

# Regional Circular Economy Plan

## Barwon South West



October 2022



Thank you to all organisations that contributed to the development of the Barwon South West Regional Circular Economy Plan.



Advanced Manufacturing Growth Centre; APCO; Austeng; Australian Biofert; Australian Industrial Hemp Alliance Inc; Barwon South West Waste & Resource Recovery Group; BioGro Pty Ltd; Biomix; Borough of Queenscliffe; City of Greater Geelong; Close the loop; Colac Otway Shire; Corio Waste Management; EcoWaste p/l; GDP Industries; Geelong Chamber of Commerce; Glenelg Shire Council; Greenchip Recycling; Integrated Recycling Pty Ltd; National E-Waste Alliance; Repeat Plastics Australia Pty. Ltd. ; SENVIC - Social Enterprise Network Victoria; Tetra Pak; The Agri Collective; Van Schaik's Bio Gro Pty. Ltd.; Visy.

This report's photos were taken on Country of the Gunditjmarra People, Eastern Maar People and Wadawurrung People.

### Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



# Message from the Minister

## From waste to value - A regional approach to growing regional Victoria's circular economies

Victoria is transitioning to a circular economy, with government, business and community looking for new ways to reduce waste, recycle and reuse more.

Regional Victoria is integral to tackling this broad and complex issue - just as it is integral to the state's economic success, its rich social and cultural heritage, and its stunning landscapes and ecosystems.

The Regional Circular Economy Plans (RCEPs) have been developed by regional Victorians, for regional Victorians, with over 125 organisations contributing to their development.

Each region is unique, with its own strengths to build from, and challenges to consider. The plans are statements of intent for where each region would like their circular economy to be by 2030, and the path to achieving this.

Moving to a circular economy opens exciting opportunities for each region to strengthen their local economies, develop new markets, attract investment, and create jobs - supporting their communities and protecting their environments into the future. The plans have been developed as an accessible resource for all to use, to support collaboration, strategic planning, and investment. I look forward to the plans being used to progress circular economy outcomes across regional Victoria.

The Victorian Government is investing over \$515 million to transform Victoria's waste and recycling industry. The RCEPs support the delivery of the \$380 million Recycling Victoria: A new economy plan - Victoria's 10-year circular economy plan to reduce waste, increase recycling, and creating more value from our resources. This will help divert 80 per cent of all material away from landfill, create nearly 4,000 new jobs and boost Victoria's economy by up to \$6.7 billion by 2030.

