Bayside Council

Sustainable Waste Management (SWM) Strategy 2032

The Journey to a Circular Economy 2024-2032

Acknowledgment of Country

Bayside Council acknowledges the Traditional Custodians, the Gadigal/Bidjigal people of the Eora Nation.

The people of the Eora Nation, their spirit and ancestors will always remain with our waterways and the land, our Mother Earth.

Amelia Bates, The Hand Saving the Lost Generation

Contents

1 Mayor's message

We all have a role to play in reducing waste.

Bayside Council recently won the prestigious 2023 National Award for Local Government in the Waste Management category. We were competing against 537 councils Australia-wide. The award recognises Bayside Council's ongoing work and achievements stemming from our Waste Avoidance & Resource Recovery Strategy 2030 (2018) and annual action plans.

This circular economy strategy seeks to promote and encourage ways to use waste as a resource. We can do this by maximising the amount of reusable or recyclable material returned to the economy and reducing the amount of waste sent to landfill.

This Sustainable Waste Management (SWM) Strategy builds on the achievements of the Waste Avoidance & Resource Recovery Strategy 2030 (2018). This Strategy will encompass even more innovative and leading circular economy initiatives.

This Strategy is the latest vision in a rolling Sustainable Waste Management program with continuous action plans. This program has been recognised through 13 State environmental awards in multiple categories.

As we transition further towards a circular economy, the role of the community becomes more important. Behaviours such as reuse, reduce, repair and reprocess take priority over more Council-managed recycling, recovery and disposal. This requires organisational and community behaviour change, which is reflected in this Strategy.

For the circular economy model to work, all levels of government and producers must play a role in facilitating reuse and recycling, funding innovative resource recovery, and designing products that last longer. Council will continue to advocate for resource management solutions that are economically viable and well-funded.

Cr Bill Saravinovski
Mayor

2 Purpose of the strategy

In July 2018, Bayside Council endorsed its first *Waste Avoidance and Resource Recovery (WARR) Strategy 2030: The Journey to a Circular Economy.* This WARR Strategy and its achievements have resulted in many awards including the 2023 National Award for Local Government (Waste Management) and the Keep Australia Beautiful NSW Sustainable Cities Finalist Award every year from 2018 to 2023.

Since 2018, global, national, state, local governments and organisations have also shifted to a circular economy model for sustainable waste management that puts greater emphasis on the value and embodied energy of products. There has also been a shift to view sustainable waste management as part of broader environment and resilience goals.

Council understands the environmental challenges that our community faces, and the need to act proactively on environmental sustainability, the natural environment, climate change, natural disaster preparedness, circular resource solutions and resilience.

This SWM Strategy forms part of a suite of environment and resilience strategies and actions plans aimed to empower our community to survive, adapt and thrive no matter what challenges we face as a community.

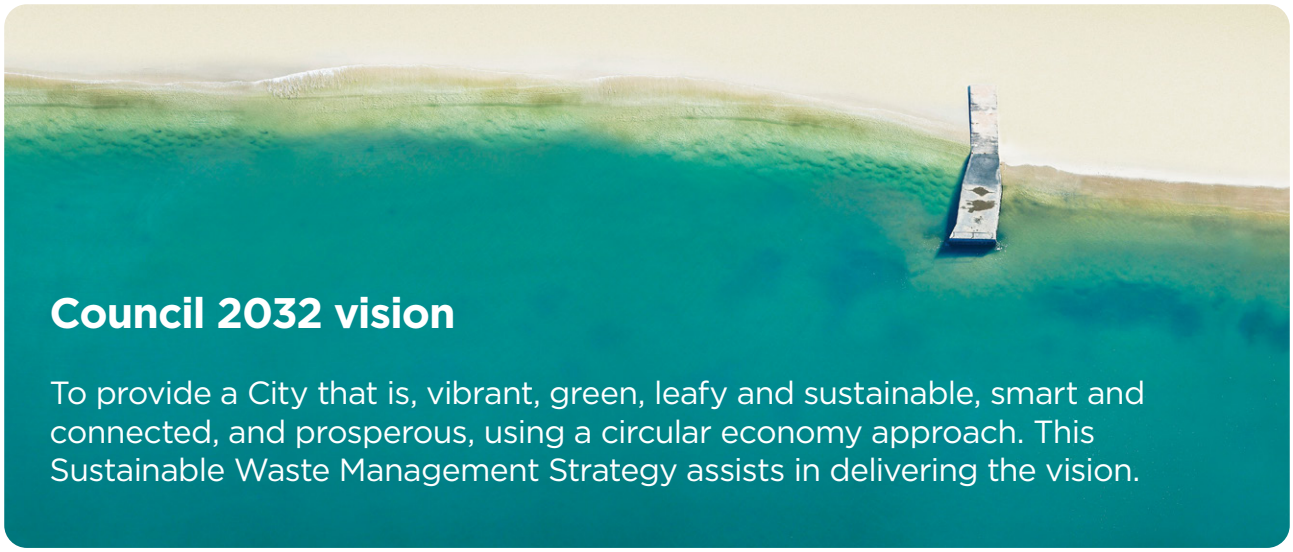
Council will take an evidence-based approach to embrace innovation and new technologies. We will engage and partner with the community, government, and industry to avoid waste, reduce consumption, reuse valuable resources, recycle, and move toward a more circular economy where materials and products are valued and preserved.

Council has adopted a transparent and interactive process where the community will be encouraged and inspired to take real action to improve the environment and our quality of life through community reporting, shared values, and learning.

The SWM Strategy and its overarching Sustainable Waste Management Policy set key focus areas and targets to guide our journey towards a thriving circular economy model.

Focus Areas and 2032 Targets are shown below. These Focus Areas and Targets build on the former WARR Strategy and align with global, national and local priorities.

In line with Bayside Council's Community Strategic Plan, these targets are designed to be achieved by June 2032. In line with national targets, progress will be measured against a 2016/2017 baseline.



Council 2032 vision

To provide a City that is, vibrant, green, leafy and sustainable, smart and connected, and prosperous, using a circular economy approach. This Sustainable Waste Management Strategy assists in delivering the vision.

Sustainable waste management targets

SWM FOCUS AREA	SWM TARGETS
1A. Refuse, re-think, reduce (design)	No increase in total domestic waste generation per capita basis by 2032.
1B. Re-use, re-home, repair, refurbish, repurpose (consumption)	Decrease in total domestic waste generation per capita beyond 2032 with producer, State Government and Federal Government initiatives.
2. Recycle, recover (return)	65% diversion of domestic waste from landfill by 2032. 80% by 2041 should advanced technologies for diversion of residual waste become viable.
3. Treat, dispose	99% of Bayside residents to live within 2km of a pharmacy participating in the Community Sharps Program by 2032. Ensure best practice contracts in place to manage residual waste that cannot be recycled or used to recover energy. Ensure specialised staff and contractors are available for wastes requiring specialised collection and disposal.
4. Reduce illegal dumping	To develop relevant reporting mechanisms that are consistent and support the Measurement, Evaluation and Learning (MEL) framework being developed by the NSW Government, as applicable to local government. Re-deploy mobile illegal dumping cameras to a minimum of 18 hotspot locations every year.
5. Litter prevention	Develop a baseline of litter data for the Local Government Area (LGA). Establish a roadmap for litter prevention initiatives for the LGA. Contribute to the NSW Government overall NSW targets of 30% reduction in plastic litter items by 2025 and 60% reduction in all litter items by 2030.
6. Responsibly manage household problem wastes	Maintain 22 Community Recycling Drop Off Events per year to collect household problem wastes. Investigate viability of Council drop off or collection service for additional household problem wastes.
7. Commercial waste and recycling	Every Bayside eligible business will be provided with an option of full suite of bin services, including general waste, recycling, and organics by 2025. The resource recovery option offered to domestic premise will be consistent with those offered to eligible businesses.
8. Other Council-managed waste streams	Council will investigate viable resource recovery options for other council managed waste streams, including street sweeping, and gross pollutant traps.
9. Reducing carbon emissions	Introduction of separate Food Organics and Garden Organics (FOGO) service across the local government area in line with the NSW Government target of net zero emissions from organic waste by 2030. Align with NSW Government's Objective to achieve net zero emissions by 2050.

Key challenges to the successful implementation of this SWM Strategy include:

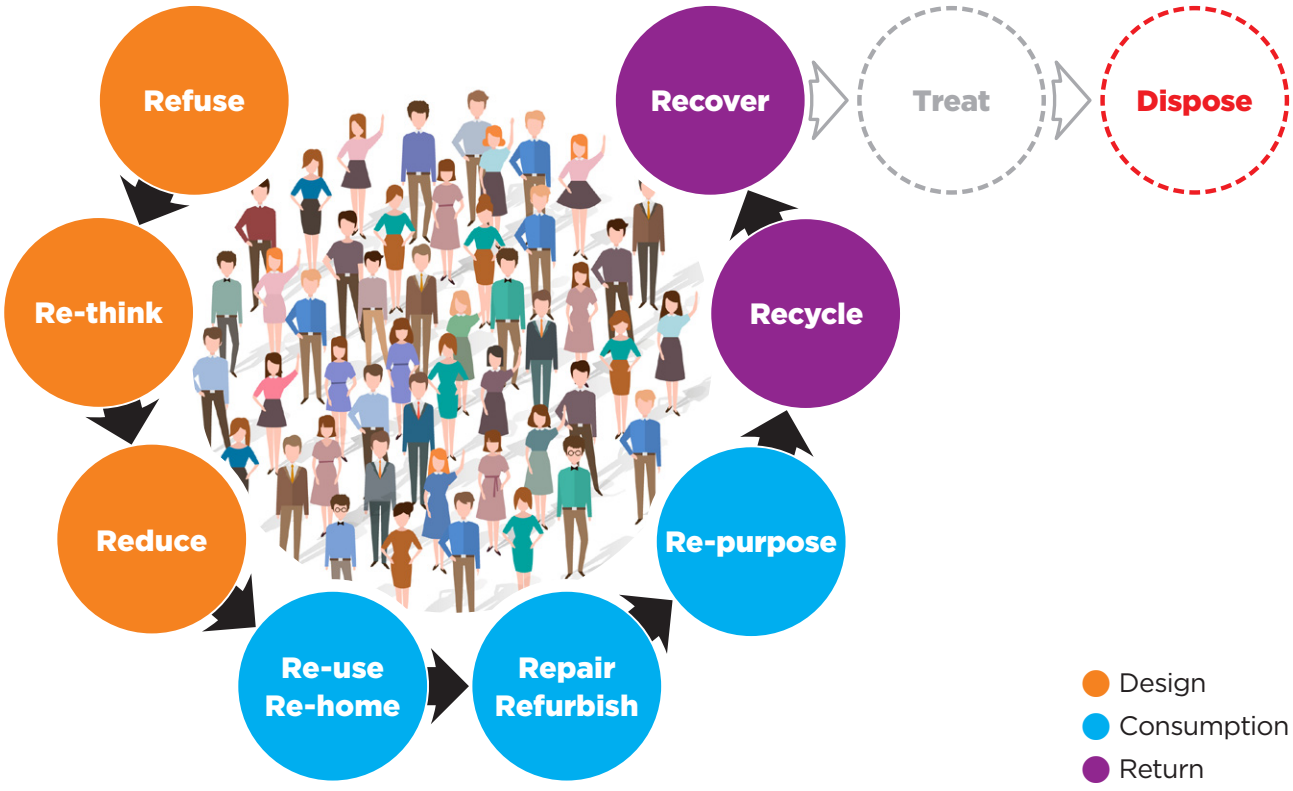
- Population growth, including increasing waste volumes and increasing high density living;
- Adequate waste infrastructure;
- Affordability and increasing cost of living;
- Changes to Federal and State policies and infrastructure;
- Design of products to maximise life cycle;
- Markets for reuse and recycled materials;
- Community behaviour change;
- Tailoring waste education and services to be inclusive for a diverse community; and
- Data to inform decisions and monitor progress.

These challenges are explored in Sections 4, 5 and 6 of this SWM Strategy.

Circular economy model

The circular economy aims to reduce waste and maximise resources. This is achieved by moving away from the linear take-make-and-dispose approach to a more circular system. The circular economy focuses on product design, longevity (life cycle), renewability. It also considers product ability to be reused and/or repaired, as well as resource recovery.

Council has positioned the community at the centre of the circular economy model. Through responsible citizenship and Council leadership, materials are returned to the community through initiatives and innovation.



3 Context and background

International and national context

Both nationally and globally, there is an increasing emphasis on sustainable waste management and the circular economy to achieve sustainability goals.

By aligning its goals with these international benchmarks, Bayside Council aims to contribute to global efforts in achieving a sustainable and circular economy, fostering community resilience and environmental stewardship.

Two examples of this are:

- The United Nations Sustainable Development Goals (SDGs); and
- The European Commission Circular Economy Action Plan.

United nations sustainable development goals

Council's SWM Strategy works towards UN SDGs, namely:

- **Goal 9 - Industry, innovation, and infrastructure**
  Actively engaging with industry partners and using innovative technologies to reduce, recycle, and process our waste.
- **Goal 11 - Sustainable cities and communities**
  Focusing on creating resilient, inclusive, and sustainable cities through sustainable waste management.
- **Goal 12 - Responsible consumption and production**
  Reducing waste generation through prevention, reduction, recycling and reuse.

Whilst these targets inform Council's SWM Strategy, they can only be achieved by the coordination of industry and government on a national scale.

Australian context

Council's SWM Strategy supports Australia's national policies and targets (National Waste Policy 2018 and Action Plan 2019), showcasing a commitment to synchronise local efforts with broader national initiatives.

The National targets are:

- Target 1 – Ban on export of waste (commenced 2020).
- Target 2 – Reduce total waste generated in Australia by 10% per person by 2030 (baseline 2016/17).
- Target 3 – 80% average resource recovery rate by 2030.
- Target 4 – Increased use of recycled content.
- Target 5 – Phase out problematic plastics by 2025.
- Target 6 – Halve organic waste to landfill by 2030 (baseline 2018).
- Target 7 – Comprehensive data availability.

NSW context

As part of the NSW Department of Planning, Industry and Environment's Waste and Sustainable Materials Strategy 2041: Stage 1: 2021-2027 (June 2021), the NSW Government has moved from a waste hierarchy model to a circular economy model (see graphic below), reflective of changes in international and national strategies and consistent with Bayside Council's former WARR Strategy and this SWM Strategy.

The NSW Waste and Sustainable Materials Strategy 2041, Stage 1 (2021-2027) targets are consistent with the National waste targets and are supported by Council's SWM Strategy, to the extent that local government, in isolation, can influence these targets.

The limitations of the NSW waste targets include:

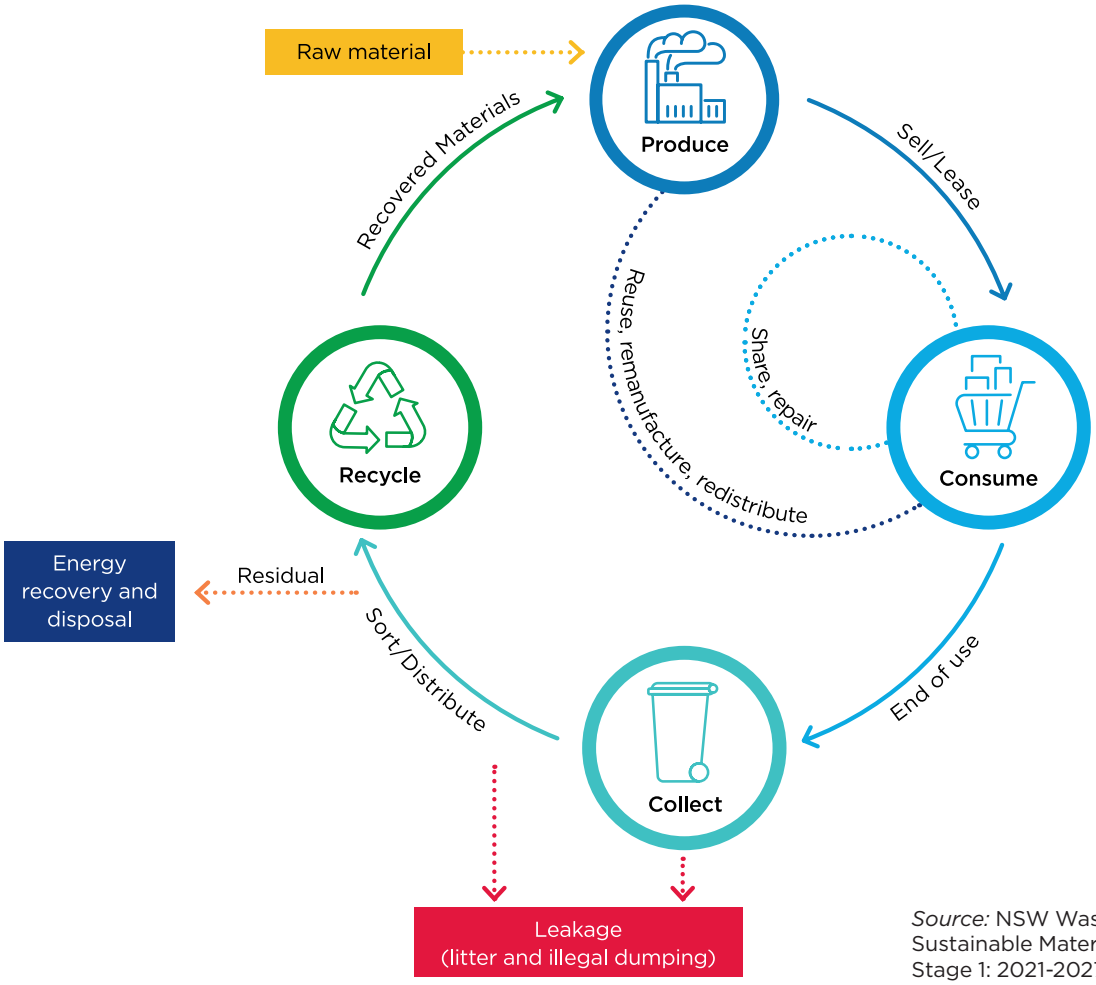
- **Reduce total waste generated by 10% per person by 2030**

  Whilst Council will support this target by empowering the community to make informed decisions to help extend the longevity of products, this longevity of products is governed by design parameters that need to be adopted by producers and potentially mandated by State and Federal Government.

