Merri-bek City Council

Circular Economy Strategy

Towards a Zero Waste Merri-bek

DRAFT v2.0

May 2025

Mayor's Foreword

TBC

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2.0	22/05/2025		Draft for June Council Meeting	

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Acknowledgment of Country

Council acknowledges the Traditional Custodians of the lands and waterways of the municipality of Merri-Bek, the Wurundjeri Woi-wurrung people, and pays respect to their elders, past, present and emerging, and to all First Nations peoples of the lands on which we live and work.

Council is also very grateful to the Elders of the Wurundjeri Woi-Wurrung Cultural Heritage Aboriginal Corporation. We especially thank Aunty Julieanne Axford, Aunty Gail Smith, Aunty Doreen Garvey-Wandin and Charley Woolmore for generously sharing their perspectives on the significant connections between traditional ways of living and the 'circular economy' concept and principles.

Statement from Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation

Wurundjeri are pleased to provide this statement for inclusion in Merri-bek's first Circular Economy Strategy. A circular economy is a sustainable practice that was employed by Wurundjeri, Woi-wurrung and other First Nations tribes across Australia for countless generations.

The phrase 'Money is the root of all evil' is a commonly known expression, and there is a great deal of truth behind it. Trade and the barter system – where goods and tools are swapped – avoids a system centred on the concept of monetary value. More value is placed on skills and craft. There is also less waste using a circular economy system, as an over-abundance reduces the value of these trade items.

A system that respects and values peoples' skills – and the craft and knowledge behind them – creates a mindset that is more considered and kind, as well as being more sustainable in how it operates. Trade items were traditionally crafted from locally sourced biodegradable materials, and due to the value placed on craft, these items were maintained and repaired, being highly prized, rather than just discarded.

There are many examples of a circular economy in which items were traded widely. The green stone from a Wurundjeri quarry site at Mt Wiilliam was highly prized and has been found as far as northwest Victoria and southwest New South Wales. The green stone from Mt William was used to make green-stone axes; an important cultural tool that was used for many purposes.

First Peoples world view is one that is deeply connected to the natural world and their place within it is one of custodianship; meaning we have cultural responsibilities to care for Country. Further to this, consideration is always given to those that come after so the Country's future prosperity is also front of mind.

- Aunty Julieanne Axeford and Aunty Gail Smith
Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation

Credits

To assist in the development of this Strategy, Council commissioned background research including an **Options Analysis** by Ricardo Energy, Environment and Planning (Ricardo) in 2022 and a **Material Flow Analysis** by Blue Environment in 2023. Copies of these reports are available in the document library of the Conversations Merri-bek Circular Economy Strategy page.

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Executive Summary

This (draft) *Circular Economy Strategy: Towards a zero waste Merri-bek* (the Strategy), provides direction to Merri-bek City Council on our role in accelerating the transition towards a circular economy over the next 5 years. It reflects the need to move beyond 'managing waste' towards 'avoiding waste', by rethinking how we can use precious resources much more efficiently.

It is widely recognised that our current 'linear economy' is inherently unsustainable, with the extraction of resources (including coal, oil and gas) being a major driver of global greenhouse gas emissions, contributing to the triple planetary crisis of climate change, environmental pollution, and biodiversity loss. To play our part in addressing these global crises, **fostering a circular economy means prioritising its three fundamental principles:**

1	**Eliminate waste and pollution** (from the start)
2	**Keep products and materials in circulation at their highest value**
3	**Regenerate nature**

This Strategy explores how these principles can be applied at a local level and what the biggest opportunities are for Merri-bek. It provides local examples of how the community, local businesses, and Council are already implementing these principles and contributing to a more circular economy. Our capital works program is highlighted as a key opportunity for Council to take a leading role in adopting smart, innovative, and sustainable approaches within our built environment.

Background data about how much material flows across the 3 waste streams – municipal solid waste (MSW), commercial & industrial (C&I) and construction & demolition (C&D) – has helped identify priority materials (including food organics, plastics and textiles) for action across Merri-bek, as well as opportunities for community, business, and organisational change.

Transitioning to a circular economy requires change across the entire supply chain to address the economic, environmental and social costs of our current system of production and (over)consumption. Yet, together with our community, there are many opportunities Council can pursue locally. This Strategy proposes **5 strategic directions for Council action**:

1	Advocating for system change
2	Community education and behaviour change
3	Optimised kerbside waste and recycling services
4	Fostering circularity in our local economy
5	Circular design and environmentally sustainable procurement (Council as Role Model)

Each strategic direction has an objective and key priorities. Goals for 2030 and programmatic actions to deliver on the 5 strategic directions are outlined in Council's draft Climate Emergency Action Plan 2025 – 2030.

Council will maintain a critical focus on enabling the Merri-bek municipality to transition towards zero waste, without reliance on thermal Waste to Energy. At the same time, through our advocacy and empowering residents, businesses and Council staff to grow our circular economy, we can play our part in creating a healthy, inclusive and sustainable economy and society.

1. Introduction

This Circular Economy Strategy: Towards a zero waste Merri-bek, provides direction to Merri-bek City Council on our role in accelerating the transition towards a circular economy. It outlines why and how we can embed circular economy principles to the way products and materials are used by Council and across our municipality.

This strategy updates our approach to increasing resource recovery and reducing waste across the municipality.

Our previous *Waste and Litter Strategy 2018* has now expired. Over the strategy lifespan Council implemented several significant programs, including:

- The introduction of food and garden organics collection (FOGO), encouraging food waste into the kerbside green waste fortnightly collection service (2019/20)
- Implementation of Plastic Wise Policy and delivery of the Sydney Road Plastic Free Places trial (2020/21)
- The trial of reusables (crockery, cutlery, cups) at selected Council venues (2021/22)
- The introduction of a subsidy program for purchase of reusable cloth nappies and period products (2022/23)
- The hard waste service changing from 2 municipal-wide collections per year to a booked service (2023)
- The introduction of a 4-stream kerbside waste service, with separated glass recycling and universal weekly FOGO collections (2023/24).

For many years Council and other stakeholders had been advocating to the Victorian Government for the introduction of a Container Deposit Scheme in this state, which finally occurred in late 2023. During the life of the strategy the Victorian Government also introduced bans on e-waste in landfill, light-weight plastic bags and a range of single-use plastic take away items.

These and other actions have helped reduce our municipal waste to landfill and increase the recovery of resources through our FOGO and recycling bins. However, much more needs to change as we strive towards our ambitious goal of 'zero waste to landfill'.

This draft Circular Economy Strategy reflects the enormous societal challenge – at home and abroad – to transform how we manage resources for the benefit of people and the planet. It has been informed by consultation with the community and research into 'material flows' across the 3 waste streams – Municipal Solid Waste (MSW), Commercial & Industrial (C&I) and Construction & Demolition (C&D). It outlines a broader scope of strategic directions to contribute towards a more circular economy by making more efficient use of precious resources whilst minimising harm caused from waste.

In line with Merri-bek's credentials as a progressive and environmentally proactive Council and community, this strategy maintains Council's commitment to strive for zero waste to landfill, without reliance on thermal Waste to Energy. The primary goal is to reduce total waste generation (across all 4 municipal bins). Additionally, Council will seek to support businesses operating in Merri-bek to improve their material efficiency and reduce waste.

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2. What are the challenges?

2.1 Global context

Our modern lifestyles depend upon the earth's finite resources for how we live, work and play. The unfolding breakdown of our climate and ecological support systems calls for an urgent transition to a truly sustainable, fair and resilient society.

In the conventional 'linear economy' model of production and consumption, resources are extracted, goods are manufactured and used, then discarded to landfill or incinerated. This model assumes a limitless supply of natural resources and prioritises profit and growth through the increasing consumption of goods. This "take, make, dispose" approach values short-term convenience without considering the long-term impacts on resources, human health or the environment.