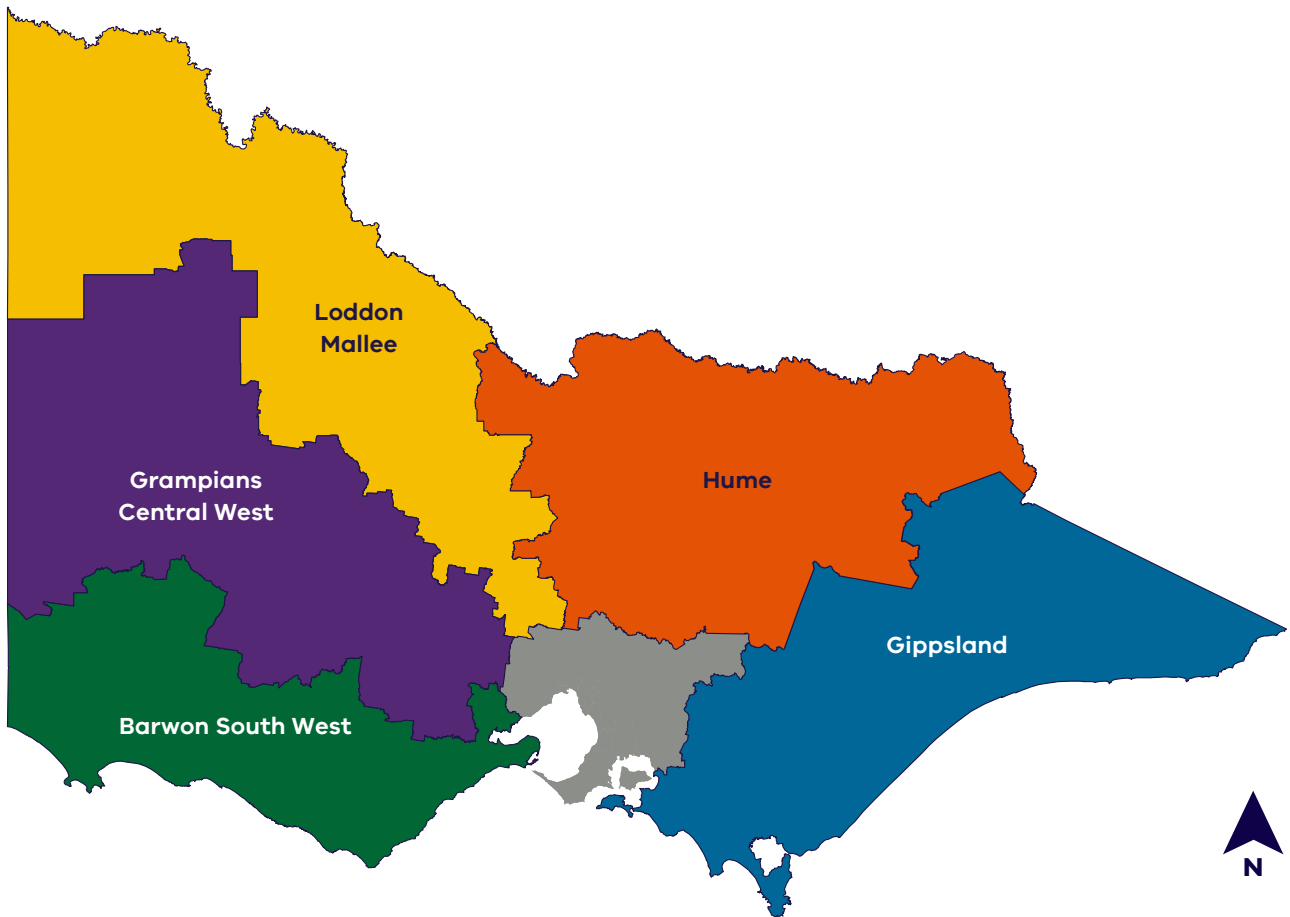


A blue ink handwritten signature of Lily D'Ambrosio.

**The Hon. Lily D'Ambrosio MP**

Minister for Energy  
Minister for Environment and Climate Action  
Minister for Solar Homes





The five regions of Victoria that have developed Regional Circular Economy Plans

# Circular economy plans for regional Victoria

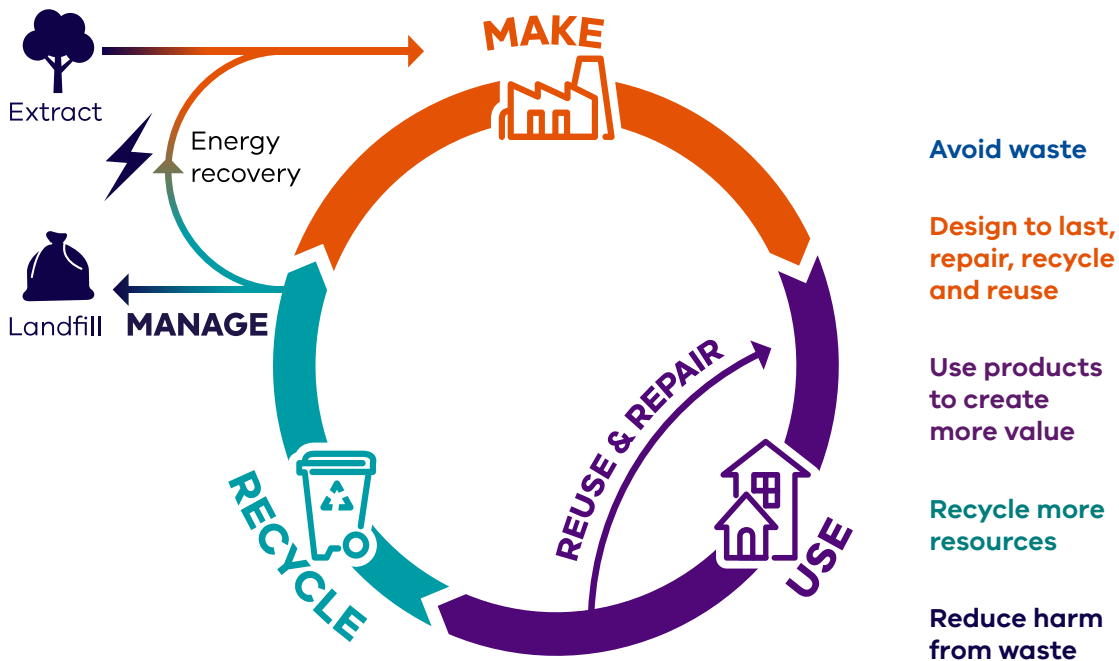
The Barwon South West Regional Circular Economy Plan (RCEP) is one of five RCEPs that have been developed for Regional Victoria. RCEPs have also been created for Gippsland, Hume, Loddon Mallee, and Grampians Central West.