- **80% average recovery rate from all waste streams by 2030**

- **Triple the plastics recycling rate by 2030**

  Whilst Council will implement programs to maximise resource recovery, modelling by Council (supported by other sources) has shown that maximum resource recovery from municipal waste is significantly less than 80% without industry and NSW policy changes to facilitate greater recycling and energy recovery (see Section 4 for more details).



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

- **Phase out problematic and unnecessary plastics by 2025**

  Whilst Council will assist the community to transition out problematic and unnecessary plastics, this target is largely driven by producer decisions and NSW legislation (such as plastic bans).

- **Halve the amount of organic waste sent to landfill by 2030**

- **Net zero emissions from organic waste to landfill by 2030**

  Council's existing and planned programs will assist in reducing organic waste to landfill but significant funding is required by the NSW Government (from waste levies paid by councils) to optimise these systems. Advanced technologies including separation, composting and energy recovery solutions are also required to achieve this target which must be supported with NSW Government planning and environmental policies as well as funding from NSW waste levies.

- **30% reduction in plastic litter items by 2025**

- **60% reduction in all litter items by 2030**

  Council's existing and planned litter abatement programs will assist in reducing littered items although littering is largely influenced by product design and legislative decisions such as Return and Earn and the NSW plastic bans.

The NSW Government has also communicated that it intends to mandate the following through yet to be enacted legislation:

- **Separate collection of food waste from large food-waste generating businesses, including large supermarkets and hospitality businesses, by 2025**

- **Separate collection of food and garden organics from all NSW households by 2030**

- **Reporting by large supermarkets on surplus food donation to food rescue organisations by 2025**

  Significant funding will be required from NSW waste levies paid by Council to ensure the success of resident FOGO collection and processing systems.

  The NSW Government has not addressed council concerns regarding FOGO capture rates (amount of FOGO placed in FOGO bins instead of general waste bins) and contamination.

  The NSW Government has not addressed industry concerns regarding sufficient processing capacity for commercial food organics and residential FOGO by the mandate dates, including infrastructure planning and investment in advanced technologies to manage contaminated FOGO.

The NSW Circular Economy Policy Statement: Too Good to Waste (February 2019) has key principles that emphasise the importance of waste reduction and maintaining materials in the productive economy longer.

The SWM Strategy also supports these focus areas being:

1. Support innovation;
2. Sustainable procurement;
3. High quality, consistent recycling;
4. Value organics;
5. Circular design;
6. Support re-use and repair; and
7. Responsible packaging.

Regional context

Bayside is an active member of Southern Sydney Regional Organisation of Councils (SSROC), which is an incorporated association of 12 councils in the southern Sydney region.

SSROC provides a forum through which member councils can work collaboratively to solve regional issues and contribute to the future sustainability of the region. A major focus of SSROC is waste management, and as such SSROC has its own Waste Policy.

The policy statement includes the following priorities:

1. Change culture to refuse before we reuse, reuse before we recycle, recycle before we recover energy, and dispose only as a last option.
2. Work with our community, industry and government to transparently manage and be accountable for our waste throughout its lifecycle, including managing waste as closely as possible from where it is created and tracking any waste removed from our jurisdiction.
3. Recognise that data identifies the problem and informs the solution. Data must be consistent and transparent.
4. Acknowledge that the management of waste is an essential service that requires facilities that are accessible for SSROC and other Sydney councils, and which needs to continue in the event of major disasters and disruptive events.
5. Develop sustainable procurement that drives innovation, stimulates markets, creates circular economy opportunities and provides value for money.
6. Collaborate on a metropolitan scale together with State and Federal Governments.

Examples of collaborative projects Bayside Council has been involved in to support these priorities are:

- **Joint procurement**

  SSROC tender of general waste processing.

  Bayside Council and Georges River Council tender for waste collection.

  SSROC panel for bulky waste processing.

  SSROC panel for mattress recycling.

  SSROC panel for collection and disposal of asbestos.

  SSROC procurement for recycled content (glass and rubber) in roads.

  SSROC Expression of Interest for joint co-mingled recycling processing procurement.

- **Advocacy**

  Electronic waste, clothing and mattresses product stewardship schemes.

  NSW Environment Protection Authority (EPA) resource recovery framework and waste levy review.

- **Data management**

  Kerbside bin and clean up material audits.

  Clothing from drop off events audit.

- **Infrastructure planning and research**

  Research into source separation and processing of food organics (FO) and FOGO.

  Research into infrastructure requirements for waste processing and disposal.

- **Disaster preparedness:**

  Participated in working group and consultation forum.

- **Regional collaboration**

  Regional collaboration on illegal dumping.

  Sharing of project information through network meetings.

Bayside Council has also endorsed the Cooks River Alliance Litter Prevention Strategy and is an active participant in industry working groups, such as those hosted by the Waste Management and Resource Recovery Association of Australia.

Our Bayside

Bayside Council was formed in September 2016 following the amalgamation of Botany Bay City Council and Rockdale City Council. Bayside extends from Bexley, Kingsgrove, and Carlton in the west to Banksmeadow, Hillsdale, Eastgardens and Daceyville in the east. It also encompasses Wolli Creek and Turrella in the north, Rockdale, Mascot, Botany, Sydney Airport and Port Botany down to the coastal communities of Brighton Le Sands, Ramsgate, Dolls Point and Sandringham in the south. Bayside consists of five wards.

Bayside Council, spanning 50 square kilometres across 29 suburbs, is a dynamic community in southern Sydney, Australia. With a culturally diverse population of over 177,000, the council prioritises sustainable and inclusive urban development. Bayside is at the height of economic activity, home to both Sydney Airport and Port Botany, providing crucial infrastructure to keep Australia connected globally.

Bayside Council plays a central role in local governance, shaping the region's future as a vibrant and desirable place to live, work, and enjoy a diverse range of amenities.

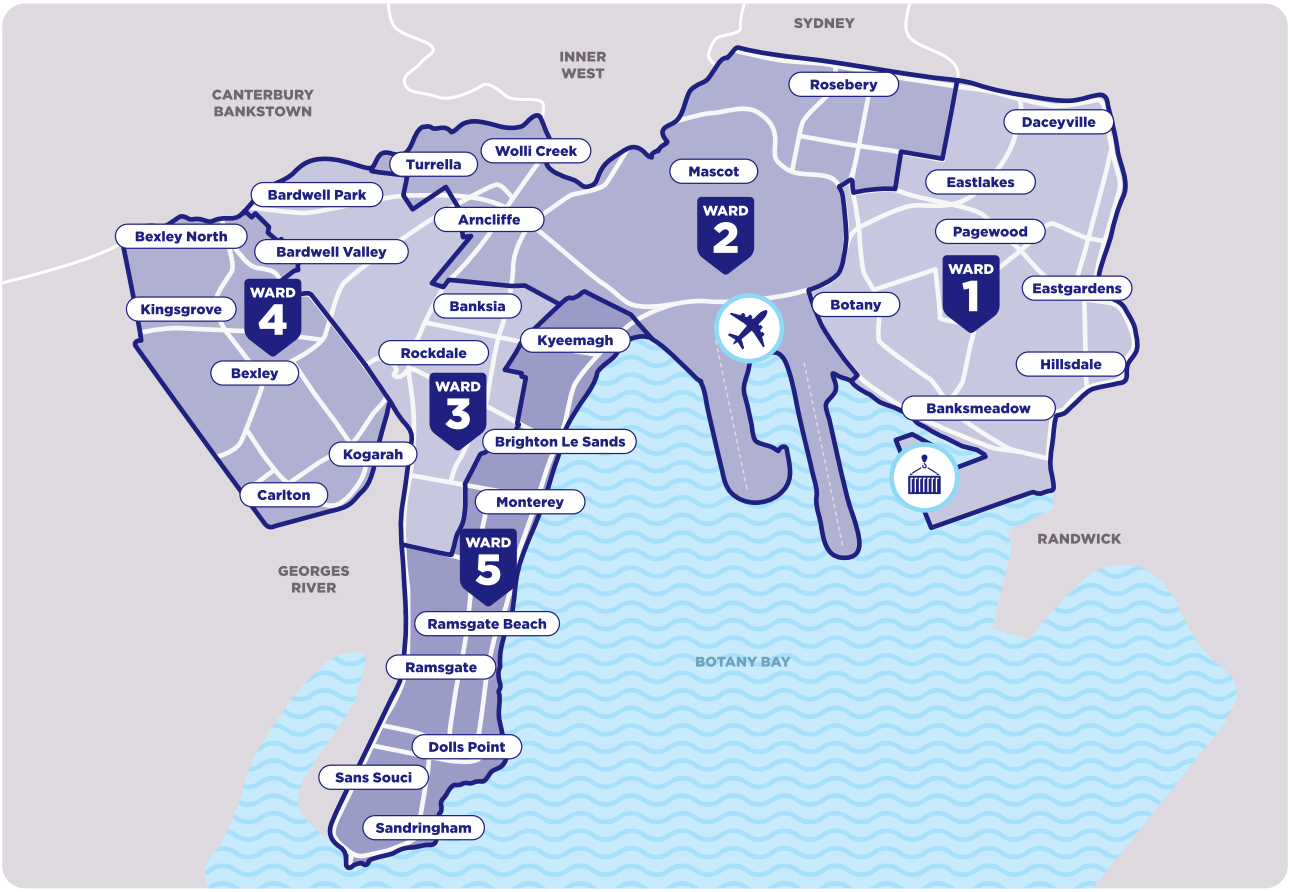
The traditional custodians of the area are the Gadigal and Bidjigal people of the Eora Nation, and they have had an intimate spiritual and cultural connection to the land and waters for many thousands of years.

Council provides waste services to over 67,000 residences, 54% of which are multi-unit dwellings (apartment/unit buildings) and 46% are in houses or townhouses. Council also provides waste collection services to participating commercial businesses.

Council provides kerbside bin collection services to residential properties and participating commercial businesses. Collection services include Mixed/General Waste, Recycling, and Garden Organics.

Council residents are also provided with four (4) Scheduled Clean Ups per year. They are also invited to attend 22 Community Recycling Drop Off Events each year to recycle those larger or harder to recycle items.

In addition, almost 1,000 public place litter bins are serviced, along with the investigation and collection of illegal dumping incidents. Council also provides waste education and illegal dumping regulation services to the community.



Bayside Council Local Government Area (*Source:* Bayside 2032)

Bayside community socio-economics and resilience capacity

Median age: 35
Greater Sydney: 37
NSW: 39

Medium and high-density housing: 66%
Greater Sydney: 46%
NSW: 35%

Lone person households: 24%
Greater Sydney: 22%
NSW: 24%

Language at home other than English: 51%
Greater Sydney: 37%
NSW: 27%

Source: ABS, 2049.0.

Aboriginal and Torres Strait Islander: 1.1%
Greater Sydney: 1.7%
NSW: 3.4%

Older couples without children: 7%
Greater Sydney: 9%
NSW: 10%

Overseas born: 48%
Greater Sydney: 39%
NSW: 29%

Unemployment rate: 5.5%
Greater Sydney: 5.1%
NSW: 4.9%

SEIFA index of disadvantage (2016): 1002
Greater Sydney: 1018
NSW: 1001

Bayside's future population in 2036

13,446 children (**0–4 years**), an increase of 3,327 (6.3%)

15,300 primary school aged children (**5–11 years**), an increase of 2,954 (7.2%)

12,003 secondary school age students (**12–17 years**), an increase of 2,766 (5.6%)

40,147 people in the young workforce (**25–34 years**), an increase of 9,484 (18.9%)

45,846 parents and homebuilders (**35–40 years**), an increase of 12,202 (21.5%)

23,238 older workers and pre-retirees (**50–59 years**), an increase of 4,958 (10.9%)

18,726 empty nesters and retirees (**60–69 years**), an increase of 4,036 (8.8%)

19,379 seniors (**70–84 years**), an increase of 5871 (9.1%)

4,740 elderly people (**85 and over**), an increase of 1,067 (2.2%)

24,289 couple families with dependants, an increase of 4,947 (29.8%)

21,104 couples without dependants, an increase of 6,463 (25.8%)

4,566 group households, an increase of 1,429 (5.6%)

21,009 lone person households, an increase of 7,045 (25.7%)

Source: Bayside Community Strategic Plan 2018-2032.

Bayside 2032: Community Strategic Plan

Bayside's Community Strategic Plan (Bayside 2032) has four overarching themes that underpin Council's plan for the future and ultimately guide the strategic approach set out in this SWM Strategy.

Themes 1, 3 & 4 relate specifically to the delivery of sustainable waste management solutions and strategies.

Theme 1 – Vibrant City

Community Outcome 1.3
Bayside's places are people focussed

Delivery Program Strategy 2022-26 (1.3.2)
Create and maintain vibrant, visually appealing, and welcoming places with their own village atmosphere and sense of identity (Deliver, Partner, Advocate)

Theme 3 – Green, Resilient & Sustainable

Community Outcome 3.4
Bayside's waste is well managed

Delivery Program Strategy 2022-26 (3.4.1)
Address illegal dumping proactively (Deliver, Advocate)

Delivery Program Strategy 2022-26 (3.4.2)
Educate community on sustainable waste management and recycling practices (Deliver, Partner)

Delivery Program Strategy 2022-26 (3.4.3)
Promote a circular economy by encouraging and/or implementing avoidance, reuse, rehoming, repair, recycling, recovery solutions before landfilling (Deliver, Partner, Advocate)

Theme 4 – Prosperous City

Community Outcome 4.3
Council is financially sustainable and well governed

Delivery Program Strategy 2022-26 (4.3.2)
Foster a customer centric culture (Deliver)

Bayside Community Circular Economy Survey

Community participation is crucial to facilitating a circular economy. A successful circular economy strategy requires feedback from the community on their vision of sustainable waste management systems.

In June 2021, Bayside Council conducted an online survey regarding sustainable waste management, Council's current services and potential future service. 1,402 residents responded to this survey, which was recognised as Highly Commended by Keep Australia Beautiful NSW in the Communication and Engagement Award category of the 2022 Sustainable City Awards.

In general, there was a high satisfaction with the current services with strong support for some future improvements.

Key findings relevant to the SWM Strategy were:

- Support for a harmonised garden organics (GO) bin service (all residents will have access to a GO bin service in 2024);
- 73% were moderately or extremely concerned about environmental waste impacts;
- 61% were willing to spend more for higher waste outcomes;
- 72% support technologies for recovering energy from non-recyclable waste;
- 56% were willing to spend an additional 15 minutes per week to separate waste; and
- 66% prefer FOGO bin service over a GO bin service; units/apartments (78%) and houses (63%).

A smaller number of respondents answered optional questions on topics such as illegal dumping and education. If those responding to these questions:

- 92% support surveillance technology to combat illegal dumping;
- Preferences for community workshops: second hand/vintage fairs (71%) and waste avoidance (71%);
- Preferences for community workshop delivery: in-person workshops (76%) and online videos (63%); and
- Most effective ways to provide waste information: online (77%) and waste calendar fridge magnet (70%).

Bayside Sustainable Waste Management Policy

The WARR Policy was endorsed by Council in 2018. This policy was updated and renamed the Sustainable Waste Management (SWM) Policy in 2024.

The SWM Policy provides a framework for Council to provide effective waste services in accordance with enabling legislation and associated policies. It also provides a framework to encourage waste avoidance and minimisation, and ensure that the resources contained in waste products are recovered, which in turn will minimise waste being disposed of to landfill.

This SWM Strategy has been developed to support delivery of the SWM Policy.

Bayside Waste Avoidance and Resource Recovery Strategy 2030

In July 2018, Bayside Council endorsed its first Waste Avoidance and Resource Recovery Strategy 2030: The Journey to a Circular Economy. This WARR Strategy and its achievements have resulted in many awards including the 2023 National Award for Local Government (Waste Management), Keep Australia Beautiful NSW Sustainable Cities Finalist Award every year from 2018 to 2023.

Bayside Council's WARR Strategy had resulted in many successful achievements including:

- Mandating the use of recycled material in our annual road re-sheeting program;
- Extracting organic material from the general waste bins at an advanced treatment facility to make a compost used for mine site rehabilitation;
- 22 annual Community Recycling Drop-Off Events;
- Smart, solar powered mobile surveillance and education trailers to reduce illegal dumping;
- Trial garden beds at our off leash fenced dog parks, where the soil is nourished using a rotational dog poo worm farm and compost bin system;
- Implementing 80 'smart sensor' beach litter bins over 8km of beachfront; and
- Pollution control devices that help divert 225,000 kilograms of unwanted material annually from entering our waterways.

The previous WARR Strategy has 5 Key Strategic Actions with associated targets. These Key Strategic Actions and targets are discussed in Appendix A: WARR Strategy Progress Update 2024.

Bayside Council's circular economy model

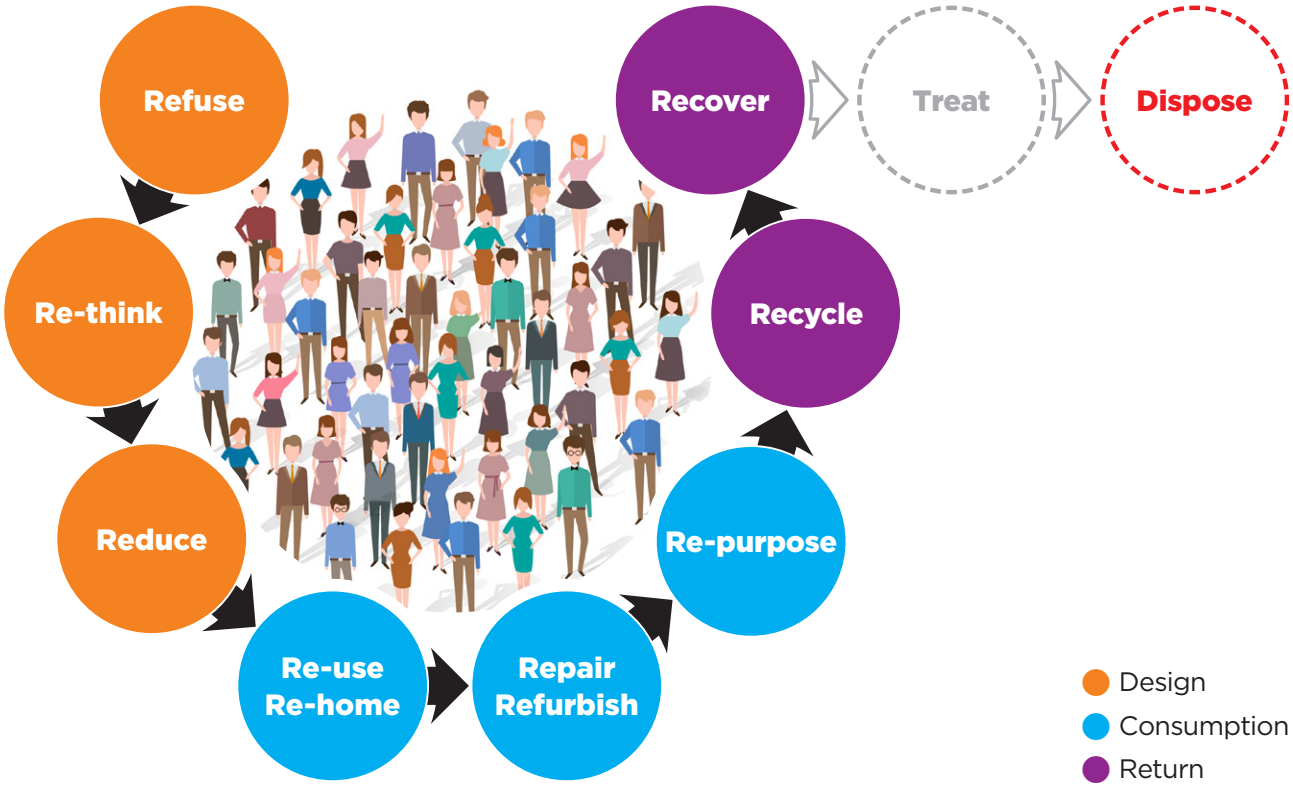
Since the 2018 WARR Strategy, Bayside has built upon their original circular economy model to provide greater focus on the design and consumption stages of a circular economy.