Figure 1: The Linear Economy

Our society is dependent on the Earth's finite resources as well as all the essential services provided by natural ecosystems such as clean air, fresh water, healthy soil and disease control. The linear economy is inherently unsustainable, with the extraction of resources (including coal, oil and gas) being a major driver of global greenhouse gas emissions, contributing to the triple planetary crises of climate change, pollution, and biodiversity loss.

Addressing the climate crisis requires the urgent transition to 100% renewable energy, which can eliminate around 55% of global emissions. However, the remaining 45% of emissions are embedded within the physical resources and goods we use, and the way land is managed[1]. Reducing these 'embedded emissions' is also urgent, requiring much more efficient use of resources and less consumption. Material consumption has more than tripled since 1970, and we are currently consuming resources 1.7 times faster than nature can regenerate.[2]

These crises disproportionately affect vulnerable communities, with pollution contributing to over 9 million premature deaths globally each year[3]. Many pollutants such as heavy metals and microplastics persist in the environment for years, damaging both ecosystems and human health. Relatedly, the growing demand for the materials essential for the renewable energy transition – such as critical minerals and rare earth elements – must be very carefully managed to maximise resource efficiency and avoid exploiting local communities and damaging ecosystems.

Concurrently, deforestation and land clearing are driving an unprecedented loss of biodiversity. The UN warns that there are up to one million species at risk of extinction within decades[4]. Environmental degradation and climate change are also impacting the ability of natural carbon sinks (oceans, forests, soils) to absorb human-made greenhouse gas emissions and, in the case of oceans, the extra heat that these emissions are creating.

To address the triple planetary crises, new economic paradigms are needed that decouple economic activity from resource use, while addressing issues like inequality, over-consumption and environmental degradation.

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[1] Ellen MacArthur Foundation, The circular economy: a missing piece in city climate action plans? September, 2023

[2] Earth Overshoot Day, overfootprintnetwork.org, website accessed December 2024

[3] The Lancet Planetary Health, 2022 Pollution and health: a progress update - The Lancet Planetary Health

[4] UN Biodiversity - our strongest natural defense against climate change | United Nations

2.2 Our local context

As well as the above global challenges, the circular economy strategy for Merri-bek must also consider our local and regional challenges.

Merri-bek has a rapidly growing and diverse population experiencing housing and cost of living pressures. Our community expects Council to provide waste and recycling services that meet their needs affordably. More thoughtful household behaviours (like following a list when shopping, growing and swapping produce or passing on clothes etc) can offer ways to sustainably reduce household costs.

The waste and recycling industry in Victoria is immature, with limited competition between players and a market biased toward demand for virgin goods and resources over recycled content products. Prior to China's National Sword Policy, local councils were paid per tonne for recycling that they delivered to the processor. Now the costs to have our recycling and organics processed is significant. The Victorian Waste Levy increases annually to ensure that sending waste to landfill is more expensive than having material recycled, which helps to incentivise diversion and maximise recycling rates.

Research undertaken into material flows in Merri-bek in 2023 identified that in the 2021/22 financial year the Construction and Demolition (C&D) sector accounted for 49% and the Commercial and Industrial (C&I) sector for 35% of total waste generated in Merri-bek.[5] This highlights the importance of these sectors reducing their material inputs and transitioning to a circular economy. Municipal Solid Waste (MSW) accounts for the remaining 16% of waste generated. The research also found that the estimated recycling rate for each of the streams was 86% for C&D, 59% for C&I and 44% for MSW.

The C&D sector is estimated to recycle 86% of its waste and to be responsible for 24% of waste going to landfill from Merri-bek[6]. Key circular economy opportunities for the C&D sector include reuse of building materials, adaptive reuse, refurbishment of buildings instead of demolition, purchasing recycled content products and the increased recovery and recycling of waste materials.

The C&I sector is estimated to recycle 59% of its waste and to be responsible for 45% of waste going to landfill from Merri-bek[7]**.** The C&I sector generates significant amounts of food waste and paper/cardboard, both of which represent opportunities for avoidance (through improved material and supply chain efficiencies) as well as recovery for recycling or composting.

Priority materials identified through the Material Flow Analysis research were:

- Organics
- Plastics
- Textiles
- Paper and cardboard
- Construction and demolition waste

Our local economy provides employment, goods and services to the community. Merri-bek is experiencing a shift from its historical reliance on manufacturing to a focus on service-oriented sectors. Research undertaken for Council in 2023 identified local industry sectors which have the potential for circular economy initiatives. They consulted 21 local businesses to better understand how they use resources, what circular economy initiatives they already have in place and any

[5] *MFA and opportunities assessment*, Blue Environment, 2023, Conversations Merri-bek – Developing our Circular Economy Strategy

[6] *MFA and opportunities assessment*, Blue Environment, 2023, Conversations Merri-bek – Developing our Circular Economy Strategy

[7] *MFA and opportunities assessment*, Blue Environment, 2023, Conversations Merri-bek – Developing our Circular Economy Strategy

opportunities businesses saw for Council to support circular economy in the region. The research identified a range of challenges and potential opportunities.

Common challenges for businesses:

- Lack of knowledge on sustainable products and cost comparisons to conventional products.
- Packaging materials, especially cardboard and soft plastics, are major components of businesses waste streams. It's difficult to avoid packaging and to access recycling options suited to businesses.
- Isolation between businesses wanting to pursue sustainable options, with connections mainly being business-to-Council rather than business-to-business.
- Space is the major constraint for local reuse and repair activities.

Potential opportunities for Council:

- Providing information and assisting businesses to build their capability.
- Investigate and make available existing resources for businesses, e.g. state government directory or database that compares materials or products based on sustainability and cost for items e.g. takeaway coffee cups and single use containers.
- Facilitate networking and professional development opportunities on sustainable business practices including waste management.
- Council officer role for circular economy and sustainable business to facilitate networking with business and other stakeholders.
- Research and development opportunities for businesses through partnerships with organisations such as RMIT University and CoLabs (a co-working and start up space).
- Create a space or precinct for circular economy businesses, social enterprises and not for profits to increase the volume of goods being repaired, recycled or upcycled.
- Provide support and resources for businesses to influence their supply chain and reduce packaging passed on to them by suppliers.
- Provide a separate cardboard and soft plastic packaging collection service for businesses.
- Opportunities to work with Council and participate in circular economy trials and initiatives.

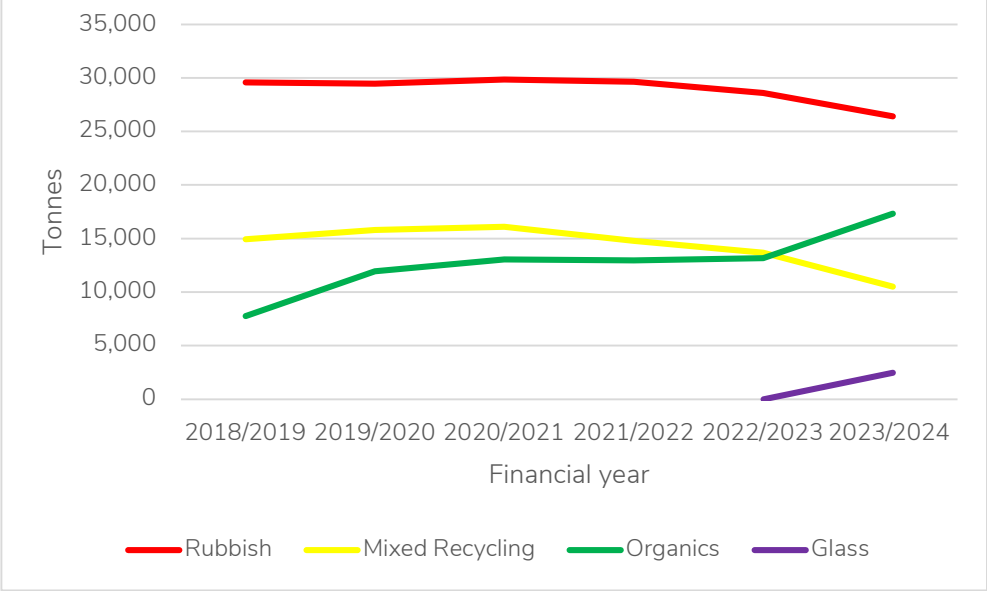
The circular economy presents many opportunities for local businesses to improve resource efficiency, lower costs, mitigate risks, and explore new revenue streams. Emerging business models can redefine product-consumer relationships and foster markets for services like sharing, leasing, repairing, reusing, remanufacturing, and resource recovery.