Each RCEP is the result of broad consultation, engagement and collaboration with regional representatives who all have important roles to play in developing the region's circular economy. The plans represent a different approach to planning and are the first of their kind.

For a summary of the engagement program, refer to the [RCEPs Engagement Program Summary Report](#).

The RCEPs support the delivery of Victorian Government's circular economy policy, Recycling Victoria: a new economy, specifically the goals to 'design to last, repair and recycle'; 'use products to create more value'; and 'recycle more resources'.

## Resource flows in a circular economy



# Barwon South West's circular economy plan

This document sets out Barwon South West's circular economy aspirations to 2030, and the priorities to help achieve these aspirations. It also provides an insight into the region's strengths and challenges, and how to support the development of a sustainable and thriving circular economy in the Barwon South West region.

This is a strategic document, not a plan with set actions for individual participants to report on.

The document identifies the collective aspirations of representatives from across the region. The aspirations and priorities are to be considered by each reader within their own contexts and spheres of influence as they transition to a regional circular economy.

## A plan by Barwon South West, for Barwon South West

Representatives from 55 organisations contributed to the Barwon South West RCEP, including local government, the waste and resource recovery industry, businesses and business associations, manufacturers, social enterprise, research and education institutions, and the Victorian Government.

Representatives participated in robust discussions and workshops facilitated by the Victorian Government designed to encourage strategic thinking about their region, where they are now, where they want to be by 2030, and how they can work together to get there.

For further information on the engagement program, refer to the RCEPs Engagement Program Summary Report. The Report has made ten recommendations, which have been incorporated into this plan where possible, or are noted for future consideration.

## Barwon South West's aspirations for 2030

Together, representatives developed five circular economy aspirations for 2030, to guide the development of the region's circular economy.

## Working together to achieve our aspirations

Building from local understanding of the region's strengths and challenges, region specific priorities have been identified to guide the development of Barwon South West's circular economy.

The priorities cover a range of key themes including improving infrastructure, developing end use markets, improving collaboration and communication, supporting behaviour change, advocating for legislative reform, undertaking research and development, and providing opportunities for reskilling and job training.

## How to use this Plan

This plan is to be used as a resource for the Barwon South West region to work together toward creating a sustainable and thriving circular economy.

