.

- · Biennial Second-Hand Saturday events
- Annual Household Chemical Cleanout Collection
- Home Composting Workshops held three times per year
- Return and Earn depots located on Council land for the collection of eligible containers
- Comprehensive waste-related community education programs



2.6. Commercial Waste and Recycling

Council currently offers a collection service for commercial residual waste and co-mingled recycling. The commercial service is versatile with the ability to collect bins presented on unscheduled days.

By participating in local community groups and the chamber of commerce, the council builds strong connections with businesses. Additionally, it oversees adherence to local planning regulations. By ensuring frequent collections, commercial waste and recycling bins do not clutter the town centres. Council also ensures suitable waste and recycling facilities are available and there is adequate space for bin storage for commercial properties.

2.7. What you told us

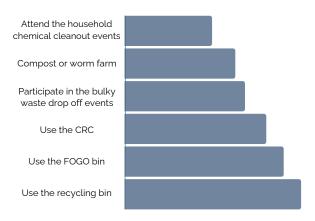
During the consultation phase of our Community Strategic Plan, feedback indicated high levels of satisfaction with the Council's kerbside collection, as well as with the services offered by the community recycling centre and the bulky waste drop-off events.

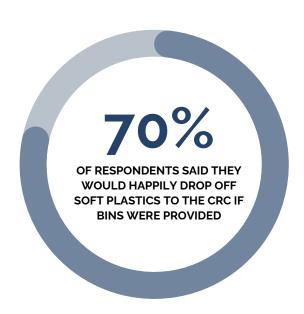
You predominantly utilise your recycling and FOGO bins to minimise waste sent to landfill, and over 70% of participants utilise the Community Recycling Centre (CRC) to dispose of hazardous

materials throughout the year. Additionally, there is a strong community desire for the introduction of a soft plastics collection bin at the CRC however the introduction of this service is dependent on a strong market demand for this product.

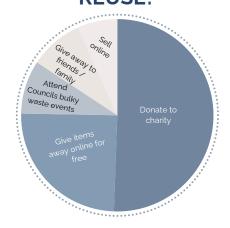
Furthermore, the Kiama community is actively engaged in reusing household items, leveraging local charities, online platforms and the Council bulky drop-off events to give items a second life.

HOW DO YOU AVOID **WASTE TO LANDFILL?**





HOW DO YOU SUPPORT **WASTE AVOIDANCE & REUSE?**



HOW SATISFIED ARE YOU WITH THESE SERVICES?



3. What does our future look like?

3.1. Where are we heading?

Council is pivoting towards a circular economy, continuing to tackle hazardous and problematic wastes, supporting community initiatives, and continual improvement are the core of our strategic direction.

Council's Waste Strategy 2024-2030 aligns elements of the NSW Waste and Sustainable Materials Strategy 2041 as well as the Illawarra Shoalhaven Joint Organisation (ISJO) Regional Waste and Sustainable Materials Strategy (2022-2027).

This alignment aims to provide residents with ongoing, contemporary, broad and cost-effective waste collection and resource recovery solutions. This approach also ensures that the Council and its community are on track towards State and Federal targets.



4. Our Priorities

To meet this vision, Council will focus on the following four priorities.

- 1. Improve infrastructure planning and environmental management
- 2. Optimise waste management costs and foster adaptive waste management contracts.
- 3. Support and implement innovative internal waste management initiatives
- 4. Reduce emissions from all waste management operations



4.1. Priority 1

Improve infrastructure and environmental management.

Outcomes - what will success look like?

- Council waste infrastructure planning is future proof and incorporates modern technologies.
- Infrastructure improvement to facilitate diversion from landfill and value add to the supply chain.
- Reduced impact of hazardous and problem waste streams on the waste service.
- Reduction in littering and Illegal Dumping on Council and publicly managed land.
- Improved diversion of waste from landfill resulting from household bulky waste (HHBW) drop off events.