These stages are where government, producers and communities can work together to:

- Reduce waste generation;
- Focus on activities where resources are valued and used to their full potential prior to becoming waste; and
- Make informed decisions to benefit the environment.

Council has positioned the community at the centre of the circular economy model. Through responsible citizenship and Council leadership, waste materials are returned to the community through initiatives and innovation.

The circular model can be easily identified as an '8R' Strategy. When the 8R circular economy model has been applied, any materials not suitable for recovery can be treated to reduce its environmental impact (e.g., medical waste) with a goal to send only a minimal amount of residual waste to be disposed of to landfill.



8R Circular Economy Strategy:

1. Refuse
2. Re-think
3. Reduce
4. Re-use / Re-home
5. Repair / Refurbish
6. Re-purpose
7. Recycle
8. Recover

How the 8R strategy works

HIERARCHY	STRATEGY	EXAMPLES
1. Design Smarter product design, manufacture and use	1. Refuse	**Producer:** design and manufacture problematic waste out. **Consumer:** avoid using single-use products.
	2. Re-think	**Producer:** redesign product to prolong use. **Consumer:** consider sharing the product.
	3. Reduce	**Producer:** increase material productivity. **Consumer:** choose products with longer life cycle and reduce food wastage.
2. Consumption Extend the life cycle of the product and/or it's parts	4. Re-use Re-home	**Producer:** increase material productivity. **Consumer:** donate and/or use second hand/pre-loved products.
	5. Repair Refurbish	**Producer:** design products so that they are repairable. **Consumer:** repair or reupholster items products.
	6. Re-purpose	**Producer:** design products so that they can interchange parts easily and/or be used in other functions. **Consumer:** re-use products but with other function.
3. Return Useful application of materials	7. Recycle	**Producer:** provide recycling programs to 'buy-back, 'take-back', and/or 'drop-off' used products or it's parts at end of life. **Consumer:** salvage and separate material streams to achieve highest possible value.
	8. Recover	**Residual materials:** left-over after following 1R-7R should be minimal, and consideration should be made for waste to energy solutions prior to landfilling.

Drivers for new SWM Strategy

Landfill capacity crisis

Current situation: Putrescible landfills in Greater Sydney are projected to reach capacity by 2036 (NSW Waste & Sustainable Materials Strategy 2041).

This situation could be worsened if facilities that are currently diverting residual waste from landfills, such as mechanical biological treatment (MBT) facilities are not immediately replaced with alternative facilities that can divert this material. FOGO processing facilities may not be able to fill this gap unless infrastructure planning guarantees sufficient processing capacity and education/behaviour change ensures most of this FOGO material is separated by individuals for recycling.

Implications: Immediate action is required to develop sustainable waste management practices, explore alternative disposal methods, and invest in innovative technologies for waste reduction. Infrastructure planning is also required to ensure sufficient processing capacity and sufficient education funding provided to councils to tackle contamination and low capture rates in new source separated streams.

Lack of high-value markets for recycled materials

Challenges: End-markets for recycled materials are needed. Without high-value markets for recycled materials, the costs of recycling increased.

Solutions: Encouraging industries to adopt recycled materials, implementing government incentives, and raising awareness amongst consumers about the benefits of using recycled products can help establish and expand high-value markets for recycled materials. Council can also play an important role through sustainable procurement.

Contamination in recycling streams

Importance: Reducing contamination in recycling streams is crucial to expanding available markets for recycled materials. Reducing contamination not only lowers processing costs but also ensures the quality of recycled products, encouraging industries to incorporate them into their manufacturing processes.

Strategies: Implementing educational programs, improving sorting technologies, and advocating for producers to make products that are easier to recycle can reduce recycling contamination. Addressing contamination in new streams such as FOGO can be resource-intensive and requires ongoing funding.

Reduction of organics to landfill (with reduced carbon emissions)

Significance: Organics constitute a significant portion of waste, contributing to landfill congestion and greenhouse gas emissions.

Approaches: Empowering individuals to reduce food waste, implementing widespread composting programs (both home and council run), and investigating energy recovery for organics in residual waste can effectively tackle the issue of organics in landfills.

Potential for wastes to cause harm to people and the environment

Human/environmental impact: Improper waste disposal poses threats to water, soil, and biodiversity. Pollution from waste can negatively impact human health, ecosystems, endangering flora and fauna, emphasizing the need for responsible waste management practices.

Mitigation strategies: Promoting correct disposal methods and conducting public awareness campaigns can mitigate environmental harm caused by improper waste disposal, however, regulatory action, legislative action and product stewardship is required to reduce problematic materials and improve resource recovery.

Job creation through recycling and reuse

Economic opportunity: The circular economy presents substantial economic potential, with the global sector forecasted to reach $4.5 trillion by 2030 (NSW Waste & Sustainable Materials Strategy 2041). Increasing Australia's recovery rate and material efficiency can contribute significantly to gross domestic product growth and job creation.

Local Impact: The NSW 2040 Economic Blueprint (NSW Treasury, 2019) recognises the need for the NSW State and Commonwealth Government to devise strategies to take advantage of emerging opportunities in waste management and the circular economy.

Other drivers include:

- Resilience, risk and disaster management (Section 6);
- Infrastructure requirements (Section 5); and
- Social licence to operate (Section 4).

4 SWM focus areas and targets

This SWM Strategy and its overarching SWM Policy, set key focus areas and targets to guide our journey towards a thriving circular economy model.

These key focus areas and targets are based on:

- Changes in circular economy focuses and targets internationally, nationally and locally (Section 3);
- Bayside Council's current performance including our progress towards meeting the objectives of and targets in Council's WARR Strategy 2030 (Appendix A); and
- Current and emerging drivers for the circular economy and sustainable waste management (Section 4).

SWM FOCUS AREA	SWM TARGETS
1A. Refuse, re-think, reduce (design)	No increase in total domestic waste generation per capita basis by 2032.
1B. Re-use, re-home, repair, refurbish, repurpose (consumption)	Decrease in total domestic waste generation per capita beyond 2032 with producer, State Government and Federal Government initiatives.
2. Recycle, recover (return)	65% diversion of domestic waste from landfill by 2032. 80% by 2041 should advanced technologies for diversion of residual waste become viable.
3. Treat, dispose	99% of Bayside residents to live within 2km of a pharmacy participating in the Community Sharps Program by 2032. Ensure best practice contracts in place to manage residual waste that cannot be recycled or used to recover energy. Ensure specialised staff and contractors are available for wastes requiring specialised collection and disposal.
4. Reduce illegal dumping	To develop relevant reporting mechanisms that are consistent and support the Measurement, Evaluation and Learning (MEL) framework being developed by the NSW Government, as applicable to local government. Re-deploy mobile illegal dumping cameras to a minimum of 18 hotspot locations every year.
5. Litter prevention	Develop a baseline of litter data for the Local Government Area (LGA). Establish a roadmap for litter prevention initiatives for the LGA. Contribute to the NSW Government overall NSW targets of 30% reduction in plastic litter items by 2025 and 60% reduction in all litter items by 2030.
6. Responsibly manage household problem wastes	Maintain 22 Community Recycling Drop Off Events per year to collect household problem wastes. Investigate viability of Council drop off or collection service for additional household problem wastes.
7. Commercial waste and recycling	Every Bayside eligible business will be provided with an option of full suite of bin services, including general waste, recycling, and organics by 2025. The resource recovery option offered to domestic premise will be consistent with those offered to eligible businesses.
8. Other Council-managed waste streams	Council will investigate viable resource recovery options for other council managed waste streams, including street sweeping, and gross pollutant traps.
9. Reducing carbon emissions	Introduction of separate FOGO service across the local government area in line with the NSW Government target of net zero emissions from organic waste by 2030. Align with NSW Government's Objective to achieve net zero emissions by 2050.

Focus Area 1A: Refuse re-think reduce (design)
Focus Area 1B: Re-use re-home repair refurbish repurpose (consumption)

No increase in total domestic waste generation per capita basis by 2032.

Decrease in domestic total domestic waste generation per capita beyond 2032 with producer, State Government and Federal Government initiatives.

Baseline: 7.6 kg per capita per week in 2016/17.

Targets

The measure of total domestic waste generation per capita includes all waste generated irrespective of whether it is recycled, used for energy recovery or disposed of to landfill.

Total domestic waste generation is impacted by:

- Design (smarter product design, manufacture and use); and
- Consumption (extend the life cycle of the product and/or its parts).

There is overlap in these two impacts, as Design can influence Consumption and vice versa. For example, the durability of a product (Design) can impact on the potential for the product to be reused or repaired (Consumption). Conversely, consumer preference for buying products that can be repaired (Consumption) can influence producer decisions regarding product manufacture (Design).

The Federal and NSW Government have both adopted a target of a 10% reduction in total waste generation per capita by 2030 (inclusive of domestic and business waste). These Federal and NSW targets reflect their significant role in reducing waste generation. Federal and NSW responsibilities include policies, legislation and funding. Policies, legislation and funding influences the way that products are made including longevity of product life, and the capacity for the product to be reused or repaired. These changes will be supported by Council through education, promotion and providing residents with the skills and assistance they require to keep products in the circular economy for longer.

From 2016/17 to 2021/22 there has been a small increase in Bayside Council's weekly per capita domestic waste generation. This increase is lower than for the region and Sydney.

Current and future Council actions are expected to result in no increase in waste generation per capita by 2032.

Initiatives led by producers, State Government and Federal Government may result in a reduction in per capita generation beyond 2032.

Refusing single use plastics: plastic free July® promotion

This year, Council ran its first promotion for both staff and the community during Plastic Free July.

Community winners of the promotion were awarded prizes and given a certificate of recognition for their environmental efforts, labelling them as 'Community Environmental Champions'.

Encouraging Council staff to participate creates a culture of sustainability, promoting collective responsibility and Council's "Lead by Example" ethos.

By promoting single-use plastic reduction during the month of July and beyond, Bayside Council aims to help residents minimise waste through behaviour change.


Leader

Home / Community / Your News

Bayside Council encourages more upcycling during Australian Fashion Week

EK

By Eva Kollmar
May 18 2023 - 6:00am

Re-use: sustainable fashion

Bayside Council has commenced a program to empower the community to make more sustainable fashion choices during high profile national and global events.

Promotion of Council's Community Recycling Drop Off Events and wearing second-hand clothes on social media, taken up by the local news (Leader) during Australian Fashion Week.

Series of social media articles on local op-shopping opportunities and buying second-hand clothes online during Oxfam's Second Hand September.

Internal Sustainable Fashion Blog created to empower staff to make sustainable fashion choices.

Future actions

Council seeks to build on that commitment to minimise waste generation per capita with:

- Behavioural change programs that help residents understand and choose products that last longer and refuse single use products;
- Behavioural change programs that help residents re-think and choose products that can be repaired instead of replaced;
- Assistance to businesses, residents and visitor to understand and adapt to single use plastic bans implemented by the NSW Government;
- Education and workshops to encourage and assist residents to avoid waste, by reducing consumption, re-thinking consumption, re-using, re-homing, re-purposing, refurbishing, and repairing;
- Programs that encourage residents to re-think and reduce food waste whilst saving money;
- Compost and worm farm workshops;
- Programs/networking with Sydney Councils through SSROC to share ideas and programs to result in a change in disposal culture;
- Programs to assist the community to re-think their perception of consumerism by sharing goods rather than purchasing, for example through clothes swap events;
- Partnerships/connections on behalf of the community with reuse organisations, resellers, retailers and/or event organisers to facilitate reuse opportunities within Bayside;
- Collection of reusable clothing and reusable/repairable bikes at Council drop off events; and
- Price incentives for residents to opt for small kerbside bins, to reduce waste generation.

Council will continue to advocate for product design, legislation and mandates that reduce waste generation including:

- Reducing the availability of single use products;
- Increasing the lifespan of products, including potential for repair or replacement of worn parts rather than disposal of the entire product (right to repair and lifespan standards);
- Longer warranties for products or mandated repair/replacement of products at the producer's cost for specific life of product;
- Increased availability and affordability of reusable products;
- Reducing, unnecessary product packaging;
- Producer/retailer removal of packaging upon delivery;
- Presentation of food, including used by/best before dates, that discourage unnecessary waste;
- Tax incentives for second-hand or refurbished goods; and
- Retail initiatives that make second-hand goods more attractive to consumers.

Consumer behaviour remains a significant factor, with a lack of awareness or motivation hindering progress despite efforts to encourage behaviour change. The prevalence of a convenience-oriented lifestyle often leads to choices favouring disposable items over sustainable alternatives. Global supply chain complexities and the economic considerations of repair versus replacement further complicate the issue. Importantly, the limited influence of local councils over global production chains and the challenge of managing waste from imported goods underscore the need for a collaborative approach.

Addressing the per capita waste generation rate requires a multifaceted and collaborative approach involving consumers, businesses, and multiple levels of government.

Repair: teaching Bayside's young people basic sewing skills

Through a series of sustainable fashion workshops in late 2023, Council addressed the impact of fast fashion and textile waste.

The clothes repair workshop was held at the Arncliffe Youth Centre, targeting youths aged 12-25.

The workshop was facilitated by an experienced educator who taught the attendees skills in basic mending and sewing.

By the end of the workshop the participants had received hands on experience in how to: start and finish knots, resew on buttons, hemming, and how to execute several different types of cross stiches.

Focus Area 2: Recycle recover (return)

Target: 65% diversion of domestic waste from landfill by 2032.

80% by 2041 should advanced technologies for diversion of residual waste become viable.

The circular economy goal is to stop items becoming waste for as long as possible. For items that do become waste, the priority is to recycle where feasible and recover the embodied energy in the material, when recycling is not feasible.

Targets

In 2021/22, Bayside Council diverted 44% of domestic waste from landfill by:

- Source separation and recycling of recyclables and garden organics (GO) through kerbside bins;
- General waste processing;
- Clean up waste recovery including source separation of mattresses; and
- Reuse/recycling of material from Community Recycling Drop Off Events.

Landfill diversion in Bayside is consistent with landfill diversion achieved by the SSROC councils and SMA councils.

Fluctuations from year to year are the result of legislative changes, facility performance, and disruptions, including collection and processing disruptions. Bayside's maximum domestic waste landfill diversion since 2016/17 was in 2020/21 when a diversion of 52% was achieved.

Whilst domestic waste diversion was well below Council's 75% diversion target by 2030, changes in industry performance, shifts in government and community priorities, and State Government policy require us to revisit and re-think our historical landfill diversion targets.

To set new landfill diversion targets, Council has taken into account the resource recovery systems and technologies currently available in NSW, as well as community preferences and recycling behaviours.

- **Source separated kerbside bin recycling**

  Source separation of recyclable paper, cardboard, glass bottles and jars, plastic food and drink containers, and aluminium cans and foil is well established in Australia.

  Recycling quality and end products are impacted by contamination. Bayside Council's recycling contamination is currently 18%, below the SSROC regional average of 20% (SSROC Kerbside Waste Audit, 2023).

  Recycling processing facilities used by Bayside Council diversion from landfill performance is averaged at 90% (NSW EPA 2021-22 Local Government Waste and Resource Recovery Data Report, 2023).

  13% of Bayside Council's recyclables (accepted in recycling bin) are currently in the general waste bin, slightly higher than the SSROC regional average of 12% (SSROC Kerbside Waste Audit, 2023).

  The 2023 kerbside audit reports indicate that Bayside Council residents could improve their recycling performance by reducing contamination and placing recyclables in the recycling bin. Council will aim to capture 50% recyclables currently in the general waste bin by 2032.

  Council and its community can make recycling more viable and cost effective by investing in materials and products that contain recycled content.

- **Source separated GO bin recycling**

  In 2024, in response to community support, Council will be providing garden organics bins to all households (GO harmonisation).

  The 2023 kerbside audit indicates that average contamination in garden organics bins is 1% with only 2% of garden organics being in the general waste bin for those with a GO bin.

  For residents that did not have a GO bin available at the time of the 2023 audit, the general waste bin contained 22% GOs.

Some of this material may be extracted by the MBT process as compost for mine site rehabilitation. After GO harmonisation, this source separated GO material will have the potential to make higher grade and value composts.

Council anticipates that within a few years of the GO bin harmonisation, approximately 98% of all GO generated will be recovered through the GO bin.

- **Source separated FOGO bin recycling**

Bayside Council is working towards implementing residential source separated food organics and garden organics collection services by 2030, in line with the NSW Government mandate.

The costs of implementing FOGO, especially with reasonable food diversion rates and low contamination is expensive and Council continues to work with the NSW Government to provide organics recovery without increasing the financial burden on households through adequate funding.

Council intends to conduct controlled trials prior to full implementation of a FOGO service.

