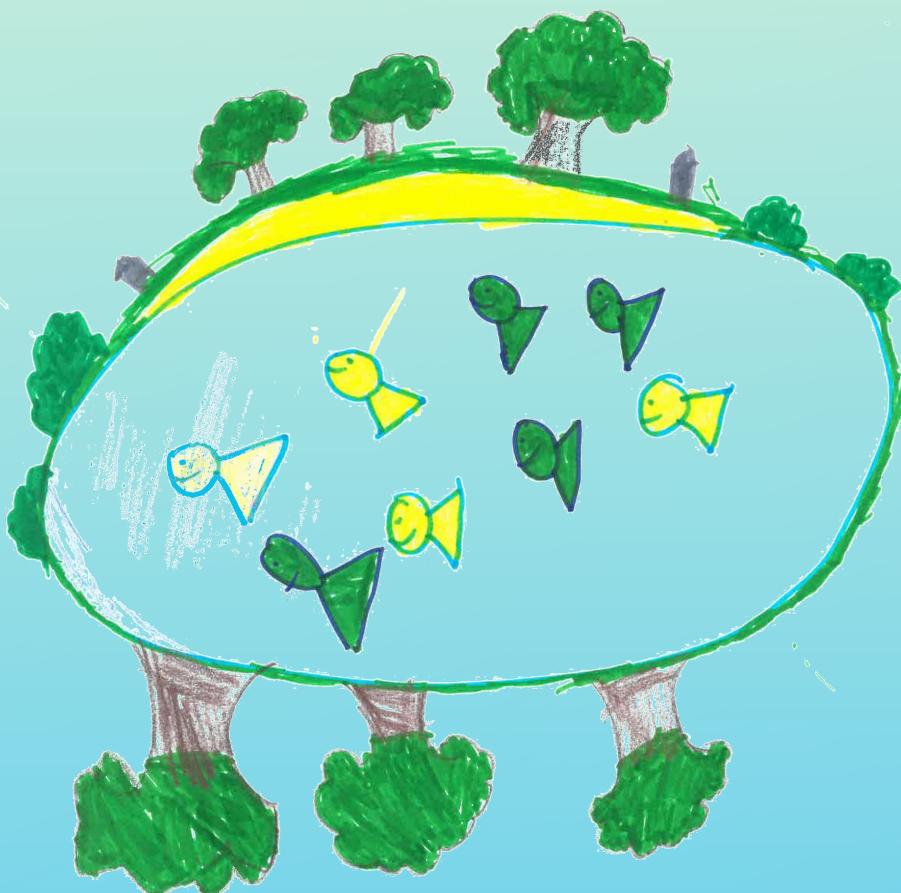


Berri Barmera Council Environmental Management and Sustainability Strategy



Our Environmental and Sustainability Vision for the Region

To lead adaptive environmental management that **supports** sustainable use of natural resources, **protects** and **enhances** our environment and lifestyle, and **stimulates** environmentally conscious investment for the benefit of current and future generations.

Acknowledgement of country

Berri Barmera Council acknowledges the First Peoples of the River Murray and Mallee - the Ngaiawang, Ngawait, Nganguruku, Erawirung, Ngintait, Ngaralte, and Ngarkat peoples – as the traditional custodians of our region. The First Peoples of the River Murray and Mallee Region are recognised as native title holders of approximately 260 square kilometres of land and waters in the Riverland, South Australia.

Berri Barmera Council acknowledges and respects the First Peoples' cultural beliefs, and values their past, present and ongoing connection to the lands and waters of our region.

Other Acknowledgements

The artwork throughout the strategy has been supplied by the students from the Barmera Primary School

Version 5 | 8 July 2020

This strategy has been prepared for Berri Barmera Council by Strategic Matters: *people + planning*

Adopted by Council – 28 July 2020



strategic matters
people + planning

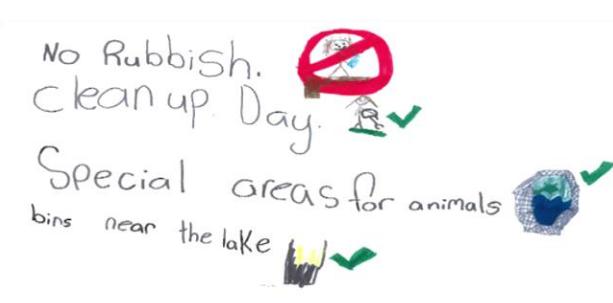
ASPIRATIONS FOR THE FUTURE:

Comments from Glossop High School students

- Energy efficiency as technology is becoming more and more prevalent in society
- water waste because water is a limited resource, we need to take care before it's too late
- Waste management and reduction is needed not just in the Berri Barmera council but across the whole region of Australia. Waste is causing this world to be polluted.
- Plant more trees! Several organisations have done this and it's a good way to improve our environment.
- Visit schools and businesses to see what they are doing and how to improve them. Have community meetings with speakers from the government.
- Changing the way food businesses use packaging. Replace the plastic with something that easily breaks down.
- Because global warming is happening and it's not stopping, everyone needs to help out somehow



STOPPING
RUBBISH



Message from the Mayor

At the beginning of 2019, Berri Barmera Council actively moved to establish a Section 41 Committee to preside over the development of our inaugural Environmental Management and Sustainability Strategy. As a council we recognise the importance of incorporating responsible environmental practices across our organisation, particularly as we move into a global period of resource shortages, rising energy demands and new and emerging technologies.

This document has been written to align with the United Nation's Sustainable Development Goals. It will assist us to understand and adopt future environmental trends, while looking after current communities and future generations.

There are many functions undertaken by a council that have an environmental impact. These include town planning, built design, tree planting and urban landscaping, waste management, recycling and repurposing, stormwater management, irrigation to public lands, reducing carbon emissions, connecting transport planning, and food gardens. Each of these activities provides the opportunity to strengthen the sustainability of our region.

The Environmental Management and Sustainability Strategy has been framed in connection with Council's Strategic Plan, incorporating stakeholder engagement and input from the Section 41: Environment and Sustainability Committee. The Strategy outlines a vision for the next five years, a vision in which Berri Barmera is a proactive, innovative and environmentally sustainable council.

We invite our community, stakeholders and businesses to join us to create a future marked by lower environmental impact, enhanced regional innovation and investment, and a commitment to sustainable living.

I have much pleasure in supporting this inaugural document of Council.

*Mayor Peter Hunt
Berri Barmera Council*

Message from the Environmental Advisory Committee

The Environmental Management and Sustainability Strategy 2020 - 2025 is a key document designed to guide Council's decision making and delivery of services and programs. It supports the Berri Barmera Community Strategic Plan 2020 - 2025 and acknowledges that a healthy environment is required for community prosperity and health.

As a region we recognise the need to plan for the future through investment in infrastructure and facilities, enhancing water supply, planning for changing environmental conditions, improving transport and focusing on creating local systems that support and secure the lifestyles, environment and businesses within our Council area.

This Strategy will guide us in reaching these aims.

Together with input from stakeholders, we have developed this Strategy to inform environmental practices within Council's operating activities and planning. The development of the Strategy has been influenced by both the United Nation's 'Sustainable Development Goals' and the principles of 'One Planet Living':

- 'Sustainable Development Goals' call for *concerted efforts towards building an inclusive, sustainable and resilient future for people and planet.*
- 'One Planet Living Principles' are designed to support businesses in developing and transforming operations, supply chains, policies and procedures for business. These principles include local and sustainable food, sustainable transport, land use and wildlife, zero waste, sustainable water and zero carbon.

The Strategy addresses current and emerging environmental issues while setting realistic actions to support our current community and future generations. It has been crafted around three priority areas, each underpinned by specific objectives, actions and measures of success:

1. Healthy Ecosystems
2. Quality Lifestyle
3. Regional prosperity

I thank the many individuals who have been involved in the development of this Strategy including stakeholder and community members, business and environmental leaders, school students, key Council staff and members of the Environment and Sustainability Committee. In particular, I acknowledge both the Glossop High school and Barmera Primary school students and staff who were valuable resources for the committee.

We look forward to working with you to protect and enhance our Berri Barmera environment.

*Councillor Mike Fuller
Chair of the Section 41 Environment and Sustainability Committee*

Executive Summary

The Strategic connections

This Strategy provides a framework for Berri Barmera Council to lead by example in protecting and enhancing the health of our local environment. Council can make valuable contributions to environmental management and sustainability through waste reduction, efficiencies in water, energy and resource use, the creation of security of supplies, planning and infrastructure design, and through green / whole of life purchasing decisions.

The Strategy also provides a framework for Council to lead and support environmental improvements, investments and decisions through partnerships and collaboration with community and business stakeholders. It is a natural connection point for Federal and State Government initiatives such as [A National Strategy for Electric Vehicles](#), and [New direction for a climate smart South Australia](#).