At the time of the Material Flow Analysis municipal solid waste accounted for 31% of all waste going to landfill from Merri-bek (across the MSW, C&I and C&D streams).[8] At the time of the research in 2021/22 our diversion rate was 48%. Latest data on the new 4-bin kerbside waste and recycling service shows that average landfill waste per household has decreased, and the amount of FOGO processed has increased since the changes were made. Our overall diversion rate has increased to 53% (2023/24). However, there is still a lot of food waste in the garbage bin and contamination in the mixed recycling bin is still too high.

These changes to household waste generation in the kerbside service are illustrated below in Graph 1 and Figures 2 and 3. Less food waste in landfill (where it breaks down to release methane) also reduces our carbon pollution. More information on municipal waste generation over the past 5 years can be found in the Towards Zero Waste Data Report in the document library of Conversations Merri-bek – Developing our Circular Economy Strategy.

[8] *MFA and opportunities assessment*, Blue Environment, 2023, Conversations Merri-bek – Developing our Circular Economy Strategy

Annual waste tonnages from kerbside bins - 2018/19 to 2023/24



Graph 1: Rubbish, FOGO and Mixed recycling, and glass tonnages, 2018/19 to 2023/24

An audit of our kerbside bins in 2024 found that 35% of the material in the rubbish stream could be recovered for recycling through proper sorting into the correct kerbside bin. The illustrations in Figures 2 and 3 below show the contents in the average bin across all 4 kerbside streams.

What's in our kerbside bins?

Figure 2: Average contents of rubbish bin and food and garden organics bin (2024 Audit)

The average rubbish bin is made up of 35% recyclable or compostable material. Of this, food waste accounts for 24%, garden organics makes up 3%, mixed recycling accounts for 7% and glass bottles and jars 1%.

The average food and garden organics bin is mostly used for garden waste (75%), with food waste making up 20% and contamination 5%.

Figure 3: Average contents of mixed recycling bin and glass recycling bin (2024 Audit)

In the mixed recycling bin, paper and cardboard represents the largest share at 51%, followed by plastic containers at 14%. This stream has the highest contamination at 23%.

The glass recycling bin is mostly used for glass bottles and jars compromising 96% of the stream and has relatively low contamination at 4%.

These findings highlight priorities for increased waste education and behaviour change programs to support our community to increase recycling rates and reduce contamination in their bins.

Since 2018 Council has aspired to achieve the target of 'zero waste to landfill'. Unfortunately, research undertaken in 2022 reveals that around 19% of our municipal waste has no alternative to landfill. This is because currently there are no scalable recycling solutions for items such as disposable nappies, plastic films, and soiled paper. This means that even with perfect material separation by households, the maximum 'diversion rate' we can achieve is capped at around 80%. The research also showed that significant amounts of materials are being improperly disposed of. In 2023/24 our diversion rate was 53%, indicating that huge community behaviour changes and state-wide waste sector changes will be needed to reach landfill diversion targets of 80% or more[9].

Council established a position against the use of any thermal Waste to Energy (WtE) technology as an alternative to landfill, in the Waste and Litter Strategy 2018. This decision reflects Council's commitment to prioritising waste reduction and resource recovery over thermal treatment methods such as incineration, gasification, combustion, pyrolysis and plasma arc. Thermal technologies can produce a host of negative environmental impacts including release of toxins into the atmosphere. Such an approach does not align with the goal of creating a regenerative and sustainable system for resource use. Due to this position, reaching high landfill diversion targets must rely on recycling and organics recovery for recycling and composting or non-thermal technologies, rather than waste incineration or alternative thermal treatment options[10].

[9] *Waste Options Development Report*, Ricardo, 2022 Conversations Merri-bek Circular Economy Strategy page

[10] *Waste Options Development Report*, Ricardo, 2022 Conversations Merri-bek Circular Economy Strategy page

3. Our emerging circular economy

3.1 Local community champions

Merri-bek Toy Library

The Merri-bek Toy Library has been running since 1991, making a lasting impact on families, carers, and children in the local community.

The toy library offers low membership fees with concession rates providing families the opportunity to 'borrow not buy' age-appropriate toys for children as they grow and develop.

The toy library offers a sustainable alternative to toy ownership, teaching the values of sharing with others and taking care of what we have.

It also allows children access to toys that might otherwise be unobtainable due to the cost, and allows toys to circulate through multiple households, being maintained and repaired when needed, which means they can remain in use for longer.

UpShop Industries

UpShop Industries is a local design business based in Brunswick. The certified social enterprise is driven by a passion for sustainability and the desire to see a societal shift from 'throw away' to material circularity.

They specialise in developing products made from the used resources of businesses and industry, reusing, repairing or upcycling waste materials into new products, often making use of materials that cannot be readily recycled or reused.

UpShop Industries strives to be a circular economy leader providing tangible, creative and aesthetically pleasing solutions for the waste problems of industry and commerce, for the benefit of society.

Pascoe Vale Repair Cafe

Pascoe Vale Repair Café is part of the global, grassroots Repair Café movement and runs out of the Sussex Neighbourhood House once a month. The Repair Café offers residents the opportunity to have goods repaired by skilled volunteers for free.

The Repair Café also provides advice and tools to mend items such as clothing and textiles, electrical goods, knife sharpening, bikes and toys. By sharing skills and connection, it supports community resilience and social cohesion. The Repair Café movement aims to reduce overconsumption by providing a place for people to come together and repair their goods rather than replacing them.

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Fawkner Food Bowls

Fawkner Food Bowls is a community food growing initiative that has transformed a disused bowling green into a community food hub. Fawkner Food Bowls is great example of repurposing an underutilised community asset to fit the changing needs of the local community.

The initiative was started by 2 local residents and has been incorporated since 2018. The Fawkner Food Bowls provides space for the community to come together to grow food, share skills and knowledge, learn about food systems as well as building community connection and resilience.

RIMERN

Rotary Inner Melbourne Emergency Relief Network (RIMERN) is a multi Rotary club project that helps locals in need and keeps good quality second hand homewares out of landfill.

RIMERN works with leading welfare agencies as they help their clients into secure housing following periods of homelessness, domestic violence, incarceration, refugee displacement or loss from disaster or illness.

At the RIMERN warehouse in Brunswick East, people can choose items that match their taste - from sofas, beds, white goods and linen to electrical goods and decor like cushions and artwork - to make their new house a home.

Brunswick Tool Library

The Brunswick Tool Library is a volunteer-led initiative providing tools on loan to the community as part of an annual membership. Established in 2013 the Brunswick Tool Library is one of the first tool libraries in Australia.

Members can access an ever-growing inventory of tools that they may otherwise not be able to afford, or only need on short term loan for a specific purpose.

Another aim of the tool library is to connect communities, share skills and learn from one another. They run workshops and a monthly repair café to share the knowledge and skills needed to repair and care for belongings.