Mattress recycling

Bayside collects over 10,000 mattresses from clean ups and Community Recycling Drop Off Events each year.

Material is recycled into products including roof sheeting, carpet underlay, weed matting, mulch and acoustic paneling.

Council has invested in two flat-bed vehicles that allow mattresses to be separately collected from clean ups for recycling.

Based on the 2023 kerbside audits, there is, on average, 37% food organics (FO) in Bayside general waste bins. Some of this FO material is currently extracted by the MBT process as compost for mine site rehabilitation.

Industry best practice indicates that capture rates for FOGO (that is, the FOGO generated that is placed in the FOGO bin for recycling, instead of in the general waste bin) is likely to be approximately 50% in metropolitan Sydney. Given the capture rate for GO for Bayside residents currently have a GO bin is 99%, it is likely that a 50% capture rate would include 98% GO material, with the remaining being FO material.

- **MBT facility to extract organics from general waste**

Due to the complexity of FOGO systems, Council has secured a long-term contract to extract organics from general waste prior to the implementation of FOGO collections using MBT process. The initial contract term expires in 2027, with the potential to extend for 5 years up to 2032.

Using this technology, Bayside can achieve a general waste diversion from landfill of up to 40%, with the organics from the general waste stream being used as a compost to rehabilitate a mine site.

Council will continue investigations as to whether this process will still be viable after the introduction of FOGO collections.

- **Recycling of bulky waste from clean up**

Council provides residents with 4 scheduled clean up collections per year, to dispose of bulky items not suitable for the kerbside bin system.

Residents can pay for additional clean up collections or take their bulky waste directly to several clean up receival sites for a reasonable price.

In 2021/22, Bayside achieved a landfill diversion rate of 69% from its clean up material, including source separated mattress recycling diversion of 75%. In 2022/23, this recovery rate was increased to 77%.

Community Recycling Drop Off Events

22 Community Recycling Drop Off Events are held annually for Bayside residents to drop off specific items for recycling, including: electronic waste, metals, mattresses, garden organics, polystyrene, x-rays, toner cartridges, tyres, LPG bottles, cardboard, reusable clothing, batteries, motor oil, fluorescent light globes, pens, plastic plant pots, bicycles and scooters.

The range of items collected and resident participation in drop off events has increased since Council's amalgamation with an average of 154 residents per drop off event in 22/23.

21/22, 122 tonnes of drop off material was received from residents with a landfill diversion rate of 93%.

In 21/22, Council received 32 tonnes of electronic waste (e-waste) from residents through the drop off events and 99% of this e-waste was diverted from landfill.

Council will continue to increase the range of drop off materials collected as new initiatives for recycling are introduced by industry and government.

Council will also investigate ways to make the dropping off of recyclable items more accessible to residents that cannot attend drop off events.

Bayside community circular economy waste survey: energy recovery

For waste that cannot be recycled, 72% of respondents indicated that they would prefer it to go to an advanced technology which can convert waste to energy.

Energy recovery from residual waste

Best practice recycling, with source separation of recyclables and organics, will still result in a residual waste that is unsuitable for conventional recycling methods.

Whilst energy recovery from residual waste is well established internationally, there are still hurdles to it being widely accepted in Australia, hurdles include public perception and concern, policy settings and commercial issues.

The Federal Government 80% resource recovery target includes recycling and recovering energy and Council modelling.

Broader implementation of EfW facilities or other advanced technologies is essential to address the residual waste that cannot be accommodated by existing recycling practices. EfW facilities can play a pivotal role in not only reducing the volume of waste sent to landfills but also in harnessing energy from non-recyclable materials.

2032 Landfill diversion targets

Domestic waste landfill diversion targets, need to be revisited due to differences in residual waste processing diversion potential, changes to Federal and State Government policies and legislation, changes in industry and community priorities.

The Federal and NSW Government have both set targets for 80% resource recovery (landfill diversion) from all waste streams. Neither level of government has quantified the contribution of local governments to this target or provided detailed modelling of how these targets will be met.

Modelling conducted by Bayside Council shows that even with all organics and recyclables recovered from the domestic waste and recycled, a target of 80% cannot be achieved.

The Federal Government has indicated that energy recovery is included in their target but have not quantified/detailed what role energy recovery will play in meeting the overall target.

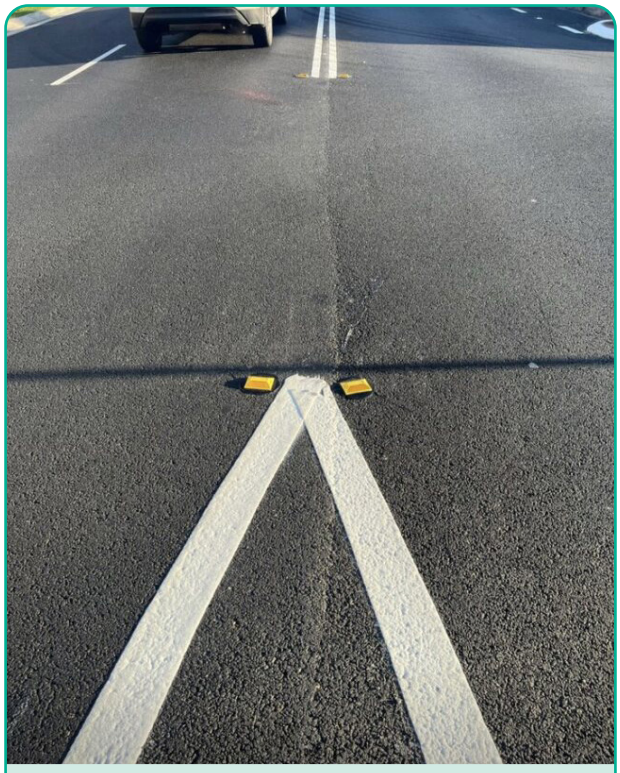
Council has modelled different scenarios based on 21/22 tonnages reported by the NSW EPA and different waste collection and processing solutions, including optimum performance of these systems as below. The modelling assumes no changes to clean up or drop off tonnages recovery rates and no changes to recycling recovery rates.

SCENARIO	ASSUMPTIONS	LANDFILL DIVERSION
1. Three bin system (general waste, recycling, GO)	Optimum general waste landfill diversion based on historical data and general waste processing. Same community separation behaviour based on historical.	57%
2. Three bin system (general waste, recycling, GO) and recycling improvement	Optimum general waste landfill diversion based on historical data and general waste processing. Improved separation of recyclables means 90% of the recyclables currently disposed of in the general waste bin are correctly placed in the recycling bin.	62%
3. FOGO implementation (50% capture) – based on current research in metropolitan areas	General waste processing is no longer viable – general waste bin material goes to landfill. 50% of FOGO material in the FOGO bin. 50% FOGO remains in general waste bin due to average separation. Contamination is low enough to result in all FOGO recovered. Improved separation of recyclables means 50% of the recyclables currently disposed of in the general waste bin are correctly placed in the recycling bin.	49%
4. FOGO 75%	General waste processing is no longer viable – general waste bin material goes to landfill. 75% of FOGO material in the FOGO bin. 25% FOGO remains in general waste bin due to improved separation. Contamination is low enough to result in all FOGO recovered. Improved separation of recyclables means 50% of the recyclables currently disposed of in the general waste bin are correctly placed in the recycling bin.	58%
5. FOGO implementation (100% capture of FOGO and recyclables	100% of FOGO material in the FOGO bin. Contamination is low enough to result in all FOGO recovered. 100% of recyclables material in the recycling bin. Contamination is low enough to result in all recyclables recovered.	71%

Future actions

Council will continue to investigate solutions to provide more opportunities for the Bayside community to recycle and recover the energy from waste including:

- Innovative solutions for resource recovery;
- Value for money solutions including lobbying for more funding from the NSW and Federal Government both directly and through regional groups/forums, such as greater return of waste levy revenue to local government and the waste industry;
- Greater accessibility of recycling services, including investigating permanent drop off locations for recyclable materials, including those run by Bayside Council, industry and the NSW Government;
- Education and information to empower the community to recycle better, including to increase diversion of recyclable material and to decrease contamination in kerbside bins, clean up material and Community Recycling Drop Off Event material;
- Continuing to provide drop off events for residents wishing to recycle more materials, including investigating the potential to increase materials accepted;
- Advocating for more extended producer responsibility and product stewardship schemes;
- Continuing separate collection of recyclable materials, such as mattresses, in scheduled clean ups, and investigating the scope to separately collecting additional materials;
- Investigating options for increasing recovery of food waste in residential and commercial premises;
- Continuing to investigate options for increasing Council buy back or use of recycled products or recycled-containing products;
- Schools education to assist school children to learn more about recycling and resource recovery;
- Working with developers to ensure best practice waste management and resource recovery in new buildings through Development Control Plans (DCP);
- Investigating options for difficult to recycle wastes such as soft plastics; and
- Continue to participate in the SSROC textiles working group to facilitate. regional co-operation and advocacy on recycling unusable textiles.



Rubber in roads: SSROC paving the way, crumb rubber asphalt demonstration

In 2023, more than 4,500 square metres of crumb rubber was installed on Willison Road, Carlton between Forest Road, and Bruce Street.

Bayside Council delivered the largest installation of crumb rubber under this demonstration, also being the first of the twelve councils to install the trial product.

The project enhances the sustainability of road infrastructure by using recycled rubber from end-of-life tyres and other types of recycled materials, such as Reclaimed Asphalt Pavement and Recycled Crushed Glass.

Finalist in the 2023 Keep Australia Beautiful NSW Sustainable Cities Circular Economy Award.

Focus Area 3: Treat dispose

Target: **99% of Bayside residents to live within 2km of a pharmacy participating in the Community Sharps Program by 2032.**

Ensure best practice contracts in place to manage residual waste that cannot be recycled or used to recover energy.

Ensure specialised staff and contractors are available for wastes requiring specialised collection and disposal.

Managing non-recyclable waste involves safe disposal practices, regulatory compliance, and the application of advanced technologies for environmental sustainability.

Waste requiring specialised collection and disposal

Certain wastes, like medical sharps and asbestos, pose challenges for traditional collection and disposal due to safety and environmental concerns. In the case of medical sharps and asbestos, these materials cannot be recycled.

Specialised contractors and designated collection sites ensure safe handling of medical sharps, which are often disposed of using methods like autoclaving or incineration.

Council has been operating a successful Medical Sharps Collection Program with our participating local pharmacies.

Asbestos requires strict removal procedures to prevent further health risks.

Bayside Council participated in an SSROC-led regional tender process to secure specialist asbestos removal contractors in 2021/22.

Household chemicals

Household chemicals (other than motor oil) are currently not collected by Bayside Council. Residents are directed to take other chemicals to NSW Government funded Household Chemical CleanOut Events. Council is currently investigating the potential to trial one of these events in the Bayside area.

Medical sharps collection program

Council funds a free disposal program to enable residents to safely manage their medical sharps in an environmentally friendly and safe manner.

Participating pharmacies accept medical waste such as syringes, needles, insulin pen needles and blood glucose lancets.

Currently there are 27 participating pharmacies in 16 Bayside suburbs.

By 2032, Council aims to have pharmacies in every Bayside suburb participating.

Residual waste to landfill

Whilst Council currently uses an MBT processing to divert as much residual waste to landfill as possible, 60% or more of the residual from this processing will still require landfilling until advanced technologies, such as energy recovery, are available.

Regional and State advocacy

Bayside demonstrates its commitment to reducing costs for residents through strategic advocacy initiatives targeting waste management.

Council advocates for 100% of the waste levy paid on landfill-disposed waste be returned to local government and the waste industry for sustainable waste management. By channelling these funds locally, Bayside aims to create a sustainable financial ecosystem that can support waste reduction programs, recycling infrastructure, and community initiatives.

This approach not only addresses the economic burden on residents, but also contributes to the development of a circular economy within the region.

Bayside also advocates for the removal of the waste levy from products for which recovery is prohibited (for example, asbestos) or currently not feasible to recycle (for example, mixed litter).

By advocating for the exclusion of certain materials from the waste levy, Council seeks to reduce the financial burden on residents by minimising rates increases required to fund sustainable waste programs.

Focus Area 4: Reduce illegal dumping

Target: To develop relevant reporting mechanisms that are consistent and support the Measurement, Evaluation and Learning (MEL) framework being developed by the NSW Government, as applicable to local government.

Re-deploy mobile illegal dumping cameras to a minimum of 18 hotspot locations every year.

Importance of reducing illegal dumping

This focus area is about individual and collective decisions, and roles in putting solutions into practice. Illegal dumping degrades our neighbourhoods and poses a hazard to public health and the environment.

Waste management and enforcement is also a considerable financial burden on Council.

Illegal dumping is a complex social issue, which can be compounded by a lack of infrastructure in some multi-unit developments and commercial areas to correctly store waste and recyclables.

Illegally dumped waste can be easily reported using the Bayside Waste Services App.

There are also challenges in identifying and prosecuting offenders. Illegal dumping incidents in Bayside are typically composed of unwanted household goods left on kerbsides and laneways, or dumping around bins in laneways behind commercial premises.

Dumping of building material and soil is also an issue.

Addressing the drivers for illegal dumping

Council has taken significant steps in recent years to address the drivers for illegal dumping, including convenience of alternative methods of disposal and costs of waste disposal.

These included:

- Reducing the cost of paid on-call clean up services;
- Increasing the materials accepted at Community Recycling Drop Off Events;
- Securing an agreement where residents can take bulky waste to processing facilities at a lower cost than the general public;
- Advocating to the NSW Government that the waste disposal levy should be removed from materials, such as asbestos, which cannot be recycled;
- Making it easier for the community to report illegal dumping through our waste app or website;
- Providing information and education to the community regarding the importance of disposing of waste correctly; and
- Including commonly illegally dumped items, such as mattresses and tyres in Community Recycling Drop Off Events.

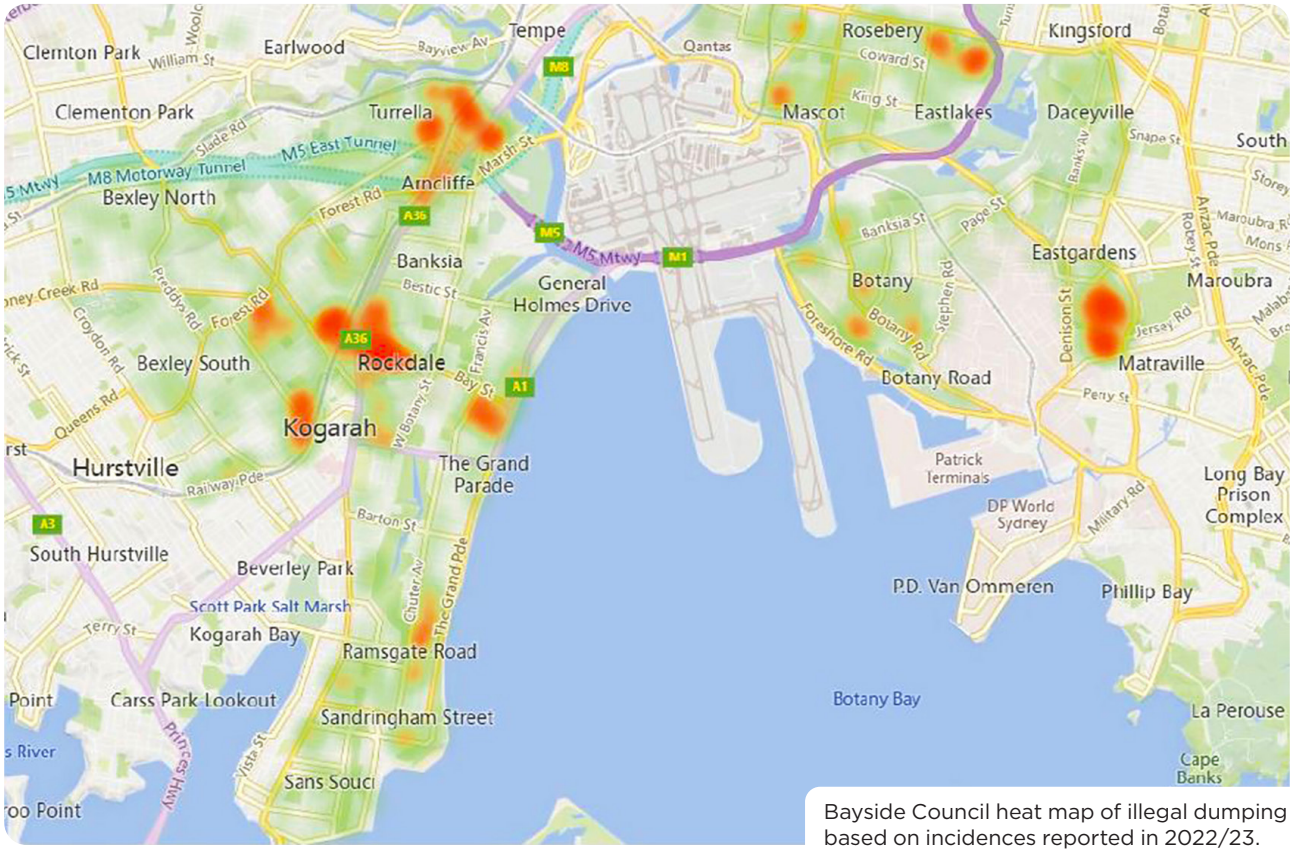
Targets

The NSW Government have acknowledged that their knowledge of illegal dumping is evolving and have chosen in the NSW Illegal Dumping Prevention Strategy 2022–27 (2022) to "develop a measurement, evaluation and learning framework to identify achievable measures and targets, instead of having an across-the-board target to reduce illegal dumping." Bayside Council will develop relevant reporting mechanisms that are consistent and support the Measurement, Evaluation and Learning (MEL) framework being developed by the NSW Government, as applicable to local government.

Future actions

To reduce the incidence of illegal dumping and monitor the effectiveness of our programs, our key actions include:

- Obtaining, collecting and utilising data on illegal dumped waste incidents to inform education and compliance;
- Better understanding the causes and the prevention mechanisms of urban illegally dumped waste;
- Developing and implementing appropriate remedial strategies to address illegally dumped waste at hotspots;
- Monitoring hotspot data using Council data and heatmaps (see below);
- Improving resident utilisation of Council clean up collection services, including education;
- Targeting illegal dumped waste hotspots with surveillance equipment, signage and face-to-face education;
- Working with regional organisations to target illegally dumped waste activities across borders;
- Providing easy to access information to residents on their scheduled clean up days, including fridge magnets, and resident specific collection calendars via the Waste App and Council's website; and
- Continuing to advocate for funding through the waste levy, removal of the waste levy from problematic materials, and increase extended producer responsibility/ product stewardship to increase the affordable recycling and disposal of frequently illegally dumped household items.