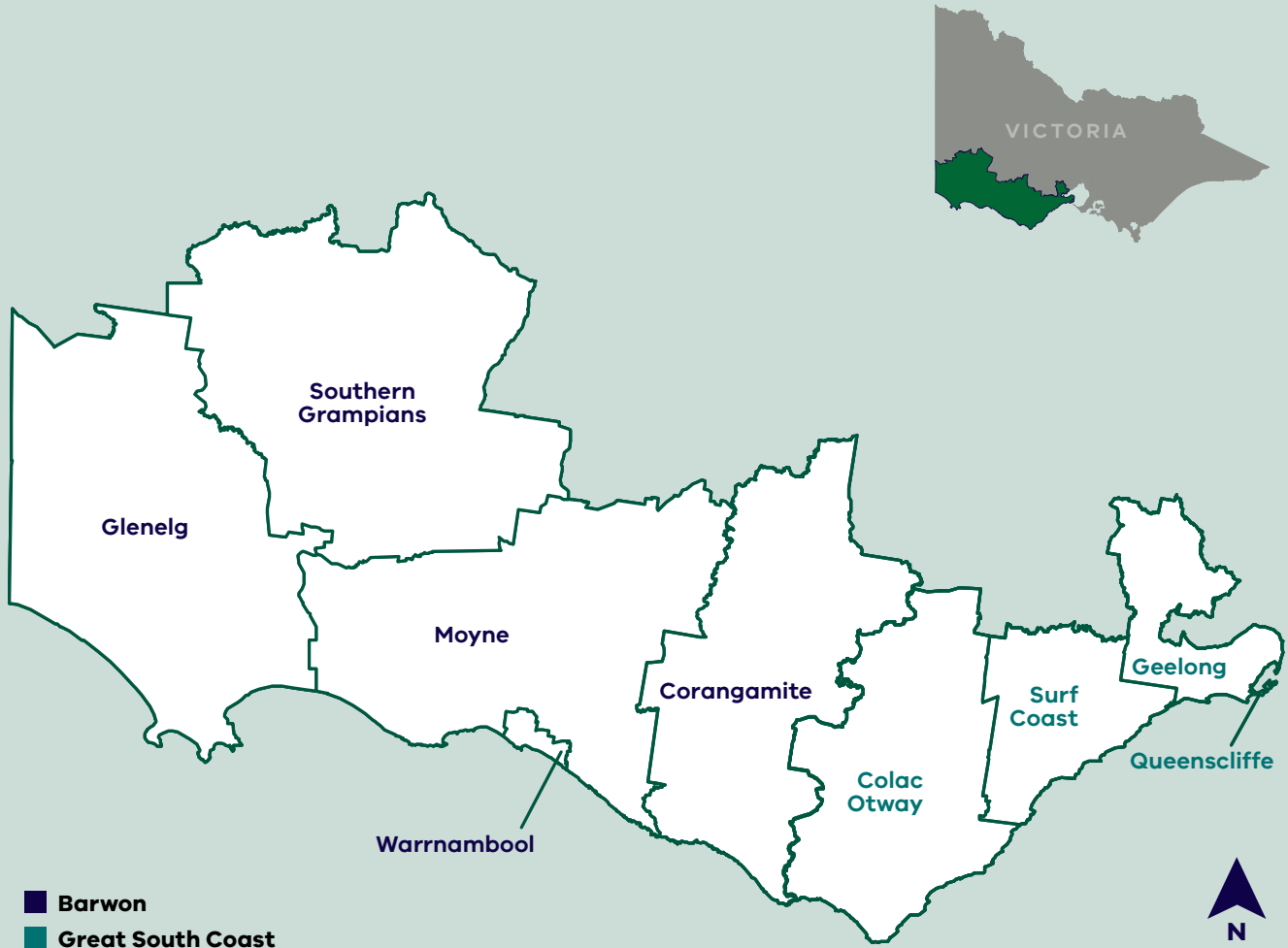
As a resource for all, the Plan has a broad number of potential uses including, but not limited to, regional planning, infrastructure planning, funding program design, business strategy development, community education program design, and product design.





# Barwon South West region

Map of Local Government Areas (LGAs)  
in the Barwon South West region





# Aspirations and priorities

Barwon South West’s five circular economy aspirations to 2030 are detailed below, along with six important changes, or ‘key enablers’, that have been identified to help realise these aspirations.

## Aspirations to 2030

**1 There is a high demand for circular economy solutions**  
 Participation in the regional circular economy is supported and encouraged through consistent regulation, investment decisions based on evidence, and opportunities to collaborate.

**2 Investment in the circular economy flows to the region**  
 The Barwon South West region is known as a leader in circular economy through collaboration, commitment to and investment in education, infrastructure, and processing capabilities.

**3 Consumers are empowered to participate in the circular economy**  
 Consumers are informed and empowered to make environmentally conscious choices. They understand the environmental impact of their purchasing decisions and actively avoid waste.

**4 Product stewardship is a priority**  
 Products and materials are created within the Barwon South West region with an understanding of their lifecycle. They are easy to reuse, repair, repurpose or recycle. Manufacturers are supported to take up extended producer responsibilities.

**5 The region’s renewable energy sector is integrated with the circular economy**  
 The use of non-renewable energy sources is reduced.