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ReWine

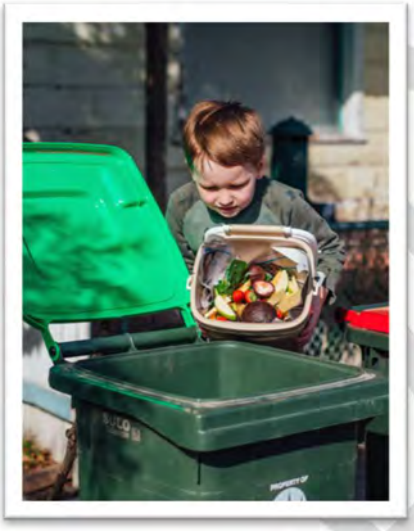
ReWine is a bottle shop on Lygon Street with a difference, providing quality wine in refillable bottles. They have designed a unique, ground-up zero-waste supply chain. From winery to wine glass, they provide sustainable wines that are locally made and waste-free.

At ReWine customers can buy wine in a special refillable bottle, that they bring back to be refilled in store. Wine is refilled straight from the barrel, into refillable bottles for takeaway, or straight into the glass without using a bottle at all. Their unique system and equipment enables bottles to be refilled repeatedly, saving hundreds and thousands of bottles from going to waste.

3.2 Council initiatives supporting a circular economy

Council is fostering the circular economy through a range of programs and activities, including:

Kerbside collection of food and garden organics (FOGO)



In 2019 Council began collecting food waste through the opt-in garden organics bin. In 2023 the FOGO service was rolled out to all households using Council's waste service, and collection frequency switched from fortnightly to weekly.

These changes have resulted in a steady increase in the amount of food and garden waste collected through this service, up from 7,700 tonnes in 2018 to 17,000 tonnes in 2023. The reforms have also seen a 7.5% reduction in waste sent to landfill via the garbage service and a 7% reduction in the carbon emissions caused by food waste decomposing in landfill.

The food and garden waste collected through the FOGO service is turned into compost and used to enrich the soil at farms, parks and community gardens. Since July 2020, over 243 cubic metres of compost has been delivered to 12 community gardens across Merri-bek.

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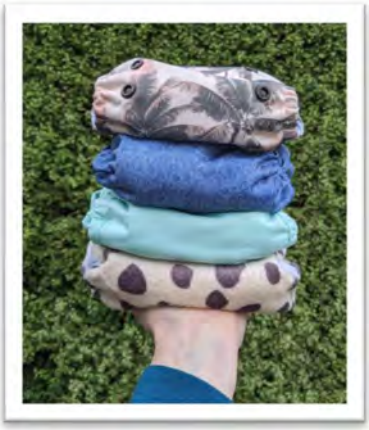
Reusable cloth nappy and period product subsidy



On average, children use 5,000 to 6,000 disposable nappies before becoming toilet trained. Our 2024 waste audit shows that disposable nappies and period products make up 13.5% of waste going to landfill.

To support Merri-bek residents who want to cut their waste to landfill by making the switch to reusable cloth nappies or period products we offer a discount on the purchase price for these items.

Households can claim up to $100 per year for cloth nappies and accessories. Individual residents can claim up to $35 per year for reusable period products. Since the program launched in 2022, over 1,035 cloth nappies and reusable period products have been subsidised by Council.

Annual Garage Sale Trail

Garage Sale Trail is a national waste education and behaviour change program that aims to reduce waste and support the transition to a circular economy.

Our annual participation in Garage Sale Trail supports households and community groups to hold in garage sales, extend the life of pre-loved items through reuse, and raise some money. Sellers can access free resources and buyers can find affordable second-hand goods. The program also enables community connection and helps to mainstream participation in the second-hand economy.

Merri-bek has participated in Garage Sale Trail since 2012, enabling thousands of households to host sales and keep goods circulating at their highest value.

Reuse of materials in the public realm

Council regularly reuses products and materials in the upgrade or construction of public open space.

In 2020/21 the Bulleke-bek Park construction in Brunswick made use of old factory trusses in the arbours. Bricks salvaged from the demolished houses were also used in the paving.

Logs from tree removals and old car tyres are often reused as steppers or edging in our playgrounds. Mulch from tree removals is also used on playgrounds and garden beds.

Bluestone pitchers are reused as edging for footpaths or playgrounds, as low walls or steppers, and larger blocks can be reused as seating. Rocks and boulders dug up during excavation work will often be saved for use in future projects.

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3.3 Built environment projects are a key opportunity

There are many opportunities for Council to support the local transition to a circular economy, including through the programs and services we provide to the community, and through our procurement of goods and materials.

Analysis by PwC has shown that incorporating circular economy principles into Australia's built environment projects could reduce emissions by 3.6 million tonnes of CO2e per year by 2040. It could also deliver $773 billion in direct economic benefits over 20 years[11]. This highlights that embedding circularity into capital works projects is a key opportunity for Council to reduce embodied carbon emissions and the overall environmental impacts of municipal buildings and infrastructure.

Several projects on the horizon in Merri-bek present this opportunity for Council to include circularity in the project scope, from initial design right through to material selection, construction, use, maintenance and end-of-life management. In particular, the Coburg Library redevelopment represents a key opportunity to implement circular design strategies from the outset and showcase Merri-bek as a leader in sustainable buildings and community infrastructure.

Opportunities to increase circularity in built environment projects include:

- Design for long term use, aim for longevity, adaptability and potential disassembly.
- Preference adaptive reuse over knock-down rebuild.
- Design and build efficiently, eliminate unnecessary components and ensure material efficiency through the reuse of existing assets and materials where possible.
- Design for best practice operational waste management and consider procuring products as a service for the use phase of buildings.
- Select building materials with high recycled content and low-embodied carbon and reduce the use of virgin, carbon-intensive, non-renewable resources and hazardous materials.
- Consider incorporating green infrastructure e.g. raingardens, permeable paving, green roofs or walls, vegetable/native gardens, trees etc.

Two useful tools to assist with incorporating these design elements into building projects are:

Circular Buildings Toolkit, Ellen MacArthur Foundation / ARUP

Circular design guidelines for the built environment, NSW Government

4. Strategic framework

4.1 Vision

The Circular Economy Strategy provides strategic direction for incorporating circular economy principles and practices across Merri-bek, to help ensure the wellbeing of our people, economy and nature, now and into the future.

Our vision is that in Merri-bek resources are endlessly renewed and residents have access to local services and initiatives that enable them to live low waste lifestyles through hiring, repairing, skill-sharing and borrowing. In our local economy nothing is wasted, benefiting both people and the planet. Local businesses including social enterprises are thriving, they understand how to incorporate circularity into their business practices, products and services and are harnessing the opportunities presented by the circular economy.

[11] PwC (2021), Building a more circular Australia – The opportunity of transitioning to a circular economy, Australia.

4.2 Circular economy principles

The circular economy presents us with an opportunity to rethink how we make, use and dispose of goods, and whether we need to build or buy something new in the first place.

Achieving circularity in the way we produce and consume products and materials requires change at all levels of society and the economy, from the individual or household level, right up to multi-national businesses and governments. The circular economy aims to eliminate waste and decouple economic activity from the consumption of finite resources by applying 3 fundamental principles:

1. Eliminate waste and pollution: this first principle identifies that it is the way products and materials are designed that ultimately leads to waste and pollution. Around 80% of a product's environmental impacts are determined at the design stage[12].

Planned and perceived obsolescence are strategies used by brands to increase sales through product replacement. Planned obsolescence, which began in the 1920s, involves designing and manufacturing products with a limited lifespan. These are generally destined to be replaced when they no longer function because this is cheaper than having them repaired. Perceived obsolescence is when a product is no longer desirable to the consumer and is replaced to keep up with the latest trend. This strategy is often employed by both the fashion and consumer electronics industries.