Bayside Council heat map of illegal dumping based on incidences reported in 2022/23.

Focus Area 5: Litter prevention

Target: Develop a baseline of litter data for the Local Government Area (LGA).

Establish a roadmap for litter prevention initiatives for the LGA.

Contribute to the NSW government overall NSW targets of 30% reduction in plastic litter items by 2025 and 60% reduction in all litter items by 2030.

Littering can impact on human health and the environment by harming wildlife that ingest or become tangled in littered material, leaching of chemicals into the environment, injuring people that come into contact with littered materials including broken glass and syringes, and by impacting on the enjoyment and image of Bayside.

Littering has the potential to damage Bayside's image as a desirable place to live and visit.

Bayside beaches and parks are used by a large number of residents and visitors (including interstate and international visitors). This high visibility increases the need to keep these areas clean, safe and free of litter.

Targets

As discussed in Appendix A, whilst Council has measured qualitative improvements for individual litter reduction initiatives, it is difficult to quantify litter on a Bayside-wide scale.

Council will continue to work with the NSW EPA and regional organisations such as the Cooks River Alliance on methods to quantify and measure the impacts of litter reduction programs.

As such, Council aims to:

- Secure funding from State Government to develop a Litter Prevention Strategy;
- Develop a baseline of litter data for the LGA;
- Establish a roadmap for litter prevention initiatives for the LGA;
- Set litter reduction targets based on baseline data; and
- Support the NSW Government to meet their overall NSW targets of 30% reduction in plastic litter items by 2025 and 60% reduction in all litter items by 2030.

Bin your butt: Bayside cigarette butt litter bin trial

15 locations were chosen to trial 30 cigarette 'butt bin' infrastructure.

The infrastructure, in conjunction with NSW EPA signage, was installed to direct and make smokers aware of the new disposal facilities, whilst also creating a safe community space for smoking.

The amount of cigarette butt litter in the trial locations have reduced significantly by 73%.

This project is supported by the NSW EPA Waste Less, Recycle More initiative funded from the waste levy.

Future actions

To reduce the incidence of littering and monitor the effectiveness of our programs, our key actions include:

- Obtaining, collecting and utilising data on littering incidents to inform remedial actions and to monitor the progress of litter prevention programs;
- Better understanding the causes and prevention mechanisms of litter;
- Developing and implementing appropriate remedial strategies to address littering at hotspots;
- Improving resident utilisation of Council litter bin infrastructure with signage and education;
- Continuing and where needed expanding the use of innovative beach litter bin infrastructure and collection services to reduce the incidence of beach littering;
- Increasing awareness of the impacts of litter on flora and fauna;
- Investigating (including potential funding) innovative and integrated projects to reduce and capture data on littering;
- Continuing our engagement of proactive community groups in litter reduction events such as Clean Up Australia Day;
- Investigate new projects to encourage and incentivise residents to keep their streets clean (for example, clean street challenges);
- Providing litter bin infrastructure at Council events;
- Partnering with other organisations, such as the Cooks River Alliance to reduce litter as a region;
- Advocating for State and industry programs for commonly littered or problematic litter types, such as soft plastics; and
- Encouraging the community to consider alternatives to single use plastics, which often become litter.

Summer foreshore program (SFP): leave only footprints

SFP has been in operation since 2019.

Program raises awareness of the NSW government single use plastics ban whilst encouraging the community to avoid beach litter.

Engaged local businesses to use the branded bags to remind visitors to put their rubbish in the bin.

Bayside Beach Buddies on-the-ground ambassadors play a vital role in communicating SFP messages, handling enquiries, and addressing issues.

The ‘Leave only Footprints’ brand was created to promote environmental awareness, waste education, and self-regulation.

Focus Area 6: Responsibly manage household problem wastes

Target: **Maintain 22 Community Recycling Drop Off Events per year to collect household problem wastes.**

Investigate viability of Council drop off or collection service for additional household problem wastes.

Targets

Household problem wastes in kerbside bins are still a significant issue for Bayside with an increase in batteries and paints since 2019.

It is important that Bayside Council maintain its 22 drop off events per year.

For household problem wastes not currently accepted at the Bayside Community Drop Off Events, Council will consider expansion of accepted items either through existing events or separate events, provided sufficient funding is supplied through the waste levy to ensure that these programs do not create an unreasonable financial burden on Bayside residents.

Batteries and producer responsibility

Batteries are of a particular concern and are resulting in collection vehicle hot loads (this is when the waste material in a waste collection vehicle catches fire) and in fires at waste processing facilities. The increase in hot loads is not only a result of community behaviour but indicates an increase in use of battery types that are particularly likely to cause fires, such as rechargeable batteries, lithium batteries and vape batteries.

Whilst the message that batteries need to be disposed of at drop off locations is getting through to the community, it is unclear whether the community understands that this includes batteries that are sold with the batteries embedded in the device, such as vapes and laptops. For these types of products, better producer labelling regarding disposal options could assist, as well as greater producer responsibility for the end products. Increased product life and ease of repair would also result in less of these items requiring disposal as is discussed in Key Focus Area 1.

Fire hazards caused by batteries

Council has experienced four incidents of fires in waste and recycling collection vehicles, both attributed to battery-related issues.

Communication included stickering all our collection vehicles (over 4 million collections conducted per annum) with impactful messaging.

Increased community awareness by promoting B-cycle through the Waste App, Community e-Newsletters and via social media.

Developed interactive marketing resource of a scale model replica of Council's waste collection vehicle, to further promote battery messaging.

All batteries are accepted at our Community Recycling Drop Off events. In 2022/23, Council collected 904kg of batteries.

Winner of the 2023 Keep Australia Beautiful NSW Sustainable Cities Community and Engagement Award.

Future actions

To reduce the incidence of household problem wastes in kerbside collections by 2030, our key actions include:

- Providing information and education to the community to empower them to make informed decisions on how to safely dispose of problem wastes;
- Using a combination of community drop off centres and other solutions for managing problem waste materials, including expanding the scope of materials collected where it provides value to Bayside residents;
- Advocating for increased Product Stewardship and Extended Producer Responsibility to manage problem wastes such as electronics containing embedded batteries and vapes;
- Including in the A-Z guide on the Waste App options for disposal or recycling of problem wastes;
- Working with external stakeholders to determine and promote drop off locations for materials not collected by Council;
- Investigating options for collection of problem wastes in multi-unit dwellings; and
- Working with government, developers and planners to provide updated waste management requirements for multi-unit dwellings as part of development control plans.

Focus Area 7: Commercial waste and recycling

Target: Every Bayside eligible business will be provided with an option of full suite of bin services, including general waste, recycling, and organics by 2025.

The resource recovery option offered to domestic premise will be consistent with those offered to eligible businesses.

Commercial waste and recycling services targets

Participating commercial businesses can access Council waste services. These services utilise the same resource recovery facilities as the domestic premises, as discussed under Focus Area 2: Recycle Recover.

To make this service more accessible to commercial businesses a flexible range of bin configurations and collection frequencies are available.

In 2023, over 1,150 commercial premises in the Bayside local government area utilised a Council collection service. As commercial general waste and recycling services have access to Council's contracts for resource recovery, in 21/22, commercial waste services on overall achieved a resource recovery rate of 33% predominantly through recovery of organics from the general waste bin and recovery of recyclable materials from the recycling bin. Without the recovery of organics through the general waste bin, the overall landfill diversion would have dropped to 14%, as most third-party operators do not have access to an MBT facility solution.

A typical commercial waste service does not include recovery of organics from the general waste, meaning that a Council waste service can provide better environmental outcomes for businesses. By increasing the proportion of local businesses participating in Council's commercial waste service, Council is increasing the overall landfill diversion from commercial businesses.

In addition to the commercial waste services discussed above, Council aims to assist commercial businesses improve their sustainable waste performance through:

- Providing businesses along the foreshore with information, education and tools to comply with the NSW Government single use plastic bans;
- Provision of street litter bins and cigarette butt bins to keep commercial shopping areas clean and inviting;
- Street sweeping services to keep commercial shopping areas clean;
- Offering Organics recycling solutions to eligible businesses from 2025;
- Providing larger skip bin solutions to prevent overflowing smaller size mobile bins; and
- A discounted (at-cost) solution for non-profit organisations, emergency services, places of worship, educational institutions and other community groups.

NSW commercial food organics (FO mandate)

The NSW Government intends to introduce a mandate on certain commercial premises to introduce a food organics (FO) collection service by 2025. Whilst it is uncertain whether these premises will be suitable for a Council collection service, Council will monitor the progress with this mandate and provide input and assistance where appropriate.

Future actions

To encourage Bayside businesses to reduce waste and become more sustainable, Council will:

- Ensure collection and processing contracts servicing commercial businesses through Council commercial waste services maximise environmental performance whilst providing value for money;
- Encourage more businesses to take up a Council waste, recycling and organics service, to improve resource recovery;
- Provide education and support to assist businesses use Council provided waste and recycling services;
- Offer sustainable waste management sessions to all primary schools in the Bayside local government area;
- Provide support to Bayside businesses to encourage their customers to reduce foreshore littering through Council's Summer Foreshore Program;
- Provide support to Bayside businesses involved in activities that support the circular economy, including reuse, repair, recycling, and the use of recycled materials;
- Continue the Sharps Collection Program to increase service offerings from pharmacies;
- Partner with commercial businesses to increase resident resource recovery (see case study for Revolve Recycling); and
- Investigate providing promotional resources that allow businesses to showcase the environmental benefits of their Council commercial waste service.

Focus Area 8: Other council-managed waste streams

Target: Council will investigate viable resource recovery options for other council managed waste streams, including street sweeping, and gross pollutant traps.

Other Council-managed wastes include litter in the environment and in public place litter bins, material collected in gross pollutant traps, street sweeping, wastes generated during Council construction and maintenance works, and organic waste from maintenance of parks and open spaces.

It also includes waste generated by Council staff such as office paper, food waste and food packaging from staff kitchens, electronic waste, staff uniforms and staff personal protective equipment.

Targets

Council provides waste services throughout Bayside ensuring that the community has access and the infrastructure it needs to dispose of waste responsibly, and to avoid littering and illegal dumping.

Council aims to continuously review infrastructure and services to ensure that they best meet the needs of the community.

As a large organisation with hundreds of staff, depots, offices and other buildings throughout Bayside, Council is both a consumer of products and a generator of waste. As such, Council has significant influence over product design and can also set important standards for both the community and other levels of government to follow.

Council will develop a methodology to better measure its own consumption, disposal and recover of materials and use this to set a benchmark against which waste reduction and resource recovery can be measured. As part of this program, Council has included sustainability as a part of their new staff induction to facilitate and encourage discussion and consideration of sustainability issues as part of everyday work operations.

Future actions

Council will take actions to reduce waste from Council activities and increase recovery of other waste collected and/or generated by Council including:

- Consider developing data measures in collaboration with SSROC and other organisations to benchmark and measure product consumption and disposal for products such as office supplies, packaging and uniforms;
- Ensuring sufficient waste infrastructure and services to meet the needs of the community and internal operations;
- Investigating advanced systems for resource recovery from difficult to recycle wastes such as street sweepings and litter;
- Advocating for the waste levy to be removed from wastes where processes do not currently exist to recover them efficiently;
- Continuing to recycle materials where there are viable recycling opportunities such as electronic waste and packaging;
- Investigating technological solutions that reduce the need for printing such as online staff and project reporting;
- Encouraging offices to recycle where possible;
- Continuing to explore opportunities to buy or lease equipment that have longer life cycles and that are easier to reuse or recycle; and
- Assisting all Council business units to quantify waste generated and find recycling or reuse options.

Worm farm at the Hillsdale community centre & offices

A worm farm has been introduced at the Hillsdale Community Centre & Offices for staff to recycling their food waste.

The staff have learnt about the dos and don’ts of worm farming.

The introduction has increased awareness and engagement with food waste recycling and its benefits.

Focus Area 9: Reducing carbon emissions

Target: Introduction of separate FOGO service across the local government area in line with the NSW Government target of net zero emissions from organic waste by 2030.

Align with NSW Government's Objective to achieve net zero emissions by 2050.

Domestic waste accounts for 15.3% of total greenhouse gas (GHG) emissions (carbon dioxide equivalent) for Bayside in 2021/2022.

Resilient Sydney has commissioned Kinesis to develop a net zero app helping local governments modelling their net zero emission pathway, including waste management.

The waste solutions could be (figure below):

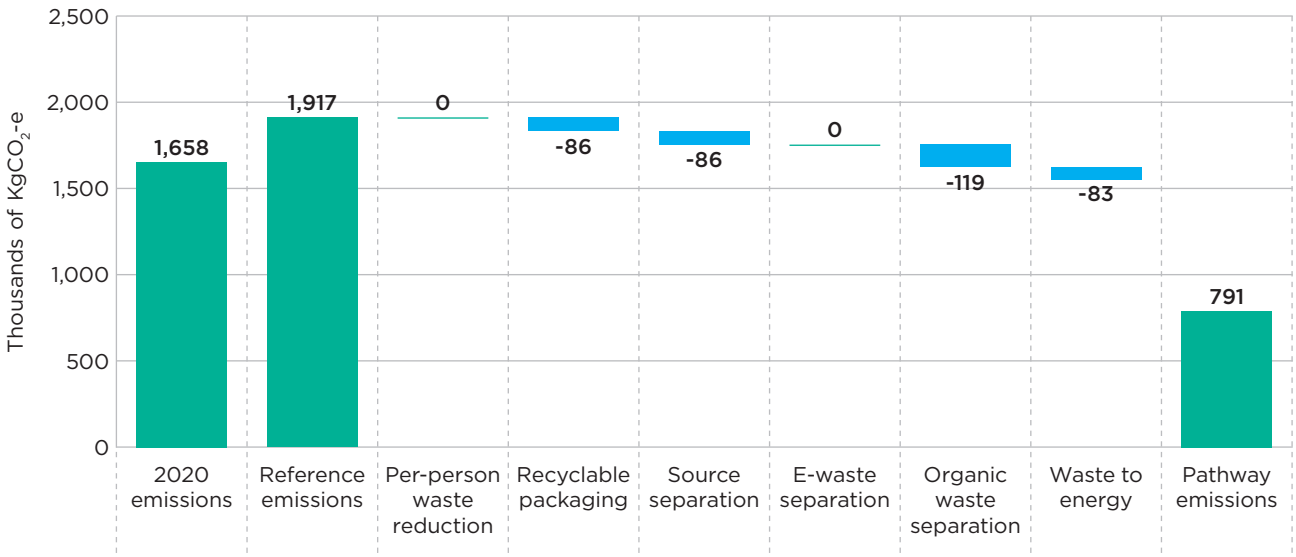
- Overall waste generation reduction per capita;
- Recyclable packaging;
- Source separation;
- E-waste management;
- Organic waste separation and recovery; and
- Waste to energy.

Introduction of source separated FOGO collection and processing services have the potential reduce up to 119 thousand tonnes of GHG by 2030 per year (based on best case scenario of 100% FOGO capture and minimal contamination with non-organic materials), while source separation and waste to energy could reduce 160 thousand tonnes of GHG emissions (Resilient Sydney, 2023).

Currently, Bayside minimises GHG emissions from waste generated by:

- Extracting up to 40% organics from the general waste bin via a MBT facility to make a compost for mine rehabilitation;
- Sending residual waste from the MBT facility to a bioreactor landfill where landfill gas capture is maximised and used to create electricity to displace fossil fuel electricity;
- Providing recycling and garden organic bin services; and
- Providing bulky waste service and drop off events to assist the community to re-use and recycle materials such as garden organics, useable clothing and electronic waste.

Emissions Reduction



In addition to these direct GHG emissions (scope 1 and 2) from waste generation and recycling, embodied carbon (scope 3) of the materials and products should be taken into account when working towards net zero emission.

Avoidance, reduce, reuse, recycle of materials and products, and use of recycled products are key actions to reduce scope 3 GHG emissions.

A good example is the fashion industry, where production and distribution of textiles is responsible for 10% of global carbon emissions.[1]

By doubling the number of times a garment is used, the GHG emissions created by this garment would reduce by 44%.[2]

Future actions

Focus Areas 1 to 8 all include actions that will contribute to net zero emissions. Actions that are expected to significantly reduce GHG emissions include:

- Diversion of additional organics from landfill;
- Community education and engagement to reduce waste generation, and increase waste separation at source;
- Increased use of recycled materials such as recycled asphalts, recycled concrete, recycled glass, recycled plastics (as using recycled materials creates less emissions than new materials);
- Promotion of sustainable fashion to increase re-use and recycling of textiles;
- Investigation and use of low embodied carbon materials and products; and
- Advocating and lobbying State and Federal Governments to introduce product stewardship schemes for packaging materials, textiles, and other electronic products.

1. European Parliament, 2023, The Impact of textile production and waste on the environment (infographics).
2. Ellen MacArthur Foundation, 2017, A new textiles economy: Redesigning fashion's future.

5 Key interdependencies

This SWM Strategy cannot succeed in isolation. There are many key interdependencies that will impact on the targets set in this SWM Strategy. This section details these key interdependencies and actions taken by Bayside Council to ensure these interdependencies are recognised and addressed.

Infrastructure

The NSW Waste and Sustainable Materials Strategy 2041 has highlighted gaps in required waste infrastructure including significant new infrastructure required for FO/FOGO processing, organics transfer stations and tyre processing.

Without sufficient infrastructure, the resource recovery targets set by Federal, NSW and local government will not be met.

Infrastructure planning is a priority area for the Sydney region. Bayside Council continues to work with SSROC on regional infrastructure needs which are communicated to the NSW Government. Bayside Council and SSROC will continue to advocate to the NSW Government the need to ensure planning includes sufficient waste infrastructure, and essential planning precincts that are zoned for this type of infrastructure to be built and operate. This is in addition to the funding and waste policy certainty that are required to encourage investment in infrastructure in NSW.

Bayside Council has also worked to ensure sufficient waste infrastructure through joint procurement initiatives such as for general waste processing.