## Key enablers

Important changes to strengthen our circular economy



**Improved infrastructure**  
**14%\***  
 of priorities



**Developing end use markets**  
**6%\***  
 of priorities



**Improved collaboration and communication**  
**14%\***  
 of priorities



**Behaviour change (industry and consumers)**  
**34%\***  
 of priorities



**Legislation, regulations, or standards reform**  
**14%\***  
 of priorities



**Other key changes including research and development, reskilling and job training**  
**14%\***  
 of priorities

\* Percentage rounded to nearest whole percentage. The rounded percentages add to 96%.

# Priorities to achieve our aspirations

Barwon South West has developed 35 priorities to achieve their circular economy aspirations to 2030. Each priority has been identified as contributing to one or more aspiration and has been grouped by Key Enablers. Many of the priorities align with current Victorian Government policy, whilst others will be for future consideration.

Key			Alignment with Victorian Policy	
<b>Aspirations</b>			 Aligns	 For future consideration
<b>1</b> High demand for circular economy solutions	<b>3</b> Consumers are empowered to participate in the circular economy	<b>5</b> The region's renewable energy sector is integrated with the circular economy		
<b>2</b> Investment in the circular economy flows to the region	<b>4</b> Product stewardship is a priority			






## Improved infrastructure

Invest in <b>new materials recovery facilities</b> in proximity to both Geelong environs and the South West to facilitate local processing and manufacturing.	<b>1</b> <b>2</b> <b>4</b>	
<b>Invest in storage facilities and redistribution solutions for reusable materials and goods, to improve access to high-quality feedstock</b> and support local industry, including manufacturers, to develop end-use markets.	<b>1</b> <b>2</b> <b>4</b>	
<b>Improve access</b> to local services, solutions, and facilities <b>to recover household and commercial resources</b> by material type and process recyclables.	<b>1</b> <b>2</b> <b>3</b> <b>4</b>	
<b>Increase the collection of e-waste</b> to include household battery systems, smart meters, and solar panels.	<b>2</b> <b>3</b> <b>4</b> <b>5</b>	
<b>Explore technologies</b> , such as hydrogen, to minimise future waste streams from the transition to renewable energy, including site-based battery solutions, as Barwon South West transitions to a fossil-free energy circular economy.	<b>2</b> <b>5</b>	

## Developing end use markets

Support reuse entities already working in the region to expand their capabilities or explore new projects which fit with the region's circular ambitions.	<b>1</b> <b>2</b> <b>4</b>	
Partner with product designers and initiators to include the full social, environmental, and economic life cycle costs in new products to incentivise.	<b>3</b> <b>4</b> <b>5</b>	

## Improved collaboration and communication

Use strategic and region wide mechanisms to <b>raise the profile of circular economy</b> , including investment in infrastructure to increase reprocessing capacity for organics, carbon fibre and textiles.	1 2 3	
<b>Promote innovative and collaborative approaches through science, technology, and initiatives</b> to demonstrate reuse of materials, or recycling across different industry types.	1 2 3 4	
Make <b>better use of existing tools and information to map and understand local circular economy opportunities</b> including materials flow, use and volume to enable better take up (e.g., Sustainability Victoria, ASPIRE).	1 2 5	
Work collaboratively with <b>suppliers, designers, and consumers to design reusable products</b> that produce less waste and contamination.	1 3 4 5	
<b>Engage proactively with global corporations</b> to understand how we can work collaboratively to support the region's circular economy.	1 2 3 4 5	