In a circular economy products are instead designed and manufactured for durability and longevity. They are also designed for ease of maintenance, repair, component recovery and reuse. The resources and materials used to produce them can be recovered and returned to the material cycle at their end of life. Sustainable materials and manufacturing processes are also crucial for reducing pollution and waste.

Some examples of this principle include:

- Opting for zero-VOC paint (free from volatile organic compounds) or fertiliser or pesticide-free produce to reduce environmental pollution back through the value chain.
- Using paper products that do not contain plastics or PFAS chemicals so that they can be safely composted or recycled.
- Purposefully designing and choosing products that can be maintained and repaired to extend their use.

2. Keep products and materials in circulation at their highest value: this principle involves keeping products and materials circulating at their highest value and best use through rethinking whether you can make do with what you already have, including the remanufacture or reuse of products. This also includes careful maintenance to extend the life of products and repairing or replacing parts rather than discarding an entire item.

Additionally, circular business models, such as providing 'products as a service', can transform our approach to ownership and value generation. Instead of purchasing products outright, customers can access products through a subscription or lease, where the responsibility for maintenance and repair is retained by the producer or retailer, extending the life of the product.

Circular business models (such as repair, hire or share services) are essential to support the individual behaviours needed to keep goods and materials circulating.

Some examples of this principle include:

- Hiring or borrowing items or sourcing them second hand instead of buying new.
- Reupholstering a chair you already own rather than replacing it with a new one.

[12] Source: Ellen MacArthur Foundation, An introduction to circular design, June 2022

- Subscription services for household appliances, ride sharing, e-bikes as an alternative to ownership.
- Businesses diverting 'waste' materials into new products e.g. hairdressers collecting cut hair to make wigs.
- Carefully renovating a building rather than demolishing it to build a new one.

3. Conserve natural resources and regenerate nature: this final principle involves avoiding the use of virgin materials and returning nutrients to the soil. It moves beyond the goal of 'do less harm' to the environment towards the intention of leaving nature better off through the creation of habitat, increasing biodiversity levels, enriching soils, improving watersheds or enhancing ecosystems. It is about being a nature steward and 'caring for country'.

The circular economy goes beyond the aims of 'Reduce, Reuse, Recycle'. As shown in Figure 4 below, it aims to evolve the values underpinning our economic system and seeks to re-think all stages of a product's lifecycle including supply, processing, manufacturing, distribution, and retail, not just end-of-life management.

Some examples of this principle include:

- Sourcing materials from responsibly managed natural ecosystems to ensure that harvesting does not exceed regeneration rates.
- Incorporating green spaces in urban areas to improve air quality, manage stormwater runoff, and provide habitat for wildlife.
- Keeping products and materials in use, so that less land is required for sourcing virgin raw materials, e.g. from mines.

The different stages of a product's lifecycle in a circular economy.

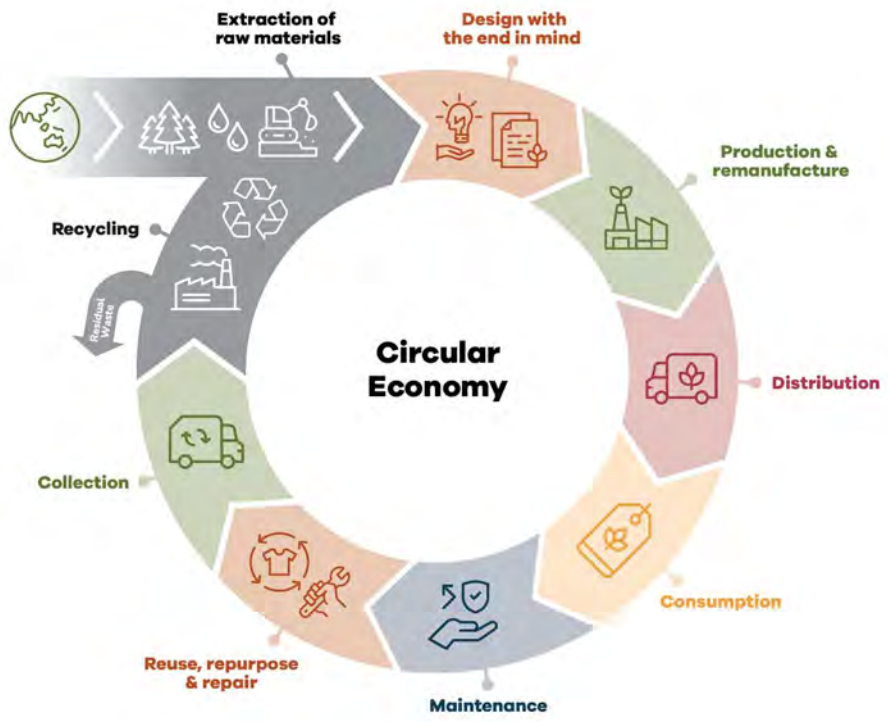

Figure 4: The Circular Economy

4.3 Implementation approach

Our approach to strategy implementation will strive to:

- Ensure programs and services are designed to respond to the needs of community and are accessible and inclusive.
- Design interventions that also build climate resilience.
- Progressively integrate circular economy principles within Council operations, capital works and procurement.
- Trial and implement innovative approaches or technologies to progress circular economy outcomes.
- Partner with our community, other councils, not-for-profit organisations, businesses, state and federal government to pursue shared objectives.

4.4 Strategic directions

Council has a role to play in the circular economy through our procurement of goods and services, our building and capital works program as well as through advocacy and the delivery of programs and services to the community that enable participation in the circular economy.

Whilst circular economy requires change across the entire supply chain to address the economic, environmental and social costs of the linear system of production and consumption, there are many opportunities Council can pursue locally. The 5 key areas for Council action are:

1. Advocating for system change

Our objective is to:

Achieve regulatory reform to improve resource efficiency and minimise environmental pollution (including climate pollution) and drive a rapid transition to a circular economy in Victoria and Australia.

Our priorities are to:

- Advocate for Extended Producer Responsibility and mandatory national minimum product design and import standards to ensure goods are durable, repairable, reusable and recyclable at end-of-life.
- Seek further bans on problematic products and materials (e.g. single use plastics, PFAS chemicals in compostable and fibre-based packaging).
- Call on Federal Government to introduce policy measures that incentivise repair, refurbishment and the use of recycled content over virgin materials.

A full list of our circular economy advocacy asks can be found at Appendix 2.

Partnership/collaboration opportunities: MAV, NGOs, community groups, other Councils.

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2. Community education and behaviour change

Our objective is to:

Increase opportunities and influence households and community groups to participate in the circular economy as conscious consumers.

Our priorities are to:

- Foster the expansion of local sharing groups and community initiatives that enable material reuse, repair or recovery and increase diversion from landfill, e.g. libraries of things, repair cafes, swap events, workshops and skill sharing meetups.
- Deliver programs and services that enable zero-waste lifestyles.
- Assist community to access services for hard to recycle or hazardous items.
- Engage and inspire Merri-bek's diverse community to act as 'conscious consumers' - to re-think their shopping and waste habits.

Partnership/collaboration opportunities: community groups, libraries team, Sustainability Victoria, social enterprises.

3. Optimised kerbside waste and recycling services

Our objective is to:

Continue reforming our kerbside waste collection services to maximise recycling and reuse, and to equitably and cost effectively meet the needs of residents and businesses.

Our priorities are to:

- Minimise the amount of organic waste (FOGO) and recyclables sent to landfill.
- Explore tailored services for businesses and Multi Unit Developments (e.g. food and bulk cardboard).
- Increase opportunities for reuse and recycling through the hard waste service.
- Reduce contamination and resource loss through correct bin use.