Funding

Future resource recovery comes at a price. Future actions that are likely to come at a significant expense to local government and/or industry are:

- FOGO implementation (education and processing costs);
- Recycling of textiles unsuitable for re-use;
- Soft plastics collection and recycling;
- Innovative technologies for hard to recycle materials; and
- Additional travel time and productivity loss transporting materials to new waste, recycling or recovery facilities.

Council advocates for 100% of the waste levy paid on landfill-disposed waste be returned to local government and the waste industry for sustainable waste management. By channelling these funds locally, Bayside aims to create a sustainable financial ecosystem that can support waste reduction programs, recycling infrastructure, and community initiatives. This approach not only addresses the economic burden on residents, but also contributes to the development of a circular economy within the region.

Bayside also advocates for the removal of the waste levy from products for which recovery is prohibited (for example, asbestos) or currently not feasible to recycle (for example, mixed litter). By advocating for the exclusion of certain materials from the waste levy, Council seeks to reduce the financial burden on residents by minimising rates increases required to fund sustainable waste programs.

Without additional investment in resource recovery through return of waste levies collected by the NSW Government and removal of waste levies where the levy provides no incentive to divert from landfill, greater resource recovery may be cost prohibitive for councils and their communities.

As part of their advocacy work with SSROC, Bayside has researched the true cost of sustainable waste management solutions including FOGO implementation and education.

Bayside Council also continues to apply for grants to pay for new initiatives, such as the garden organics harmonisation ($1.25 million awarded by the NSW Government from waste levies collected) and a pending application for funding for litter reduction strategies.

Bayside Council has also advocated that schools waste education (currently funded by Council for Bayside primary schools) should be funded and managed by the NSW Government to ensure consistency of sustainable waste management education throughout NSW.

Federal and State policies and legislation

Federal and NSW policies are instrumental in achieving sustainable waste management targets.

Federal Government waste export bans, product stewardship legislation and funding (for example for the National Clothing Product Stewardship Scheme) impact on the way waste materials are managed and funded.

NSW Government policies and legislation govern how waste management operations are conducted in NSW, as well as how they are funded and how waste infrastructure is planned and approved. The NSW Government also regulates and approve waste facility licences and mandated the Container Deposit Scheme to reduce litter from containers and increase container recycling.

Significant NSW Government waste impacts:

- Waste levies are collected by the NSW Government on wastes disposed of to landfill. In 2017/18, only 19.9% of NSW waste levies were spent on waste and recycling activities, inclusive of State EPA agency funding;
- Resource recovery exemptions and orders (RREO) govern how waste materials can be land applied or used for energy. The changes to the RREO for organics from general waste caused significant disruption to the industry and created uncertainty that hindered innovation investment in waste infrastructure. The RREO for FOGO will determine the future viability of FOGO implementation;
- The NSW Government support for energy recovery from waste is currently limited and constrains innovation in this area;
- The NSW Government has announced through their Waste and Sustainable Materials Strategy 2041 that implementation of source-separated FOGO collections for all NSW households will be mandated by 2030. Whilst Bayside remains committed to this timeline, the specifics of the legislation regarding this mandate are yet to be announced. Additionally, the NSW Government has not returned sufficient waste levy funds to allow local government to implement FOGO without an unreasonable cost burden on the community. Issues raised regarding FOGO capture rates (amount source separated by bin users), contamination of product and lack of infrastructure are yet to be addressed;
- The NSW Government single use plastic bans have made significant changes to the consumption of plastic packaging in NSW. It should be noted that compostable alternatives are not currently suitable for FOGO systems and are disposed of to landfill;
- The NSW Government sets fine amounts for litter and illegal dumping and shares responsibility with local government for issuing fines; and
- The NSW Government sets licence conditions for waste infrastructure and regulates transport of certain wastes within NSW, such as tyres.

Bayside Council continues to:

- Advocate for greater local government and industry consultation regarding resource recovery orders and exemptions to provide more certainty to industry;
- Advocate for financial and technical modelling to underpin State Government waste strategies and targets;
- Advocate for greater local government consultation on Federal waste policies and legislation;
- Advocate for more product stewardship schemes including for soft plastics, medical sharps and textiles; and
- Contribute to SSROC government advocacy submissions.

Product design

Changes to product design are required to:

- Phase out problematic products or product materials that are hard to recycle or impact on the environment;
- Make products easier to re-use or recycle;
- Make products last longer; and
- Include more recycled content in products.

The EPA Waste Delivery Plan (NSW Government & NSW EPA, 2021) details how the NSW Government intends to use its powers to influence product design and avoid plastic waste including single use plastics bans, product design standards, and investigating extended producer responsibility for problem wastes such as cigarette butts.

The Federal Government's National Waste Policy Action Plan Annexure 2022 (Department of Climate Change, Energy, the Environment and Water, 2022) aims to use its powers to significantly increase the use of recycled content by governments and industry and reduce reliance on problematic plastics. Additionally, the Product Stewardship Act 2011 allows for industry and products to be regulated through voluntary schemes, co-regulatory schemes and mandatory schemes.

Bayside Council continues to:

- Advocate for phasing out materials that are difficult to recycle, such as polyvinyl chloride (PVC) for food packaging;
- Work with SSROC on trialling recycled content materials in civil works, including design standards (glass and rubber in roads) in support of Federal and NSW policies;
- Advocate for mandating recycled content materials in some products; and
- Invest in sustainable procurement (giving higher priority to sustainable products).

Markets for reuse and recycled materials

Changes in international policies (such as China's reduced acceptance of recyclable materials) and national policies (waste export bans) have meant that new or increased markets need to be found for recycled product in Australia.

Lack of markets can impact the viability of recycling in Australia, as has been seen in the past with low grade glass and soft plastics. Lack of high value markets can also make recycling more expensive for the community.

Lack of markets for second-hand and pre-loved items continues to impact on the viability of the re-use market in Australia.

Bayside Council continues to:

- Work with SSROC to increase markets for recycled crushed glass and rubber from tyres through trialling and procurement of civil work materials including recycled glass and rubber;
- Advocate for extended producer responsibility and product stewardship for producers to take ownership and develop market solutions for their products, including making them more re-usable, repairable or recyclable;
- Encourage the community to buy second-hand to increase markets for second-hand items. This includes promotion of organisations that are reselling second-hand clothes, furniture and bikes;
- Work to include more transparency requirements regarding end markets in contracts and agreements; and
- Conduct research with SSROC into the end markets for products such as unusable textiles and FOGO materials.

Behaviour change

Behaviour change plays a pivotal role in all areas of waste management, encompassing waste avoidance, recycling, and combatting littering/illegal dumping. The success of waste management systems hinges on community engagement and individuals adopting sustainable practices.

With concerns to recycling, the capture rate and contamination levels are directly influenced by individual behaviours. Effective recycling relies on the community to properly sort their waste. Behaviour change programs, ranging from educational campaigns to incentivised initiatives, aim to alter consumer habits. However, achieving widespread compliance is challenging, given the intricate nature of ingrained behaviours.

Littering and illegal dumping further underscore the need for behaviour change. Even with stringent regulations, tackling this issue demands a cultural shift towards environmental responsibility. Community awareness programs targeting the consequences of littering and illegal dumping are vital. While local initiatives play a crucial role, a comprehensive approach requires coordinated efforts at the State and Federal levels.

Implementing behaviour change programs comes with challenges. They demand significant financial resources and face the difficulty of quantifying success. Unlike tangible infrastructure, the impact of behavioural interventions is harder to measure. Nevertheless, their importance cannot be overstated, emphasising the need for continued investment, evaluation, and collaboration at all levels of governance to foster a sustainable waste management culture.

6 SWM Strategy delivery

Waste service improvements

Waste service changes are implemented to enable greater resource recovery, provide best value to the community, at the expiry of existing contracts and to reflect changes in community expectations, policy or legislation.

Council has taken advantage of the expiry of the current collection contract for kerbside bins to implement a range of changes to benefit the community in 2024. Some of these changes include:

- Harmonisation of garden organics collection for all residents;
- Increased education and communication with residents regarding how to currently use the bins and reduce contamination;
- Electronic monitoring and reporting that will allow Council to respond to customer enquiries and requests more efficiently; and
- Allowances for a transition to FOGO by 2030.

Other changes to waste services may be implemented as required to meet the targets set in this SWM Strategy.

Information, education and empowerment

The circular economy model adopted by Council emphasises the importance of consumer and community behaviour in reducing the amount of waste entering the Council waste management systems. This circular economy model requires Council to provide the community with:

- Information to make informed and meaningful decisions regarding product consumption and use;
- Education on how to maintain, repair, use and re-purpose products to keep them for longer; and
- Tools and strategies that empower them to change learned behaviours to value products more and consume less.

New or emerging recycling systems require a higher level of community participation to be successful.

In response to these changes, Council is investing more resources into education, contamination management, community workshops and promotions.

We have listened to our community through various channels such as the 2021 Bayside Community Circular Economy Survey and understand that community preferences for how to receive education and information differ.

For this reason, Council intends to deliver programs under this SWM Strategy using a comprehensive suite of education including face-to-face, print materials, signage, online tools and social media.

Council will keep channels open to communication with the community and will maintain a flexible approach to communication that adapts to the needs of the community and incorporates best practice developments in community engagement.

Education actions are also specified in the Bayside 2032: Delivery Program 2022-2026 (Operational Plan & Budget 2023-2024):

- Program, offer and conduct waste education campaigns; and
- Update the annual program of resources to inform residents about Councils Domestic Waste and Clean Up programs .

In addition to print and electronic media, Council will conduct face to face engagement with at least 3,500 community members each year.

Lead by example

Council intends to inspire the community to take action to manage materials more sustainably and protect the environment by demonstrating an internal commitment and passion to sustainability. This requires sustainability to be embedded in our corporate and staff values.

Council will continue this process by maintaining an open dialogue with staff on how to live and work more sustainably.

Sustainability is included in our new staff corporate induction and staff are encouraged to give feedback on how they would like to improve their sustainability at work.

Public spaces will also be used to showcase leading environmental solutions, such as the trial dog poo worm farms situated in Council-owned off-leash dog parks.

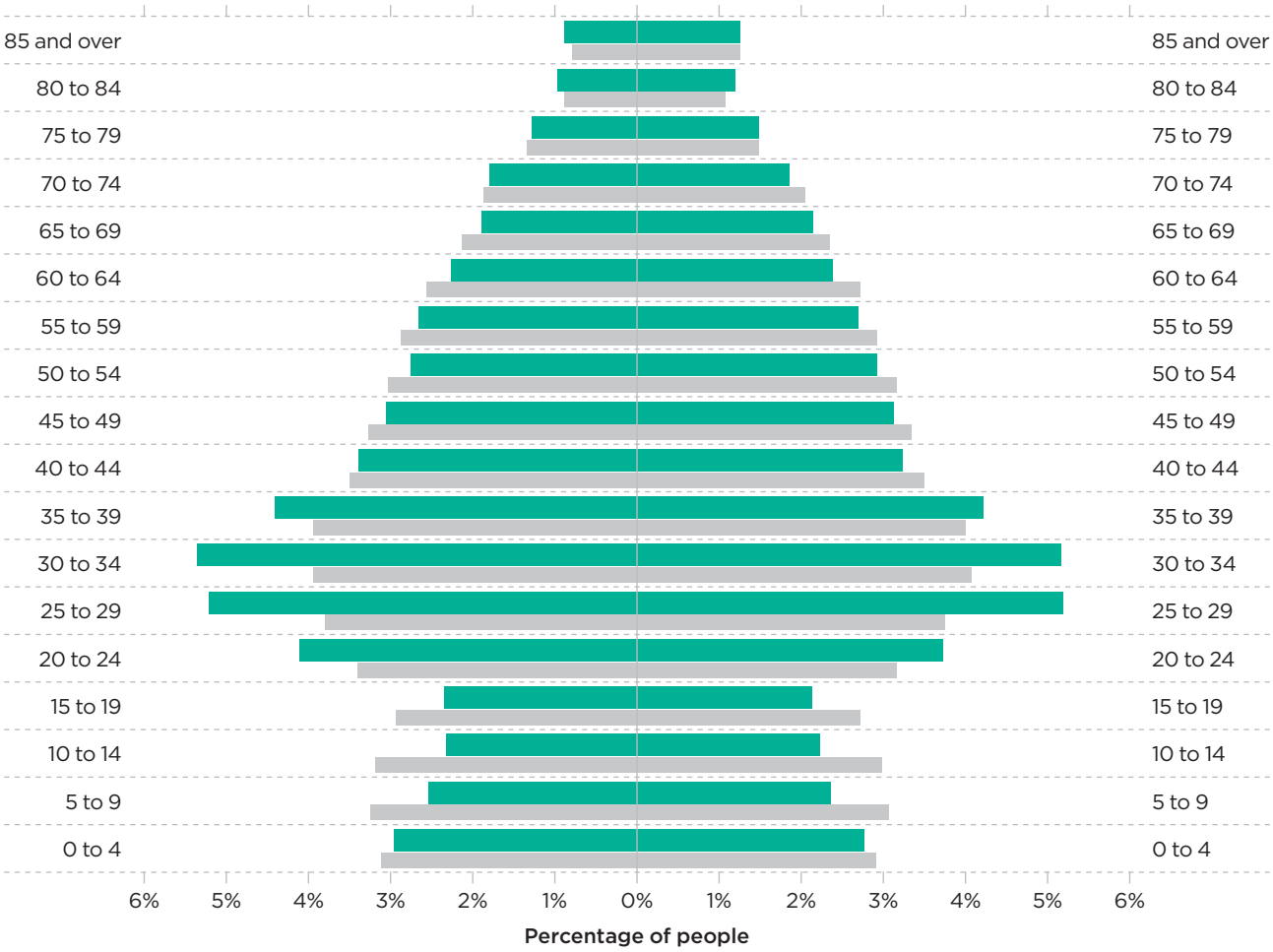
Inclusivity and diversity

Bayside Council is a culturally rich area where people from many different cultures and backgrounds live together in harmony. Bayside is also home to people of all ages, who choose to engage in sustainability in different ways.

2021 ABS Census data states that out of our population of approximately 177,000, over 90,000 of our residents speak a language other than English at home (over 50%), with 15% of those residents reporting that they do not speak English well or not at all.

2021 Census data also shows that Bayside's age group distribution is above the Sydney average for age brackets 20 to 24 through to 30 to 34. The higher proportion of young adults and young families is an important factor when considering the types of waste education and resources these households are likely to require.

Age-sex Pyramid



Source: Australian Bureau of Statistics, Census of Population and Housing, selected years between 1991-2021 (Enumerated data).

Council will continue to develop educational materials with clear graphics that do not rely solely on language to convey their message. Additionally, Council will consult with different community groups and age groups regarding their communication preferences and the sustainable waste issues that are more relevant to them.

Waste services (including participation in the circular economy) also varies by housing type, with services varying in unit blocks and houses. Council will tailor services by housing type and work to ensure that services are accessible to all residents.

Council hosts a number of free events and workshops for the community each year. The Bayside Council Migrant Information Day gives newly arrived migrants in the region the opportunity to gain information about sustainable waste management, health, government, education, youth, community and Culturally and Linguistically Diverse specific services. Visual graphics are also preferred, where possible, to communicate with residents, accompanied by plain English where required.

Council has also used interpreters to communicate waste messages in different languages and has recently completed an 8-week series of sustainable fashion workshops at the Arncliffe Youth Centre for people aged 12-25. Our primary schools education program also provides sustainable waste management messages in a format that is entertaining and informative for school aged children.

In the future, Council intends to consult with a diverse range of community groups across Bayside to understand how to better engage with our diverse community on sustainable waste management topics.

Sustainable procurement

As a large organisation providing a significant number of services to the community, Bayside Council procures a lot of products, from asphalt to uniforms to electronics.

As part of our commitment to the circular economy, Council will continue to work on ways to embed sustainable criteria into our procurement decisions and reduce our use of single use materials.

Bayside Council's procurement policy and guidelines place a strong emphasis on sustainable procurement practices, aligning with the principles of environmental responsibility. The policy recognises the pivotal role of purchasing behaviour in minimising the environmental and human health impacts associated with the supply chain. Specific directives within the procurement guidelines highlight the importance of selecting products that contribute to sustainability goals, such as those with reduced waste, energy and water-saving attributes, pollution minimisation, non-toxic properties, and greenhouse emission reduction.

By actively promoting the preference for sustainable products and services, Council seeks to influence suppliers and contractors to adopt cleaner technologies and practices. This approach, as outlined in the policy, is aimed at encouraging the production of goods with lower environmental impacts, thus contributing to a more environmentally conscious marketplace.

Environmental purchasing is a strategic decision-making process that prioritises products or services with a lower environmental impact compared to alternatives serving the same purpose. The document underscores the numerous benefits of such an approach, including reduced energy and water consumption, improved resource use efficiency, waste reduction, minimised environmental health impacts, and decreased pollution. Notably, the policy recognises the role of environmental purchasing in creating markets for environmentally preferable products, boosting recycling activities, and incentivising industries to adopt cleaner technologies.

Council has mandated the use of recycled material in our annual road re-sheeting program, using 600 tonnes of recycled crush glass (equivalent to 3 million glass bottles) and 4,500 tonnes of recycled asphalt in 2022/23.

The second phase of Council's sustainable roads initiative was trialling rubber from tyres in the asphalt mix (see case study under Section 4). Council's template for high value request for tenders requires information from tenderers regarding their environmental management systems.

In the future, Council will work with staff and regional groups, such as SSROC, to investigate and implement more sustainable procurement solutions that focus on key products/items used by Council, especially where recycling market gaps have been identified as they were for crushed glass and rubber from tyres.