Objectives - How will we achieve success?

- Master planning of the Minnamurra Waste and Recycling Facility.
- Improved data collection on all waste management activities.
- Actively listening to the community and educating on the value of resources.
- Utilise EPA resources to promote and improve the Community Recycling Centre for safe disposal of hazardous and problem wastes.
- Leverage the knowledge and skills of stakeholders to monitor and evaluate litter and illegal dumping behaviours against state benchmarks.
- Develop regional partnerships that can contribute to an improved diversion rate.
- Develop regional partnerships that can contribute infrastructure for improved processing of waste to resources.

Indicators - Measuring success

- Audit data
- Weighbridge data
- WARR data
- Community survey
- · CRC data
- CRC survey
- Targeted education campaigns
- Public Place bin audits
- RID online

4.2. Priority 2

Optimise waste management costs and revenue and foster adaptive waste management contracts.

Outcomes - what will success look like?

- Improved service options through market analysis and robust contract development.
- High quality services provided to residents and commercial clients.
- Versatile collection options that meet the needs of the community.
- · Adding value to the supply chain.

Objectives - How will we achieve success?

- Market pricing volatility is reduced through joint contracts and regional procurement.
- Contracts are designed with flexibility to maintain high-quality services in line with current technology and regulations.
- Provide services reviews of the commercial service with inclusions that promote improved practices in waste and resource recovery.
- Ongoing waste education and promoting sustainable waste practices.

Indicators - Measuring success

- Additional service provision generating additional revenue.
- Joint contracts and regional procurement implemented where possible.
- Analysis of customer feedback through survey or customer service logs.
- Analysis of service change requests.

4.3. Priority 3

Research, develop and implement innovative internal and external waste management initiatives.

Outcomes - what will success look like?

- Council has adaptive services in place to cater for identified problem waste streams
- Improved planning systems to ensure waste generated through new development is managed correctly.
- Council's waste management practices remain in line with market trends and improvements in technology.
- Council staff, the community and local business are engaged with innovation and support waste diversion.

Objectives - How will we achieve success?

- Identify problem waste streams that require innovative solutions
- Actively participate in innovative waste and resource recovery projects
- Actively participate in partnership projects with stakeholders i.e. ISJO, waste management industry, social enterprise.

Indicators - Measuring success

- Utilisation of space at the Minnamurra Waste and Recycling Facility with innovative waste processing and value adding initiatives.
- Reduced cost to serve on existing waste management practices
- Variation to existing EPA License for the Minnamurra Waste and Recycling Facility to apply innovative waste management initiatives.

4.4. Priority 4

Reduce emissions from all waste management operations.

Outcomes - what will success look like?

- Organics and food waste are diverted from landfill.
- Procurement processes within Council consider sustainable materials, recycled content and whole of life carbon emissions.
- Council minimising the use of carbon fuel through efficient allocation of resources.
- Transitioning to electric or hydrogen waste collection fleet and infrastructure.

Objectives - How will we achieve success?

- Annual reduction in fuel consumption over the life of this Strategy.
- Council waste management fleet demonstrating a transition to electric.
- Minnamurra Waste and Recycling Facility transition to renewable energy.

Indicators - Measuring success

- Audit data
- Weighbridge data
- WARR data
- Community survey
- CRC data
- CRC survey
- Targeted education campaigns
- · Public Place bin audits
- · RID online

An operational action plan will be developed to complement this strategy, detailing activities and programs that Council will implement to achieve these priorities. The action plan will be continually reviewed to monitor progress and ensure it is aligned to Regional, State and Federal strategic direction, policies and statutory requirements.

Appendix A: Legislative, policy and council frameworks

Kiama Council's Waste Strategy fits within the context of national, state and regional policies and strategies.

Local Government carries the primary responsibility for delivering waste management services directly to the community. However, all levels of government play a role in shaping the regulatory environment and future direction of waste management in Australia.