To minimise climate, noise and air pollution from our waste collection vehicles, Council aims to be an early adopter of emerging zero emissions truck technologies.

Partnership/collaboration opportunities: M9, local food businesses, social enterprises, retailers, private waste contractors.

4. Fostering circularity in our local economy

Our objective is to:

Increase awareness of circular business models and practices to help businesses reduce waste and costs and to increase job opportunities whilst also increasing community access to local sustainable businesses.

Our priorities are to:

- Support business networking, capacity building, innovation and research to help businesses adopt circular practices and capitalise on opportunities in the circular economy.

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- Educate and engage the community, local businesses and suppliers in circular opportunities for priority materials.
- Further investigate opportunities identified through the analysis of material flows in Merri-bek to increase diversion of commercial and industrial waste from landfill and encourage greater circularity in the local economy.

Partnership/collaboration opportunities: NorthLink, Melbourne's North Food Group, Melbourne's North Advanced Manufacturing Group, LXRP, Trader Associations, local businesses including social enterprises, charities, and the education sector – in particular RMIT University Brunswick campus.

5. Circular design and environmentally sustainable procurement (Council as Role Model)

Our objective is to:

Be a leading Council in environmentally sustainable procurement, through greater adoption of circular economy principles in our capital works, operations and service delivery.

Our priorities are to:

- Evolve Council's procurement policy and guideline documents, processes and assessment criteria to embed circularity across the organisation and to stimulate demand in the supplier market for circular products and services.
- Explore 'goods as services' contracts for products e.g. lighting or IT hardware.
- Adapt tender specifications to increase the use of sustainable / low embodied carbon / recycled content materials; products that are durable, repairable, reusable and recyclable.
- Seek innovation in our infrastructure (streetscapes, roads, etc) and open space projects, to increase the reuse, repair and maintenance of goods and materials.
- Reduce embodied emissions from our built environment by preferencing adaptive reuse over demolition where possible, designing buildings for modularity, adaptability and disassembly and using recycled content, salvaged and/or sustainable/low carbon materials.
- Seek to deliver zero or low waste events and festivals for our community.

Partnership/collaboration opportunities: SV Buy Circular, local reuse/salvage/recycling businesses and social enterprises.

5. Policy and regulatory context

Local strategic context

This strategy contributes to a range of Council plans and strategies, outlined in the table below.

Local Policy / Initiative	Overview
Council Plan 2021 – 2025 (to be updated)	Theme 1: An environmentally proactive Moreland Relevant strategies: 1.6 Strive for zero waste to landfill with best practice municipal waste minimisation through reform of kerbside services, community education and innovation.

	1.7 Foster a more circular economy through implementing kerbside waste reform, supporting community initiatives and businesses, minimising waste generated by Council activities and using collaboration to influence markets and advocate for greater commitment of state and/or federal governments.
Community Vision 2021 – 2031 (to be updated)	Articulates how the community wants Merri-bek to be in the next 10 years. The Community Vision is that: "Merri-bek is our home. We respect and look after our land, air, waterways, and animals. We care for our people and celebrate our diverse stories, cultures, and identities. "Merri-bek is enhanced by all of us supporting our local businesses, arts communities and social organisations. "We work together proactively and transparently to continue to create a: Vibrant; Safe; Healthy; Resilient; Innovative; Regenerative community. "Many faces, one Merri-bek."
Zero Carbon 2040 Framework	Outlines Council's vision and strategic directions for the transition to zero carbon in Merri-bek by 2040. Acknowledges that the climate emergency calls for urgent action by all levels of government. The framework reflects 3 key strategic directions: Energy Transition, Sustainable Transport and Waste and Consumption. The 2040 goal for Waste and Consumption is: Circular economy with zero waste.
Kerbside Waste Service and Charge Policy 2021	The Kerbside Waste Service and Charge Policy 2021, adopted December 2021, introduced reforms to the kerbside waste collection service for implementation between 2022 to 2025 and defined a high performing 'end state' service model. General rubbish bins will be collected weekly until fortnightly collections have been trialled.

Victorian policy context

The Victorian Government introduced their circular economy policy *Recycling Victoria: A New Economy* in 2020 to guide the state's transformation of kerbside recycling and use of materials.

Where possible this strategy aligns with the goals and directions of *Recycling Victoria: A New Economy*.

State Policy / Initiative	Overview
Circular Economy (Waste reduction and Recycling) Act 2021 (CE Act)	The CE Act provides for the establishment of Recycling Victoria as the regulator of the Victorian waste and resource recovery sector and outlines the activities to be regulated by Recycling Victoria including waste, recycling and resource recovery services, the Container Deposit Scheme and the Waste to Energy Scheme.
Recycling Victoria: a new economy (Victorian Government 2020)	Outlines changes to the waste and resource recovery sector to enable Victoria's transition to a circular economy. Includes 4 targets: - Divert 80% of waste from landfill by 2030, with an interim target of 72% by 2025. - Cut total waste generation by 15% per capita by 2030.

	- Halve the volume of organic material going to landfill between 2020 and 2030, with an interim target of 20% reduction by 2025. - Ensure every Victorian household has access to food and garden organic waste recycling services or local composting by 2030.

National policy context

The Federal Government plays a critical role in enabling the transition to a circular economy. They set direction and can be drivers of innovation and investment. Many different policy levers can be applied to accelerate the transition, below are some key national policies and initiatives.

National Policy / Initiative	Overview
Australia's Circular Economy Framework (Australian Government 2024)	Australian government's first circular economy framework, which represents the commitment to a national circular economy transition. The framework includes the goal of doubling Australia's circularity by 2035. The framework aims to transform how we use, reuse, and regenerate resources across the economy. It also recognises that as we work to decarbonise our economy, circularity is an essential tool in reducing our carbon footprint while simultaneously restoring ecosystems and natural capital.
Environmentally Sustainable Procurement Policy (Australian Government 2024)	Australian government's first national procurement policy focused on climate, the environment and circularity. It reflects the commitment to reduce national GHG emissions to net zero by 2050 and enable the transition to a circular economy. It aims to ensure the Government uses its purchasing power to reduce emissions and waste to landfill by increasing local demand for recycled materials.
Recycling and Waste Reduction Act 2020 (replaces the Product Stewardship Act 2011)	The *Recycling and Waste Reduction Act 2020* establishes a legislative framework to better manage the environmental and social impacts of products and materials. This includes regulating exports and expanding product stewardship, as well as assisting businesses to adopt more resource efficient practices, better product design and repairability.
National Waste Policy Action Plan (Australian Government 2019)	Guides Australia's investment and national efforts to deliver against targets to better manage waste and resource recovery nationally, including to: • Regulate waste exports • Reduce total waste generated by 10% per person by 2030 • Recover 80% of all waste by 2030 • Significantly increase the use of recycled content by governments and industry • Phase out problematic and unnecessary plastics by 2025 • Halve the amount of organic waste sent to landfill by 2030
National Packaging Targets (Australian Government 2018)	In 2018 Australia established the ambitious National Packaging Targets. The 4 targets to be achieved by 2025 were:

	• 100% of packaging being reusable, recyclable or compostable • 70% of plastic packaging being recycled or composted • 50% average recycled content included in packaging • The phase out of problematic and unnecessary single-use plastic packaging. Note: These targets have not been achieved.
National Food Waste Strategy (DEE 2017)	The *National Food Waste Strategy* provides a framework to support collective action towards halving Australia's food waste by 2030.

Product Stewardship Schemes

Several national product stewardship schemes have a direct impact on the products and materials in the municipal waste stream. Product stewardship is a strategy used to ensure that producers take responsibility for minimising the environmental and human health impacts of the products they put on the market.