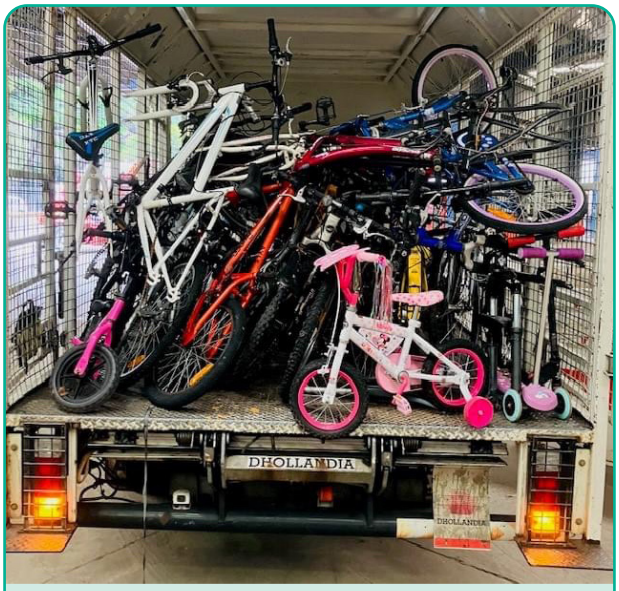
Innovation

Bayside Council has a long history of innovation. Some of our recent innovative projects include:

- One of the first councils in Sydney to have a long-term contract to divert organics from the red-lidded bin;
- First council in NSW to trial the use of the heavy duty AC14 Reconophalt at one of our operational depots;
- Purchase of an expanded polystyrene condenser to facilitate styrofoam recycling;
- One of the first councils to embrace the circular economy in their waste strategy (WARR Strategy 2030, adopted in 2018);
- Used custom designed solar powered CCTV illegal dumping trailers and hotspot data to quantify reductions in illegal dumping;
- Installation of custom designed beach bins and coal bins to curve littering and coal dumping along the Bayside Foreshore during busy summer periods;
- Conducted an online survey regarding Council's waste services and potential future services with 1,402 respondents;
- Maintained and updated the Bayside Waste Services App (over 33,000 downloads to date) to consistently provide up-to-date information on Council's waste services and best practice waste management guidelines;
- Delivered an 8-week series of sustainable fashion workshops to the Arncliffe Youth Centre to encourage sustainable fashion practices;
- Trialled the use of electric waste collection vehicles and street sweepers to reduce vehicle emissions of Council's waste services;
- Conducted dog poo recycling bin trials in selected off leash dog parks; and
- Published an internal Sustainable Fashion Blog for Council staff to encourage reuse and repair of clothing and textiles.

Council intends to continue its track record of innovation in the next decade and to share these trials and demonstration programs with the community and our regional partners to encourage best practice innovative solutions to support the circular economy.

Council will also showcase industry and government partners that have embraced innovative solutions, learning from their experiences and providing best value to the community.



Revolve ReCYCLING

Bayside Council partners with Revolve ReCYCLING as a collection point for unwanted, damaged, or unused bicycles, e-bikes, scooters, and other personal transport vehicles.

Can be dropped off at Community Recycling Drop Off Events.

Aims to recover, recycle, and redeploy personal transport vehicles, avoiding landfill, conserving natural resources, and minimising greenhouse emissions.

In 2023 Bayside delivered its 200th bike to Revolve ReCYCLING.

Evidence-based reporting and actions

When innovative programs are undertaken, evidence-based reporting is crucial to determine the success of the program, lessons learnt, and modifications required to improve the success of the program.

Trials can still be successful, even if the outcomes are not as expected, if we learn from what happened and adapt to continually improve. This includes not only our trials and programs but learning from the programs of our partners and neighbours and providing them with the information to learn from our programs as well.

In 2024, our kerbside bin collection contractor, our Council waste vehicle fleet and our education and audit officers will be using a state-of-the-art waste service reporting system that will allow us to view waste service issues and customer requests in real time. Facilitating quicker action and more data on waste services and how they can be improved and adapted to best suit the needs of the community.

Council will also continue to use a variety of online tools to monitor the success of programs, including satisfaction surveys and waste app requests. For those more comfortable with traditional methods of communication, dedicated waste education and customer service staff will facilitate communication with customers via phone and face to face.

Council will also work with the NSW Government and SSROC to improve regional data required for infrastructure and contract planning, and also for monitoring our performance against SWM targets as well as NSW targets.

Council will also advocate for more transparent waste data from industry and all levels of government to better inform strategy, policy and legislative decisions. Council is committed to reporting on and strategically reviewing waste data as it becomes available.

Value for money and affordability

Council has been entrusted by the community to provide sustainable waste solutions whilst also providing value for money and minimising the cost impact to residents.

Every decision made as part of this SWM Strategy considers implementation and operational costs and cost efficiency.

Council has worked with neighbouring councils via SSROC to estimate the real costs of FOGO and other waste solutions. These estimates have been communicated to the NSW Government with the intent that the NSW Government provide funding for these new services.

Council will continue to research cost impacts of waste services on residents and advocate to NSW Government that 100% of waste levies paid by our ratepayers for waste disposal be return to local government or the waste industry to offset the increasing costs of difficult to recycle materials such as organics, textiles and soft plastics.

Council will continue to advocate for the waste levy to be removed from materials that cannot be recycled, such as asbestos.

Council will also continue to advocate for greater extended producer responsibility or product stewardship so that the costs of recycling are met covered by the product producers and not the community through council rates.

Council also recognises that informed decisions by the community to reduce waste, repair, reuse and embrace second-hand products can provide cost savings to individuals and organisations without impacting on quality of products or quality of life. Council will empower the community with the tools and information it needs to make cost effective designs to reduce both waste and spending.

Resilience, risk and disaster management

In recent years, extreme weather events, such as floods, have demonstrated how vulnerable waste services are to natural disasters. Whilst Bayside Council has used innovative methods to keep services running, including community information via social media and the Bayside Waste Services App, more work needs to be done on a Council, regional, State and Federal level to make waste services more resilient.

Council has established a Continuity Plan to combat such crisis waste management issues, including:

- Prioritising services by how essential they are (i.e., services with higher hygiene and health concerns are prioritised);
- Engaging hybrid modalities (such as a combination of Council and contractor provided services);
- Collaborating with neighbouring councils and industry players to provide contingency solutions; and
- Sufficient waste reserve funding to manage these ad-hoc events.

Additionally, considering the waste and resource needs of all community members promotes equality, fairness and community values. Empowering the community to participate in the circular economy more responsibly, can bring groups together and create a more informed and resilient community. Waste education can also promote and build respect for the natural environment and resources.

Bayside Council strives for economic resilience through pursuing value for money solutions, applying for grants, and Council procurement of recycled products. Current and future programs will encourage the community to be more financially resilient through waste avoidance and reducing wasteful spending.

Collaboration

Regional collaboration can provide benefits such as reduced the costs of waste management (cost sharing), sharing of ideas and consistency of education messages.

Regional collaboration includes collaboration with regional associations such as SSROC and LGNSW; with Federal and State Government; with industry, with businesses; and with research institutions such as universities and Cooperative Research Centres.

- **Knowledge sharing**

  Regional collaboration allows for sharing best practices in sustainable waste management.

  Each stakeholder may have unique insights or successful strategies that, when shared, can improve overall efficiency and effectiveness.

  By pooling resources and expertise, organisations can collectively invest in and adopt innovative technologies to enhance waste collection, recycling, and disposal processes.

  Knowledge sharing includes sharing with other councils, Federal and State Government, universities, commercial businesses, community groups and industry experts.

- **Consistency in educational messaging**

  Collaboration ensures that consistent messages is presented to the community regarding sustainable waste management practices.

  A unified approach to educational messaging helps avoid confusion among residents and encourages better compliance with waste management guidelines.

  Sharing resources and ideas can also save money.

- **Cost sharing**

  Collaborative initiatives allow Bayside to benefit from economies of scale.

  Joint waste contracts or joint procurement of waste management equipment, services, or facilities can result in cost savings for each participating council.

  Regional collaboration enables councils to jointly invest in infrastructure projects, such as the general waste processing facility that Bayside uses.

  The Bayside Council and Georges River Council joint tendering for waste collection services in 2023 provided cost savings in relation to consultant, legal and probity costs whilst allowing sharing of ideas and strategies.

Advocacy

As detailed in Section 5, the success of this SWM Strategy and our circular economy model rests not only with Council and the Bayside Community but on the actions of:

- Producers (who make the products that become waste and should be responsible for the waste those products make);
- The NSW Government (who receives money from Council managed waste through the waste levy and makes decisions on how much of that money is returned to benefit sustainable waste management solutions, and who also strategise and regulate waste avoidance and resource recovery activities); and
- The Federal Government (who controls national policies and legislation).

Council will continue to advocate both individually and as a group, through SSROC, for producer, State Government and Federal Government actions that benefit the Bayside community, the environment and the circular economy.

Working with traditional communities

Bayside encompasses both Sydney Airport and the Port and acts as a gateway to Australia. Council acknowledges the Gweagal, Bidjigal and Gadigal Clans which are the traditional custodians of the land in which we meet and work. We fall within the boundaries of both the Metropolitan Local Aboriginal Land Council and La Perouse Local Aboriginal Land Council. Of our 177,000 population, 1.5% identify as First Nations people.

Bayside Council has significant cultural and historical areas and is committed to a healing journey through collaboration and truth telling.

Council's Sustainable Waste Management teams and Community Life team will work together to explore synergies between Council's Reconciliation Action Plan and the Sustainable Waste Management Action Plans.

7 Sustainable Waste Management Action Plan

Actions required to address the focus areas and meet the targets in the SWM Strategy will be detailed in the SWM Action Plan.

This plan will include:

- **Flagship actions:** Key initiatives with the potential for city-wide involvement and transformational outcomes. Flagship actions are either underway or have been identified as a priority for the first two years (short-term) of implementation of the SWM Strategy;
- **Supporting actions:** Initiatives with the potential to improve Bayside's circular economy and sustainable waste management on a range of scales – some may affect only a few suburbs, while others could apply across the city area. Supporting actions are likely to be facilitated by one business unit or external organisations; and
- **Aligned actions:** Existing internal or external initiatives that align with Bayside's sustainable waste management and circular economy principles. The aligned actions are included to promote these initiatives that contribute to sustainable waste management in Bayside.

Action Plan reporting will be done at 6-montly intervals, consistent with the reporting under Bayside's Community Strategic Plan 2032. Review and updating of the Action Plan will be conducted annually.

The SWM Strategy will be reviewed at least every 4 years or more frequently if required to respond to any significant changes in sustainable waste management changes, policy or legislation.

8 Glossary

Commercial Waste
Waste produced during the course of a commercial activity.

Domestic Waste
Waste produced during the course of residential activity.

Illegal Dumping
The NSW Environment Protection Authority (EPA) describes illegal dumping as the disposal of waste larger than litter on land or in water without the correct approvals (an environment protection licence or planning approvals). In this SWM Strategy, illegal dumping is limited to materials that are disposed of on public land as Council's do not manage illegal dumping on private land.

Litter
The NSW Environment Protection Authority (EPA) describes litter as anything unwanted that has been thrown, blown or left in the wrong place. The NSW EPA lists common litter items as takeaway and beverage items, confectionery and snacks, drink containers (plastic and metal) cigarette butts, small pieces of paper, bottle caps, plastic straws, and pieces of glass bottles. The NSW EPA also includes advertising and promotional material left in the wrong place in their description of litter.

Mechanical Biological Treatment (MBT) Facility
An MBT facility is a waste management facility that combines mechanical processes, such as shredding and sorting, with biological processes, such as composting or anaerobic digestion, to treat and recover value from mixed MSW.

Recycling
Is a set of processes (including biological) for converting materials that would otherwise be disposed of as wastes, into useful materials or products.

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WARR STRATEGY PROGRESS UPDATE 2024

WARR Strategy Action 1:
Avoiding and reducing waste

Objectives: **To encourage more productive and efficient use of household goods to decrease the quantity of material entering the waste management system.**

To promote responsible citizenship to avoid waste and/or reduce waste generation.

Target: **To reduce per capita waste generation (baseline: 399kg capita in 2016/17 or 7.7kg per week).**

Progress report: **Total waste generation per capita**

Total domestic waste generation per capita includes all domestic waste generated irrespective of whether it is recycled, used for energy recovery or disposed of to landfill.

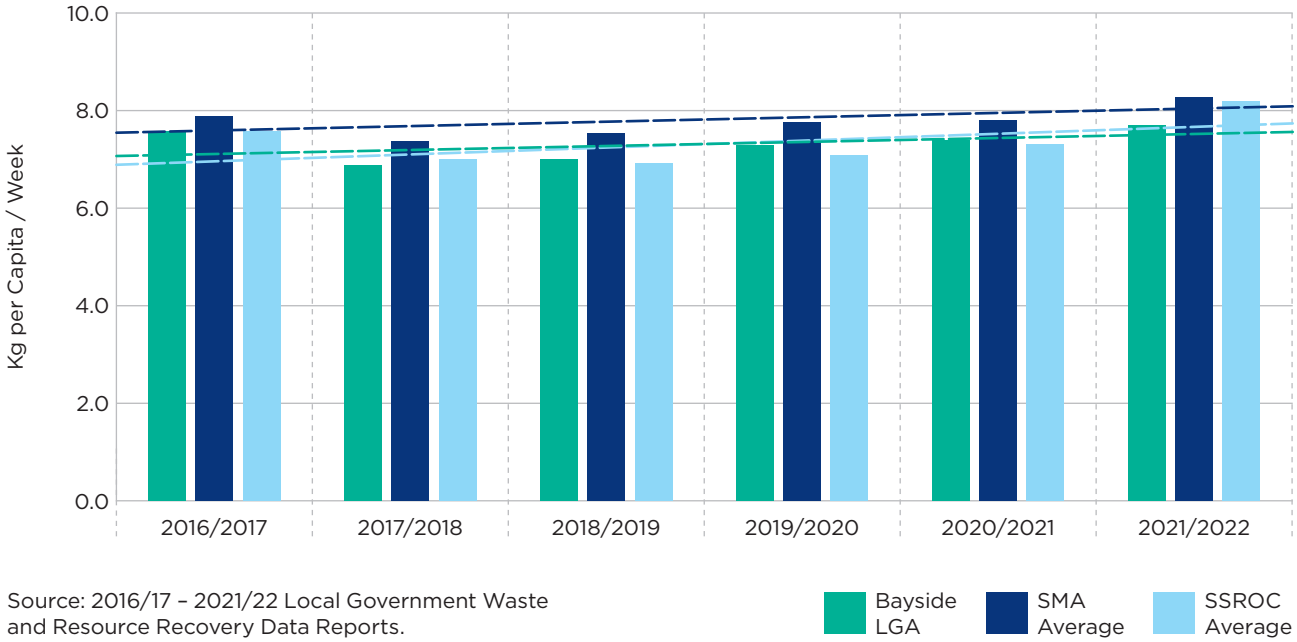
For NSW councils, this domestic waste generation is published annually by the NSW EPA (based on council data). The data includes all domestic waste from kerbside bins, clean up services and Community Recycling Drop Off Events.

Resource recovery and landfill diversion targets included in WARR Strategy Action 2.

Bayside's weekly per capita domestic waste generation has been compared to per capita domestic waste generation for the Sydney Metropolitan Area (SMA) and the Southern Sydney Regional Organisation of Councils (SSROC).

The graph below indicates a small increase in Bayside Council's weekly per capita domestic waste generation from 2016/17 to 2021/22. Bayside's weekly per capita domestic waste generation is increasing at a slower rate than the SSROC and SMA average.

Bayside Waste Generation Comparison



Source: 2016/17 – 2021/22 Local Government Waste and Resource Recovery Data Reports.

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Council supports the international, national and NSW targets to reduce weekly per capita domestic waste generation by empowering the community to make informed decisions to:

- Reduce consumption;
- Extend the longevity of products; and
- Participate in reuse and re-purposing.

This longevity of products and availability of reusable/second-hand products is governed by product design parameters, retail decisions and Federal/State policies that incentivise and mandate these parameters.

For this reason, the trends in waste generation are more heavily influenced by Federal and State Government decision making – a fact that is reflected in the consistent trends in Bayside, SMA and SSROC data.

Bayside Council advocates for Federal and State actions to influence these trends and continues to provide the community with the information, education and tools to support the actions of industry and Federal/State Government.

WARR Strategy Action 2: Recovering resources

Objectives: **To increase the capture and use of valuable resources from the municipal solid waste (MSW) stream.**

To promote responsible citizenship to increase resource recovery.

Target: **75% diversion of domestic MSW from landfill by 2030 (without advanced processing solutions).**

85% diversion of domestic MSW from landfill by 2030 (with advanced processing solutions, such as energy recovery).

Progress report: **Diversion of Domestic Municipal Solid Waste (MSW) from landfill**

Resource recovery is a key component of sustainable waste management and an important indicator of industry, government and community success in keeping materials that cannot be reused, repaired or repurposed in the circular economy for longer. The domestic MSW landfill diversion targets include diversion of materials from kerbside bins (general waste, recycling and garden organics, diversion of materials from clean up services and diversion of materials from Community Recycling Drop Off Events.

In 2018, Bayside Council set ambitious targets for resource recovery based on several factors including:

- General waste processing recovery performance; and
- Product design to make resource recovery easier.

Industry performance has demonstrated that these projections were optimistic, with diversion of domestic MSW being 44% in 2021/22, consistent with both the SSROC and SMA average (NSW EPA, 2021-22 Local Government Waste and Resource Recovery Data Report).

The difference between the 2030 target (75%) and the actual diversion rate of 44% is largely due to the difference in projected and actual general waste recovery performance.

The recovery performance was expected to be up to 75% in practice, only a maximum general waste recovery of 38% has been achieved utilising the current MBT facility. This MBT facility recovers organics in the general waste to make a compost to rehabilitate an old mine site.

Bayside's maximum landfill diversion since 2016/17 was in 2020/21 when a diversion of 52% was achieved, corresponding to a general waste recovery of 38%. Fluctuations from year to year are the result of legislative changes, facility performance, and disruptions, including collection and processing disruptions.

Bayside Council has achieved a respectable diversion of recyclable materials and organics, through:

- Use of an MBT facility to recover organics from the red-lidded general waste bin;
- High recovery of dry recyclables from the yellow-lidded recycling bin
- Garden organics recovery from the green-lidded bins in former Botany Bay
- High recovery of mixed clean up materials at the clean up processing facility, as well as source separation of mattresses in the clean up; and
- Recycling of recyclable materials at Council's 22 drop off events per year.

Projections for how resource recovery can be improved by 2030 are discussed as part of the new targets for SWM Strategy in Section 4: Focus Area 2 Recycle Recover.