## Behaviour change (industry and consumers)

<b>Engage and educate consumers to see avoidance</b> as a legitimate solution to the circular economy.	1 2 3 5	
<b>Improve access and reduce barriers</b> for community groups and consumers <b>to repair and share common household items</b> .	3 4	
Introduce broad scale waste avoidance/reduction/reuse <b>education campaign</b> focussing further up the waste hierarchy than recycling/composting (e.g., Small Acts Big Impacts).	2 3 4 5	
<b>Promote sustainable, locally manufactured products</b> within the region to support local circular economy jobs.	3 4 5	
<b>Notify consumers of their annual household waste volumes</b> and impact and promote relevant available services e.g., exchange programs, removal service, what currently happens to the waste (including pictures, videos tours).	2 3 4	
Invest in community groups and social enterprises, training and volunteer attraction to <b>continue to empower the community to transition</b> to a circular economy.	1 2 3	
<b>Communicate local circular economy outcomes</b> to the community, promoting and celebrating the combined community effort e.g., recycling volumes, landfill volumes avoided, new products created.	2 3 4 5	
<b>Engage with industry and manufacturers to increase the percentage of recycled materials</b> used and include the lifespan of the product on its packaging.	1 3 4	
Expand product stewardship programs to <b>incentivise manufacturers or resellers of consumer products to take back products</b> , providing an end of product service that includes repair, collection, and recycling.	2 3 4	
<b>Support existing product stewardships</b> programs to encourage community uptake and use.	2 3 4	

## Behaviour change (industry and consumers) continued

**Incentivise the use of the Australian Recycling Label** for products sold and supplied within the Australian market to support the consumer to dispose and recycle the product appropriately.

1 2 3 4



Partner with Solar Victoria and DELWP Energy to **support businesses manage costs and emissions from energy**.

1 2

5



## Legislation, regulations, or standards reform

**Increase the uptake and use of recycled and recyclable materials** within all levels of government through procurement practices and mandating appropriate levels of recyclable material in all projects.

1

4 5



**Develop consistent standards, guidelines, and legislation to encourage product design** and manufacturing to meet circular economy objectives.

1

3 4 5



Advocate for new regulations to **incentivise building developers to design and build homes with end-of-life deconstruction** in mind.

1

4 5



Advocate for legislation changes to **incentivise manufacturers to include the full social, environmental, and economic life cycle** costs on packaging.

1

3 4 5



**Establish new standards to guide manufacturers**, particularly those working with plastic polymers, to select raw or recycled materials that can be easily recycled or repurposed.

1

4 5



## Other key changes including research and development, reskilling, and job training

Undertake **research to understand the infrastructure and processing needs** across different industries to identify cross-industry manufacturing opportunities e.g., co-location of infrastructure.

1 2



Undertake **research into markets with high waste volumes** such as textiles, agricultural plastics, and solar panels or other priority materials, to attract new entrants with minimum volume requirements across a longer term.

1

4



**Develop educational pathways** for young people and those interested in training or retraining to pursue a career in circular economy.

2



**Build on Geelong and Portland's large manufacturing base and invest in research** and development to support a transition to a circular economy.

1 2

4



Undertake **research and invest in the paper, glass, and plastics industry** to increase use of these recyclable materials.

1 2





# Barwon South West today



**434,619**

Current Population (2020)<sup>1</sup>



**\$23.4 billion**

Gross Regional Product (2020)<sup>2</sup>



**43,554 tonnes**

Kerbside Recycling Collected (2019-20)<sup>3</sup>

## Barwon



**330,372**

Current Population (2020)<sup>1</sup>



**\$17.6 billion**

Gross Regional Product (2020)<sup>2</sup>



**34,405 tonnes**

Kerbside Recycling Collected (2019-20)<sup>3</sup>

## Great South Coast



**104,247**

Current Population (2020)<sup>1</sup>



**\$5.8 billion**

Gross Regional Product (2020)<sup>2</sup>



**9,149 tonnes**

Kerbside Recycling Collected (2019-20)<sup>3</sup>

<sup>1</sup> Australian Bureau of Statistics ([abs.gov.au](https://abs.gov.au))

<sup>2</sup> Regional Economic Development Strategies (REDS) – Regional Development Victoria ([rdv.vic.gov.au](https://rdv.vic.gov.au))

<sup>3</sup> Victorian Local Government Area Survey – Sustainability Victoria ([sustainability.vic.gov.au](https://sustainability.vic.gov.au))

# Barwon South West region

Barwon South West's circular economy aspirations and priorities were developed with a local understanding of the region's strengths and challenges. The region's representatives considered 'where we are today' as a region, before projecting forward to 'where we want to be' in 2030 and beyond.

The process identified key strengths within the Barwon South West region – unique characteristics that provide the region with a base from which to consider the circular economy priorities and work towards their aspirations for 2030.

Understanding the region's size and diversity, it has been split into two major sub-regions: Barwon and the Great South Coast.