Product Stewardship and Extended Producer Responsibly Schemes are intended to shift the responsibility for collection, transportation, and the management of products at end-of-life away from local governments, who have traditionally borne these costs, to the manufacturers.

Product Stewardship Scheme	Overview
Seamless Clothing Stewardship Scheme	Voluntary product stewardship scheme for clothing launched in 2023. Aims to have 60% of industry sign up to divert 120,000 tonnes of end-of-life clothing from landfill by 2027.
National Television and Computer Recycling Scheme	The National Television and Computer Recycling Scheme (NTCRS) was established in 2011 to provide Australian households and small businesses free access to industry-funded collection and recycling services for end-of-life televisions and computers, including printers, computer parts and peripherals.
Australian Packaging Covenant	Established in 1999, the Australian Packaging Covenant is a voluntary, industry-led co-regulatory product stewardship scheme for packaging. Deemed no longer fit-for-purpose and in need of reform, national packaging regulation is currently under review.

6. Monitoring and evaluation

This Strategy's vision, principles and priorities will be implemented through the Climate Emergency Action Plan 2025 – 2030, which will map out priority projects and programs for delivery. Measuring and reporting on progress towards circular economy outcomes is key to showing progress, measuring success and ensuring actions are meeting strategic objectives.

Australia currently lacks a comprehensive framework for measuring the circular economy, with metrics mostly centred around waste management. Global agencies and organisations gather data to reflect material consumption and the use of secondary materials (recycled content) in the economy.

Several high-level indicators can assist in measuring how successful a circular economy is at reducing waste, keeping materials circulating (use of salvaged and/or recycled content products/materials) and reducing greenhouse gas emissions.

Where feasible, these metrics will be tracked for the purposes of evaluating the outcomes of this strategy and associated actions.

Indicator	Measure	Source
Material circularity	Increase proportion of recycled content products/materials in capital projects Increase reuse of products/materials in major capital works/building projects Number of buildings renewed vs demolished	Capital works project-based reporting
Greenhouse gas (GHG) emissions	Reduction in direct GHG emissions from landfill Low embodied carbon materials used in capital works/building projects	Municipal solid waste data Capital works project reporting
Waste diversion	Divert 80% of waste from landfill by 2030	Municipal solid waste data
Total waste per capita	Cut total waste generation (across all 4 bins) by 15% per capita by 2030	Municipal solid waste data
Contamination and resource loss in kerbside bins	Reduce contamination in: - mixed recycling by 10% - FOGO and glass recycling by 2% and Reduce occurrence of resource loss in general rubbish stream by: - 10% for food and garden waste - 5% for mixed recycling and glass (from 2021 baseline)	Municipal solid waste data Kerbside audit data Recycle Right bin inspection data
Community awareness	Increase in community participation in circular behaviours (repairing, repurposing etc) from 2025 baseline (TBD) Increase in community awareness of the term 'circular economy' from 2025 baseline (TBD)	Sustainability Victoria, Annual State of Sustainability Report
Access to local circular services / opportunities	Increase or expansion of services / programs in Merri-bek that enable circular behaviours (e.g. tool libraries, repair cafes, food swaps)	Council monitoring
Advocacy outcomes	State or federal policy change that fully (or partially) delivers on advocacy priorities	Council monitoring

7. Glossary

Circular economy: a model of production and consumption that promotes the sustainable and efficient use of resources to achieve social, economic and environmental outcomes. It shifts away from the current 'take, make, waste' linear approach to one where products are designed to be reused, repaired, refurbished and recycled. It aims to create a closed-loop system where materials are continuously circulated and repurposed rather than being discarded as waste.

Contamination: any item that is not allowed in the mixed recycling bin, glass recycling bin or food and garden organics bin and/or any item that cannot be recovered at a recycling or composting facility.

Critical minerals: are metallic or non-metallic elements found in the earth that are essential for modern technologies, economies, or national security, with a high risk of supply chain disruptions.

Embodied emissions (embodied carbon): all greenhouse gas emissions that are released as part of making a product for use. This is also referred to as 'embodied carbon'.

Environmentally sustainable procurement: aims to achieve value for money while minimising environmental impacts such as climate change, biodiversity loss, waste, and pollution. This involves selecting goods and services that have the most positive environmental impact throughout their entire lifecycle.

Environmental footprint (ecological footprint): measures the impact of human activities on the environment, quantifying the resources consumed and waste generated, often expressed as the amount of land and water needed to support those activities.

Greenhouse gas emissions: the release of certain gases, such as carbon dioxide, methane, and nitrous oxide, into the atmosphere that trap heat and contribute to the 'greenhouse effect', leading to global warming and climate change. While emissions can result from natural causes, they are primarily the result of human activities.

Lifecycle assessment (LCA): is a framework for evaluating the effects that a product has on the environment over the entire period of its life, including raw material extraction and processing, manufacture, distribution, use and end-of-life management.

Linear economy: a traditional 'take, make, waste' economic model where resources are extracted, used, made into products, used and then discarded as waste, often leading to resource depletion and environmental harm.

Product-as-a-Service (PaaS): is a business model where products are provided on a subscription or usage basis. PaaS is different to renting as it provides additional benefits to customers and as the company retains ownership across the entire product lifecycle, it is in their interest to produce a better product.

Recycled content: the proportion of recycled materials (both pre-consumer and post-consumer) used in a product, typically measured as a percentage of the total material used in a product.

Supply chain: is the network of all the individuals, companies, facilities, activities and technology involved in the creation, delivery and sale of a product. A supply chain encompasses everything from the supply of raw materials to the manufacturer through to its eventual delivery to the consumer.

Sustainability: meeting the needs of the present without compromising the ability of future generations to meet their needs.

Value chain: the processes and activities involved in bringing a product or service from initial conception through to delivery to the consumer, this includes production, marketing, and the provision of after-sale services.

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8. Appendix

Current waste reduction programs

Through the delivery of the previous Waste and Litter Strategy and the Kerbside Waste Reform Project, Council has implemented a range of interventions and programs designed to increase the circularity of certain waste streams or materials through reuse or recycling, these include:

- Weekly FOGO collection – all households now have access to the weekly collection of Food and Garden Organics (FOGO) as part of the standard kerbside service. This will divert more organics from the waste to landfill stream, reducing waste and emissions.
- Separated glass recycling collection –all households now have access to monthly kerbside glass recycling collections or glass drop-off points for glass bottles and jars, as part of the standard kerbside service. This is providing clean glass for recycling and reducing contamination in the mixed recycling stream.
- Compost Community program - established in 2016, the Compost Community program subsidises home composting equipment and online education for successful composting and worm farming.
- Reusable cloth nappy and period product subsidy – established in 2022 the subsidy program for reusable cloth nappies and period products aims to encourage the uptake of reusables and help residents reduce disposable nappy and period product waste in the garbage stream.
- Recycling Stations - established in 2015 for the collection of household batteries, mercury-containing lamps, mobile phones and digital cameras, CDs and DVDs and tapes for recycling. Recycling Stations are available for residents at our 3 customer service centres.
- Recycle Right program – an education program established in 2009 to reduce contamination in the recycling and organics streams. The Recycle Right program provides 'at point of behaviour' information to residents on correct bin use and which items are accepted in each bin.
- Drinking fountain installation – as part of the Plastic Wise Policy implementation, 28 drinking fountains were installed at sports club over a 3 year period from 2020/21 to 2022/23.
- Plastic Free Events – 24 flagship Council run festivals have been delivered as 'Plastic Free' events since Plastic Wise Policy implementation began in 2019 including 6 major annual events - Sydney Road Street Party, Glenroy Festival, Fawkner Festa, Brunswick Music Festival, Carols by the Lake and Coburg Night Market. Many other smaller events such as park openings, sports open days and smaller ticketed events have also been 'Plastic Free'.
- Reusable crockery and cutlery trial – as part of the Plastic Wise Policy implementation, a trial of reusable cutlery and crockery commenced in 2023 at 3 community venues, Merlynston Progress Hall, Brunswick Town Hall and Coburg Town Hall.
- Reusable coffee cups at Council events – as part of the Plastic Wise Policy implementation, the use of reusable coffee cups at small community festivals was initiated in 2022 in partnership with Green My Plate.
- Support to businesses to reduce Single Use Plastics – through distribution of online and printed resources, Responsible Cafes promotion, and the trial of Plastic Free Places program on Sydney Road.
- Reusable Party Packs – in 2023, packs containing reusable crockery and cutlery were made available to staff organising community events through Council's Open Space and Sustainable Communities Units, Oxygen Youth Centre and Glenroy Hub.