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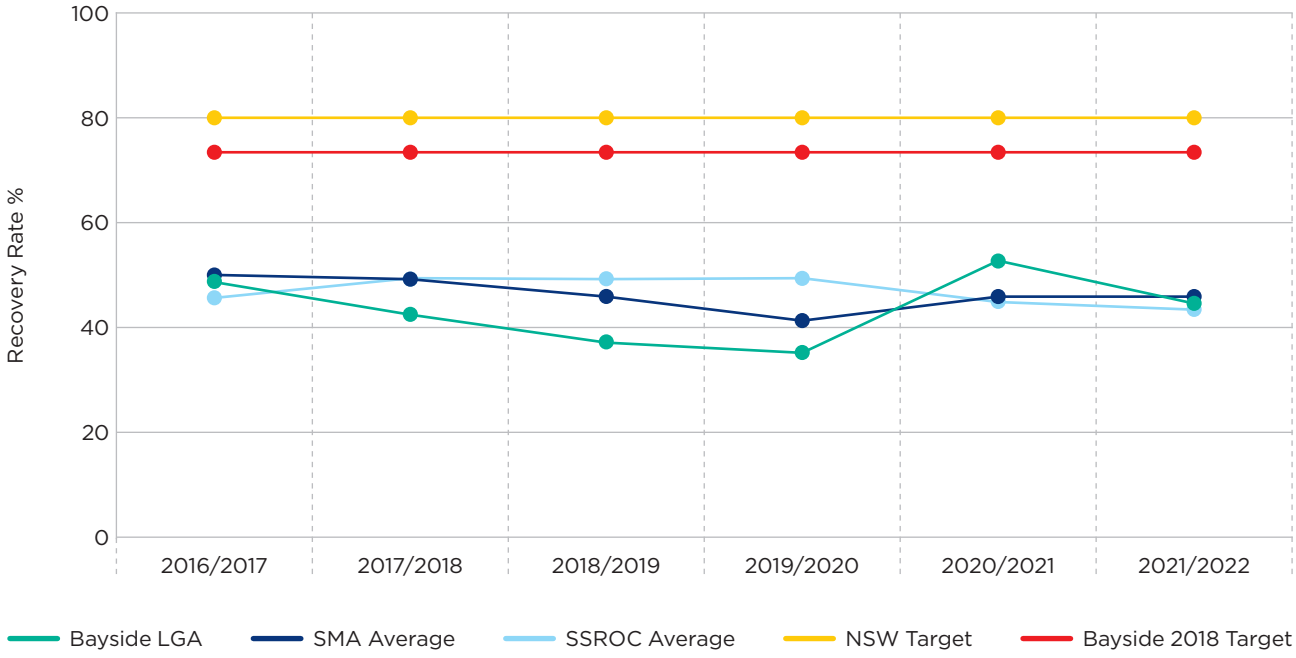
Domestic Recovery Rate Comparison



Source: 2016/17 – NSW EPA 2021/22 Local Government Waste and Resource Recovery Data (Based on data self-reported by councils to the NSW EPA).

WARR Strategy Action 3: A healthy region

Objectives: **To work with government and communities to better manage problem wastes to:**

- **Decrease risks to environmental and human health within the waste management system; and**
- **Improve the quality of materials presented for processing 'clean the stream'.**

Target: **To reduce the incidence of household problem wastes in kerbside collections.**

Progress report: **To reduce the incidence of household problem wastes in kerbside collections**

Council's previous WARR Strategy defines problem wastes as wastes that cannot be safely and/or efficiently managed through standard kerbside collections. Included in that definition under the WARR Strategy were batteries, gas bottles, medical waste and needles, electronic waste, tyres, smoke alarms, textiles and household chemicals.

Whilst some of these wastes also fall under the NSW Government definition of household problem wastes, others are outside their definition and are discussed separately.

NSW Government: defined household problem wastes

The below table lists the NSW Government defined problem wastes how they are currently managed by Bayside Council.

NSW HOUSEHOLD PROBLEM WASTE	MANAGEMENT BY BAYSIDE COUNCIL
Car batteries, household batteries, motor oils, fluorescent globes/tubes	All batteries, motor oils and fluorescent globes/tubes are collected at Bayside Community Recycling Drop Off Events.
Gas bottles	LP Gas bottles are collected at Bayside Community Recycling Drop Off Events. Council directs residents to take other gas bottles to NSW EPA funded Community Recycling Centres and Household Chemical CleanOut events.
Paint, fire extinguishers, other oils, smoke detectors	Not collected by Bayside Council. Council directs residents to take paints to NSW EPA funded Community Recycling Centres and Household Chemical CleanOut events.

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Bayside WARR Strategy: additional defined problem wastes

The below table lists the additional problem wastes defined by Bayside Council and how they are currently managed.

NSW HOUSEHOLD PROBLEM WASTE	MANAGEMENT BY BAYSIDE COUNCIL
Medical waste and needles	Medical sharps (a component) of medical waste, can be taken to pharmacies participating in Council's Community Sharps Program. Surplus, out of date or unused medicines should be returned to a pharmacy for free under the Return Unwanted Medicines program (not Council managed).
Electronic waste	All electronic waste accepted at Community Recycling Drop Off Events and recycled. Electronic waste that does not contain batteries is acceptable in clean up services (for example, TVs, set top boxes, old DVD or video players and small appliances) but may not be recoverable for recycling.
Tyres	Household tyres accepted at Community Recycling Drop Off Events and recycled.
Textiles	Reusable clothing accepted at Community Recycling Drop Off Events and recycled. Unusable clothing and other textiles can be placed in general waste bins or clean up but will not be recoverable for recycling. Some retail organisations also accept unusable textiles for recycling.

Bayside Council has taken significant steps to reduce the incidence of problem wastes in kerbside collections.

These include:

- Clear messaging on the Waste App, Council website and in the Waste Guide regarding what is accepted in the kerbside bins and clean up materials, in addition to an A-Z guide for how to safely dispose of/recycle materials (including those not accepted in Council kerbside streams) on the Waste App and Council website;
- Education campaign on safe battery disposal and battery fires, including social media and waste vehicle signage;
- Sharps drop off program (partnering with 27 pharmacies across 17 Bayside suburbs); and
- 22 Community Drop Off Events per year to receive problem wastes such as batteries, fluorescent light globes and motor oil.

The impacts of these initiatives are difficult to quantify as even a small quantity of problem wastes can significantly impact on our waste collection systems. Additionally, change in consumer patterns, such as increased use of lithium-ion batteries, can impact on the amount of these materials incorrectly disposed of in kerbside systems.

Waste audits, whilst only a snapshot of a small proportion of the waste collected, can offer some insight into incorrect behaviours regarding disposal of problem wastes.

Kerbside Bin Audits 2019/2023 comparison: NSW household problem wastes

Consistent with NSW Government guidelines, Bayside Council commissions audits of the kerbside bins every 4 years.

The last two audits were conducted in 2019 and 2023. The audit is based on a small sample size. The sample size in 2023 was 220 households. Due to the sampling protocol, audits may not be representative of the entire local government area.

Batteries: The kerbside bin audit results indicate an increase in battery items since 2019. Council accepts batteries at Community Recycling Drop Off Events. Council also actively promotes council and other drop off locations through Council's website and waste app. Batteries have become a significant problem across Australia. Compression of batteries in compactor vehicles or at processing/disposal facilities can cause fires.

Fluorescent tubes: The audit results show a decrease in fluorescent tubes since 2019. Council accepts fluorescent globes at Community Recycling Drop Off Events.

Motor oils and gas bottles: No items of motor oils or gas bottles were detected in the 2023 audits. Motor and LP gas bottles are collected at Community Recycling Drop Off Events.

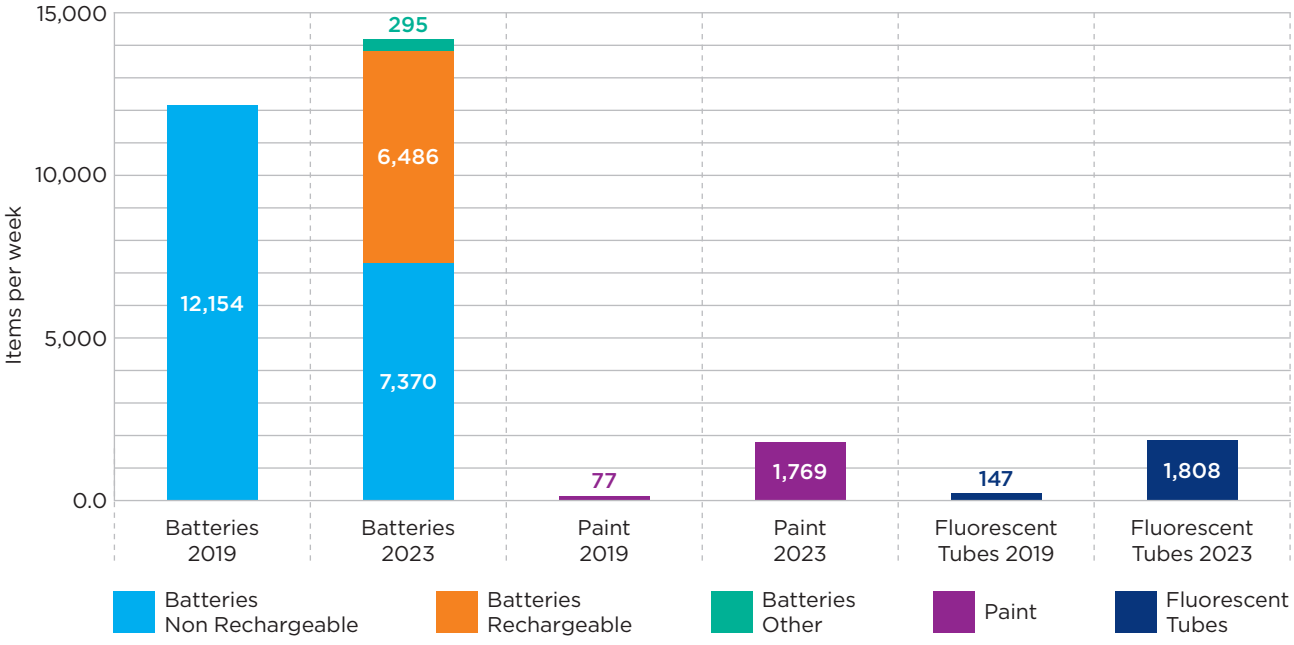
Paints: The audit results show an increase in paint items since 2019. Paints can be taken to NSW EPA-led Community Recycling Centres and Chemical Cleanout Events.

Fire extinguishers: No fire extinguishers were discovered in the 2023 audit. Fire extinguishers can be taken to NSW EPA-led Community Recycling Centres and Chemical Cleanout Events in the region.

Other oils: The audit results show no oils were discovered in the 2023 Audit.

Smoke detectors: The audit results show no smoke detectors were discovered in 2019 or 2023. Smoke detectors can be taken to NSW EPA-led Community Recycling Centres and Chemical Cleanout Events.

Bayside Waste Generation Comparison



Source: SSROC Kerbside Audit Report, 2019 & 2023.
*Motor Oils not measured separately in 2019, no motors found in 2023.
**Gas Bottles were not found in either 2019 or 2023.

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Kerbside Bin Audits 2019/2023 comparison: Bayside additional problem wastes

Clinical (medical) waste: The audit results show an increase in clinical (medical) waste items since 2019 (1,962 items per week in 2019 compared to 4,127 items per week in 2023). Medical sharps (a component) of medical waste, are collected through Council's Community Sharps Program. In this SWM Strategy, medical sharps are addressed under Key Focus Area 2 Recycle Recover (contamination issue) and Key Focus Area 3 Treat, Dispose (correct disposal issue).

Electronic waste: The audit results show electronic waste to be the most common "additional problem waste" found in the general waste and recycling bins. The audit shows that per week up to 19,600 electronic items are incorrectly disposed of in the kerbside bins. In the SWM Strategy, electronic waste is addressed under Key Focus Area 2 Recycle Recover (contamination and recovery issues) and Key Focus Area 6 Responsibly Manage Problem Wastes (batteries in electronic waste).

Tyres: No tyres were discovered in the 2023 audit. Tyres are addressed under Key Focus Area 2 Recycle Recover (contamination and recovery issues) and Key Focus Area 4: Reduce Illegal Dumping.

Textiles: The audit results show that, on average, Bayside households may generate up to half a kilogram per week of textiles. By count, 294 items were counted in 220 households, dominated by unwearable clothing (52%), followed by wearable clothing and linens and towelling, both at 14% and shoes at 13%. Textiles are addressed under Key Focus Areas 1A Refuse, Re-think, Reduce and 1B: Re-use/Re-home, Repair/Refurbish, Repurpose, and Key Focus Area 2 Recycle Recover.

WARR Strategy Action 4: Reducing illegal dumping

Objectives: To work with the community, regional organisations and other stakeholders to:

- Increase the visual amenity of Bayside;
- Minimise the potential for human and environmental harm;
- Promote responsible citizenship to dispose of unwanted items correctly; and
- To provide more data to measure the effectiveness of illegally dumped waste reduction programs.

Target: To reduce the incidence of illegally dumped waste.

Progress report: **To reduce the incidence of illegally dumped waste**

Illegal dumping incidents in Bayside Council have decreased since 2018/19.

Bayside Council's recent analysis of illegal dumping in 12 hotspots indicated that 80% of incidents during the reporting period were household waste.[1]

The number of illegal dumping incidents is expected to be impacted by number of households. Illegal dumping incidents per household decreased by 17% from 2018/19 to 2022/23.

Bayside uses solar powered mobile surveillance trailers to assist in reducing illegal dumping incidences in project hotspot areas by 73% from 95 incidents before placement to 26 incidents during placement.[1]

The NSW Government have acknowledged that their knowledge of illegal dumping is evolving and have chosen in NSW Illegal Dumping Prevention Strategy 2022–27 (2022) to "develop a measurement, evaluation and learning framework to identify achievable measures and targets, instead of having an across-the-board target to reduce illegal dumping."

Bayside continues to work with the NSW Government, SSROC and Sydney council to achieve our shared goals.

1. Source: Illegal Dumping Clean-up and Prevention Grant Program, Bayside Council, Final Report, 2022.

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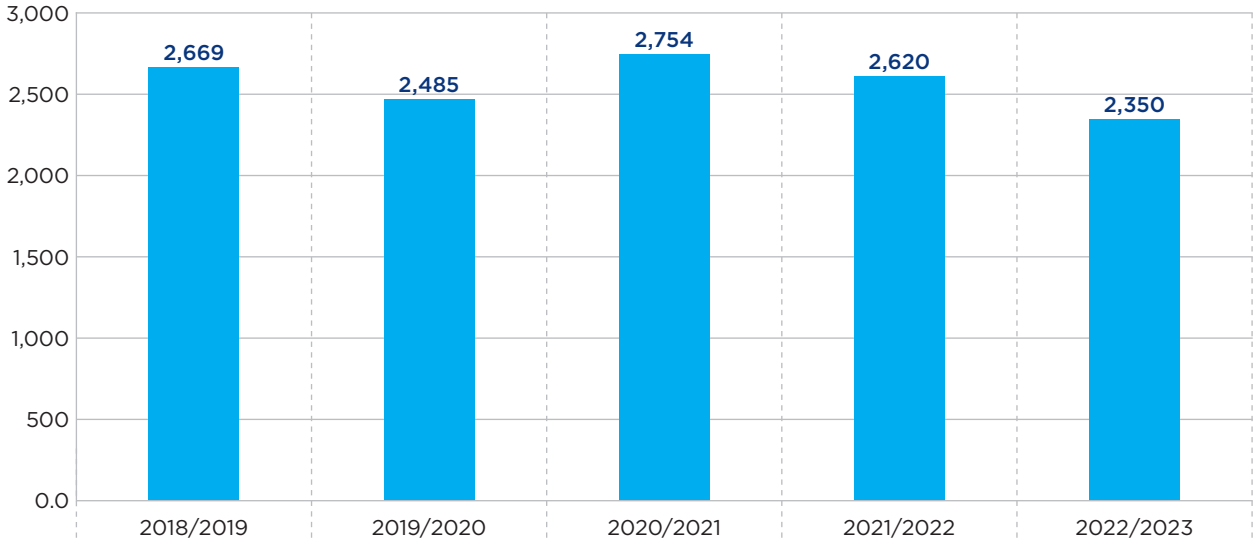
Illegal Dumping Incidents



Smart CCTV solar trailers project

Ability to move trailers to new locations periodically maintains sustained deterrence across a broader area, making it harder for illegal dumpers to find unmonitored spots and optimising utilisation of limited camera resources.

Number of illegal dumping incidents in all hotspot areas reduced by 73% from 95 incidents before placement to 26 incidents during placement.

Joint Bayside Council & NSW EPA Waste Less Recycle More initiative partially funded from the waste levy.

WARR Strategy Action 5: Litter prevention

Objectives: **To work with the community, regional organisations and other stakeholders to:**

- **Increase the visual amenity of Bayside;**
- **Minimise the potential for human and environmental harm;**
- **Promote responsible citizenship to dispose of unwanted items correctly; and**
- **To provide more data to measure the effectiveness of illegally dumped waste reduction programs.**

Target: **To reduce the incidence of littering.**

Progress report: **To reduce the incidence of littering**

Bayside Council has taken significant steps to protect the environment and human health by reducing littering. Actions have included increasing availability and type of litter bin infrastructure, education campaigns, litter regulation and campaigns to support the community transition from single use plastics to reusable alternatives.

Quantifying the overall success of these programs on a Bayside-wide scale is challenging. Some quantifiable improvements include:

- In 2018/19 Council installed 50 custom beach bins along the Bayside foreshore area to address beach litter. During the 11-week implementation period, 2,815kg of waste was collected from these bins.
- In 2020 and 2021, Council installed 30 butt litter bins using a NSW EPA grant. As a result of litter counts before and after the bin installations, it was determined that butt litter had reduced by 73% at the installation sites.
- During the 2023/24 summer foreshore program from October 2023 to January 2024, 922 residents and visitors were engaged on Saturdays by Bayside education officers on the importance of keeping the foreshore area clean.

Council also recognises that litter is a cross-boundary issue, with litter moving through water bodies from one council area to another. A regional approach to litter is required led by State Government.

Littering is largely influenced by product design and legislative decisions such as Return and Earn and the NSW plastic bans.

Beach bin project

Introduction of new custom beach bins along the 8km foreshore in 2018/19.

Over 100 beach bins installed.

Sensors included to detect fullness levels.

Sara Corlis, Dolls Point Heron

Bayside Council
Serving Our Community

Bayside Customer Service Centres
Rockdale Library, 444-446 Princes Highway, Rockdale
Westfield Eastgardens, 152 Bunnerong Road, Eastgardens
Monday to Friday 8:30am – 4:30pm

Phone **1300 581 299** | **9562 1666**
Email **council@bayside.nsw.gov.au**
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