Table X below outlines the key pieces of legislation and policies from both state and federal government relevant to the development of the waste strategy.

FEDERAL GOVERNMENT

2018 National Waste Policy: Less Waste, More Resources and National Action Plan on waste Provides direction and framework for waste management in Australia. Includes strategies for collective action by businesses, governments, communities and individuals until 2030.

Includes ambitious targets such as recovering 80% of waste across all waste streams and achieving 70% recycling for plastic packaging.



National Plastics Plan

Outlines the Australian Government's approach for the reduction of plastic waste and pollution, including the phasing out of problematic plastic materials.





NSW GOVERNMENT

NSW Waste and Sustainable Materials Strategy 2041

Identifies its commitment to waste reduction and recycling and focuses on the environmental benefits and economic opportunities in how we manage our waste.



NSW Waste Avoidance and Resource Recovery Act 2001

Commits the NSW Government to refreshing and updating its waste strategy every 5 years to review and continually improve the state's policies and targets for waste reduction and landfill diversion.



NSW Government 2019 Circular Economy Policy Statement

Aims to change the way products are produced, sold and used, by incorporating reuse and energy efficiency strategies throughout the entire product life cycle.



NSW Plastics Action Plan

How we will phase out problematic plastics, tackle litter from plastic items like cigarette butts and support innovation and research.



NSW GOVERNMENT

NSW Plastics Action Plan

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Illawarra Shoalhaven Waste and Sustainable Materials Strategy Sets out an overarching regional strategy for member Councils to reduce and manage household waste and resources across the region. This strategy has been endorsed by the ISJO board and is supported by the NSW EPA.



Kiama Council Community Strategic Plan The CSP is a high level 10 year plan developed collaboratively by Council with the Kiama Municipal community. It identifies the community's vision and objectives for the municipality and strategies to achieve them.



Kiama Council Net Zero Emissions Strategy Being a member of The Cities Power Partnership, has committed to 5 pledges to combat climate change. As part of this, Council has a responsibility to implement a net zero emissions strategy for both the Community and Council's operations with an ambitious target that aligns with below 2 degrees requirements.



Appendix B: Map of Kiama waste collection zones

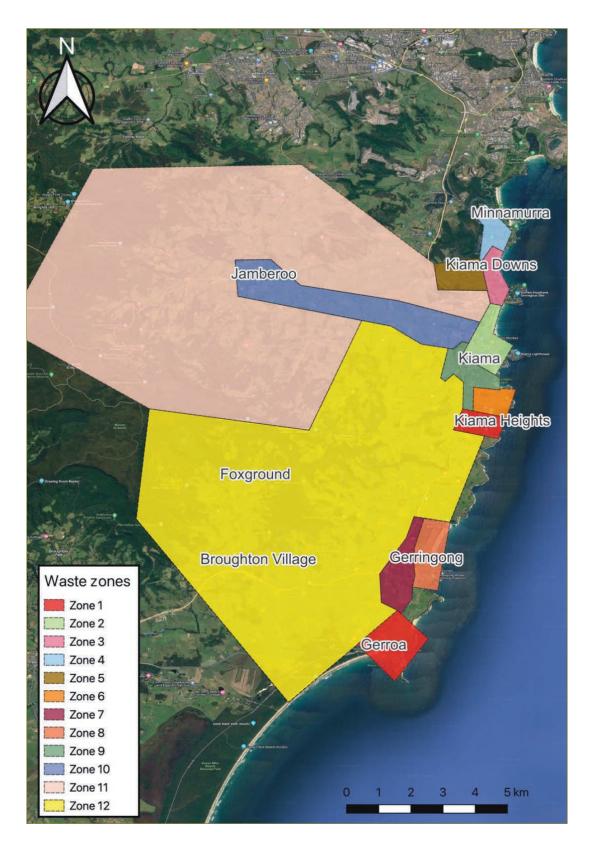


Figure x: Waste zones of the Kiama LGA