The Barwon sub region's relatively large and concentrated population, and proximity to Melbourne's metro areas were considered strengths, noting the volume of recycled and reused material available, well developed transport infrastructure and existing regional partnerships and collaborations.

The Great South Coast sub region's diversity of industry was highlighted, along with strong transport connections, space for industrial development and current circular economy projects already underway.

For in-depth economic analysis of the region, refer to Victoria's [Regional Economic Development Strategies \(REDS\)](#).

## Strengths:

### Barwon sub region

- **Size of the population and current household mix**, making it suitable for trialling projects due to the volume of waste stream availability.
- **Networks and existing collaborations** between local government and Deakin University; CSIRO and Deakin University and G21 Alliance and Victoria Cleantech Cluster.
- **Business diversity which already generates a broad range of recoverable resources** and presents an opportunity for use in recycled products and materials.
- **High availability of brown-and greenfield land and transport infrastructure** and connections.
- **New technologies to recover waste streams** that have been difficult to sort and process (plastic and e-waste included).

### Great South Coast sub region

- **Diversity of industry** in the region: agriculture, renewable energy, food processing and education.
- **Population size and land features:** deep aquifer and space for industrial development.
- **Current projects and the opportunity to build on these projects**, e.g., BioGrow in Colac, demonstrations across the SouthWest Victoria Alliance.
- **Proximity to South Australia** and strong transport connections.
- **Renewable energy sector** and potential to co locate collection services for solar panels and materials used.

# Barwon South West in 2030



**505,556**

Projected Population (2031)<sup>4</sup>



**16% increase**

Projected percentage change (2021 to 2031)

## Barwon



**398,772**

Projected Population (2031)<sup>4</sup>



**21% increase**

Projected percentage change  
(2021 to 2031)

## Great South Coast



**106,784**

Projected Population (2031)<sup>4</sup>



**2% increase**

Projected percentage change  
(2021 to 2031)

<sup>4</sup> Victoria in Future ([planning.vic.gov.au](https://planning.vic.gov.au))



In developing Barwon South West's circular economy aspirations for 2030, as well as studying the region's strengths, the region's challenges were also considered. The region's circular economy priorities were developed to mitigate, or in consideration of, these challenges.

The closure of the Drysdale landfill in 7-10 years is considered a key challenge for Barwon, as well as low engagement with the circular economy system, low volumes of some material streams, and uncertain market conditions.

The Great South Coast is particularly challenged by the size of the sub-region and accessibility to infrastructure, with associated challenges of availability of staff, including industrial workforce, as well as difficult market conditions and lack of business continuity.

By 2030, the Barwon South West region is projected to be home to 505,000 people, increasing by 16 per cent from 2021. This projected population increase is weighted heavily to the Barwon sub region with a 21 per cent increase, whilst the Great South Coast is projected to increase 2 per cent.

Population increase in certain areas is expected to lead to higher rates of waste and recyclable materials being generated, with increased demand for sorting, processing and storage infrastructure, or pressure on regional roads if this recyclable material is transported outside the region.

Where population is not expected to increase, volumes may continue to not require household collection, presenting a challenge for local councils and industry aiming to divert materials from landfill.

For in-depth economic analysis of the region, refer to Victoria's [Regional Economic Development Strategies \(REDS\)](#).

## Challenges:

### Barwon sub region

- **Lack of community involvement and participation** in circular economy system and managing this with a growing population.
- **Low volumes** of some waste streams.
- **Closure of Drysdale landfill** (in seven-to-10 years) placing pressure on the region to recover resources from landfill.
- **Uncertain market conditions:** competition for feedstock, instability of end markets, dominance by larger operators and waste export bans discouraging investment.
- **Funding cycles differ local councils**, making it difficult for industry and markets to warrant commercial investment.

### Great South Coast sub region

- **Large size of the geographical area and spread of populations;** unique difficulties in providing services and advancing circular economy outcomes.
- **Cost of accessing local processing facilities** is, in some instances, greater than transporting to larger facilities in Melbourne.
- **Limited industrial workforce** and availability of staff is already challenged.
- **Market conditions and restrictions:** lack of control over processing and location of product to commercial providers.
- **Lack of business continuity** plans in place, existing monopolies.
- **Restrictive land-use planning** (proximity to residential areas or environmentally sensitive areas).
- **Climate impacts** on local industries, e.g., dairy and impact on volume.


















































# Everyone has a role to play in a circular economy

A circular economy is a collective responsibility requiring shared involvement, commitment, and action.