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- **Garage Sale Trail -** the annual national Garage Sale Trail sees household and community garage sales over one weekend in November.
- **Eat it, don't bin it challenge** – tools and resources on the Conversations Merri-bek site to help residents reduce their food waste at home.
- **Waste education program** - free incursions for schools, Early Learning Centres (ELCs), kindergartens and community groups on a range of waste and recycling related topics. Council's waste education program has also included subsidised participation in the Resource Smart program for ELCs and professional development opportunities on sustainability for educators.
- **Online A-Z guide to waste and recycling** – a Merri-bek website online guide listing reuse, repair, recycling and disposal options for over 400 household items.

Circular economy advocacy asks

Of the 80,0000 households in Merri-bek, 72,000 receive the kerbside waste service from Council. Merri-bek has the ambitious goal of Zero Waste to Landfill by 2030.

We need mandatory national Product Stewardship Schemes to drive meaningful change around product design, manufacture, reuse and recycling, with producers taking responsibility for their products across their entire lifecycle, including collection. The responsibility shouldn't be on councils to collect and dispose of waste created by manufacturers. Ratepayers bear the cost of every additional product or stream added to the kerbside bin system. Adding additional items to the kerbside system increases the risks of confusion and contamination by service users, as well as adding costs to deliver the service.

Mandatory national minimum design and import standards are needed to ensure products are reusable and recyclable at end-of-life. Priority products include packaging, e-waste and batteries, soft plastics, textiles, and household chemicals.

Kerbside collections are a convenient way for end users to recycle or dispose of goods and materials, however adding products to kerbside bins results in additional collection, processing and contamination costs which are borne by council/ratepayers not the manufacturer.

Our specific advocacy asks include:

That the Australian Government:

- Expand mandatory end-of-life product stewardship schemes to include more products, e.g. packaging, soft plastics and e-waste
- Introduces mandatory national minimum product design and import standards to ensure goods are durable, reusable and recyclable at end-of-life
- Introduces policy measures to incentivise repair, refurbishment and the use of recycled content, for example through a tax on virgin resources
- Implements the labelling of carbon emissions on products.
- Introduces Right to Repair legislation and privileging of product reuse and repair in Extended Producer Responsibility Schemes

That the Victorian Government:

- Urgently invest waste levy funds to develop financially and environmentally sustainable waste management/resource recovery facilities and circular infrastructure in Victoria
- Urgently reinstate funding for the Detox your Home program, delivered by Sustainability Victoria, to ensure that there is a pathway for the safe disposal of hazardous household products and chemicals

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- Introduce circular procurement targets for state government and support councils and businesses to do likewise.
- Introduce further bans for problematic products and materials (e.g. single use plastics, PFAS in compostable and fibre-based packaging)
- Revise the *Good Practice Guidelines for Service Rates and Charges* to include funding waste reduction/avoidance education, programs and services through the waste charge

Circular economy frameworks

The Butterfly Diagram by the Ellen MacArthur Foundation

There are many frameworks that can help to guide the inclusion of circular economy principles into the scope of projects, tenders and procurement. The Ellen MacArthur Foundation are leaders in circular economy thinking and have many resources and examples on their website illustrating how to enact the 3 fundamental principles of circular economy. The most famous of which is their circular economy systems diagram, also known as the butterfly diagram, shown below in Figure 7.

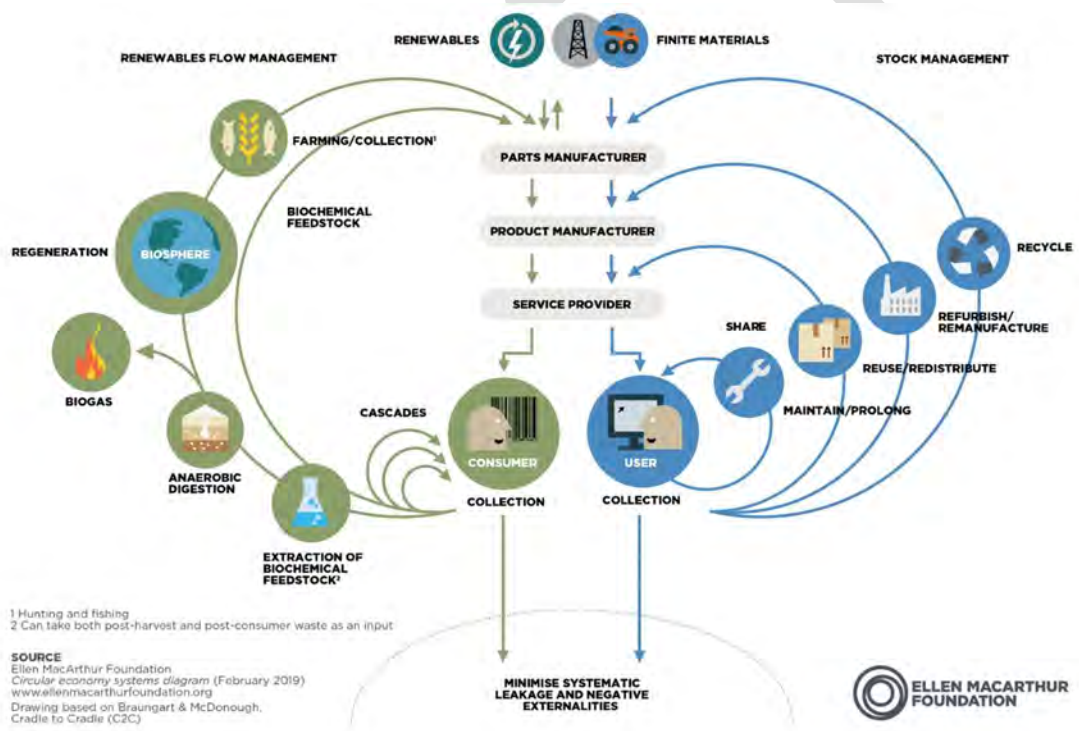

Figure 5: Circular economy systems diagram, Ellen MacArthur Foundation

Levels of Circularity by Prof. Dr. Jacqueline Cramer

The Levels of Circularity by Prof. Dr. Jacqueline Cramer, provides a helpful guide to understanding how to incorporate circular economy principles across the lifecycle of products and materials. They have been adapted from the original 1970's waste hierarchy which included the 3 R's of Reduce, Reuse, Recycle. This extended version includes Refuse, Reduce and Renew at the highest level, which aim to avoid creating waste in the design phase. In the consumption phase Reuse, Repair, Refurbishment, Remanufacture and Repurposing involve using products and materials for longer, ensuring they are kept circulating at their highest value. Recycle and Recover are end-of-life strategies aimed at recovering resources. Both landfill and incineration have no circular outcome as resources are permanently lost from the value chain at this point.

Figure 6: Levels of circularity by Prof. Dr. Jacqueline Cramer[13]

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[13] Source: Prof. Dr. Jacqueline Cramer, 2015, Levels of Circularity: 10 R's, The Netherlands