The table below highlights the various stakeholders involved in Barwon South West's circular economy and the important role/s that can be played by each.



Introduce legislation, policy, and standards to support the circular economy system										
Collaborate, design and develop market ready products, packaging, and systems that eliminate waste and pollution and support natural processes										
Undertake research to understand stakeholder needs to support circular economy system										
Plan for circular economy infrastructure										
Provide funding opportunities to encourage investment in infrastructure, services, and programs										
Preference use of reusable or recycled products, products that support natural processes, and recycled materials										
Educate households, businesses, and commercial operators										
Support and participate in share economy and repurposing services										
Collect, sort, and manage recovered material and waste										
Participate in material recovery process										
Share data and information about collected waste, including material types and volumes										



## How this plan can be used

The RCEP is to be used as a resource for all in the Barwon South West region to work together toward creating a sustainable and thriving economy.

### Some potential uses could include:

#### Local Councils in the region

- As an input into strategic waste management planning.
- To guide future procurement and purchasing
- To inform community education programs.
- To promote collaboration across local government areas, particularly in regional and rural areas where lower material volumes and reuse opportunities benefit from a regionally coordinated approach to be viable.
- To enter collaborative projects with other agencies, private businesses and research institutions.
- As a reference for future waste management community consultation programs and education programs
- To consider alongside the Regional Economic Development Strategies (REDS) for economic opportunities for circular economy in the region.
- To support applications for funding.

#### Researchers and educators (e.g., university sector, private researchers)

- To inform future areas of research.
- To inform education programs.
- To support applications for funding and proposals for the provision of goods and services.

#### Commercial and industrial operators and industry associations (e.g., designers, product manufacturers)

- To disseminate information and educate industry and consumers.
- To encourage private investment.
- To support the development of feasibility studies for new industry opportunities.
- To inform future plant expansion and re-use opportunities.
- To support applications for funding and proposals for the provision of goods and services.

## Water Industry

- To support applications for funding.
- To support advocacy for regulations or legislation.
- To inform future research, such as between water industry, local government, and the university sector.

## Businesses and business associations (businesses operating in the region, or their representative bodies)

- To identify potential end use markets.
- To support business case development.
- To support applications for funding and proposals for the provision of goods and services.

## Social enterprises and incorporated committees (not-for-profit organisations)

- To understand the role/s that social enterprises could have in the circular economy and inform strategic planning.
- To inform education programs.
- To support applications for funding and proposals for the provision of goods and services.

## Residential community/consumer

- To understand Barwon South West's circular economy aspirations and priorities.
- To understand the role/s that individuals could have in the circular economy.
- To support applications for funding

## The waste and resource recovery industry (e.g., material recovery facility operators)

- To identify potential waste management investment opportunities.
- To measure region specific information and potential levels of service strategies.
- To support applications for funding and proposals for the provision of goods and services.

## Victorian Government

- As an input into policy planning, including the 30-year infrastructure program, the Victorian Recycling Infrastructure Plan (VRIP).
- To inform the design and implementation of funding programs, including the Regional Recycling Fund Round 2.
- As an input into Recycling Victoria's work program for circular economy outcomes in regional Victoria.
- As an input into Sustainability Victoria's work program for circular economy outcomes in regional Victoria.
- To inform education programs, such as through Sustainability Victoria.

## Federal Government

- To influence product stewardship across Australia.
- To inform design and implementation of national waste and recycling funding programs.
- To harmonise any future national circular economy legislation.

## Where to from here?

The Department of Environment, Land, Water and Planning (DELWP) is the custodian of the RCEPs.

The RCEPs will be used as a valuable resource for the Victorian Government's future circular economy planning.

All readers are encouraged to consider the RCEPs within their own contexts and spheres of influence as they transition to a regional circular economy.

For more information about Victoria's circular economy plans and progress, see [vic.gov.au/building-victorias-circular-economy](https://www.vic.gov.au/building-victorias-circular-economy).





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