The Strategy is deliberately framed to connect with the three Goals outlined in the Berri Barmera's Strategic Community Plan. In it, the language of the Goals has been modified to align with the Environmental Management and Sustainability Strategy's needs, resulting in three Pillars (P):

- Natural Environment ⇒ P1. Healthy Ecosystems
- Lifestyle ⇒ P2. Quality Lifestyle
- Business ⇒ P3. Regional Prosperity

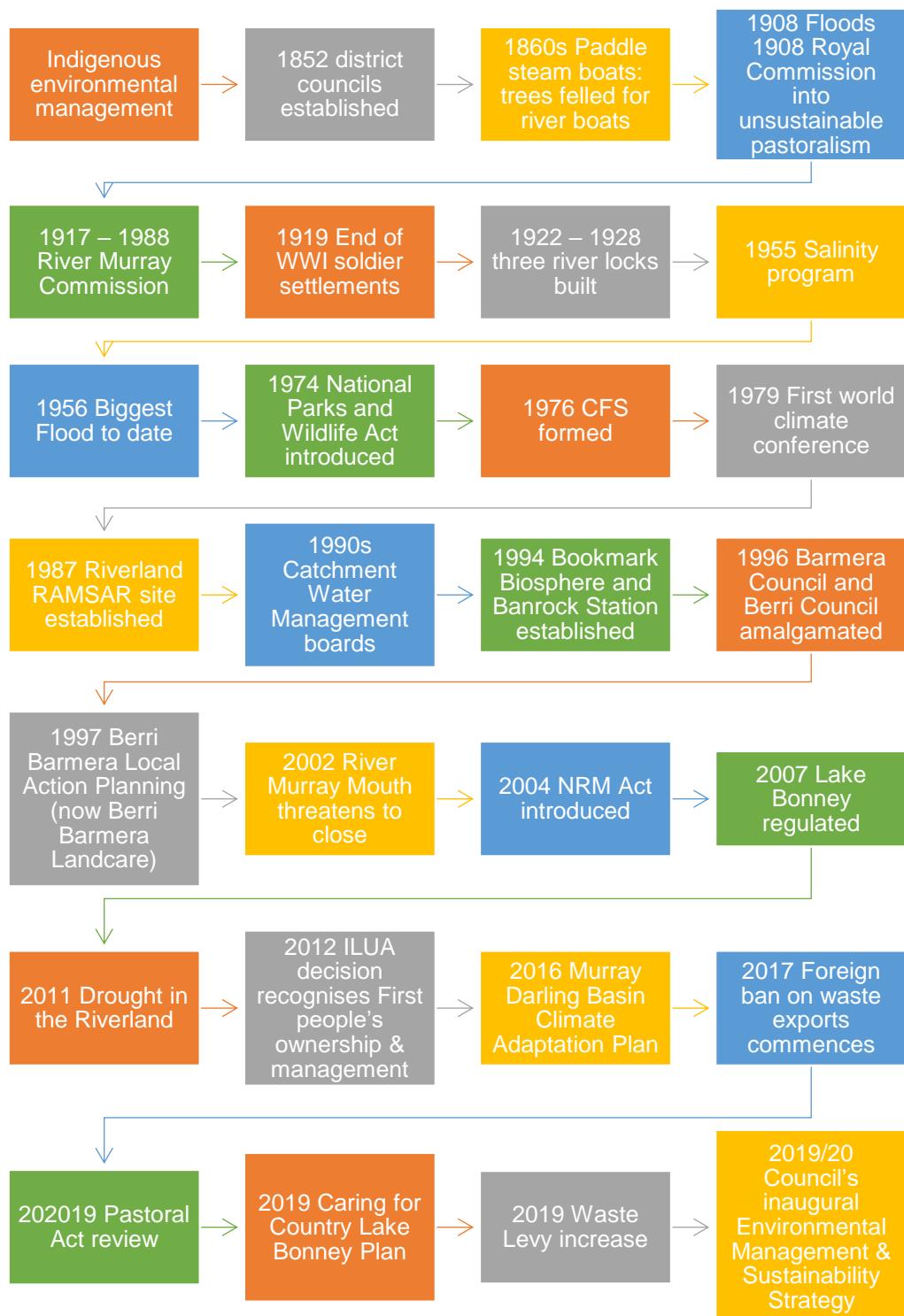
Each of the three Pillars is underpinned by key objectives, all of which connect to specific actions and roles for Council in driving implementation.

The range of proposed actions provides a clear articulation of the role of Council, the involvement of other key stakeholders, and the timing of proposed activity.

P1. HEALTHY ECOSYSTEMS	P2. QUALITY LIFESTYLE	P3. REGIONAL PROSPERITY
1.1 Sustainable water supply and management 1.2 Healthy biodiversity systems 1.3 Climate change readiness	2.1 Green towns and built form 2.2 Sustainable consumption patterns 2.3 Zero waste 2.4 Planned and environmentally (sustainable) tourism	3.1 Energy security and low carbon 3.2 Productive horticulture 3.3 Connected transport and infrastructure

Timeline ... key items in the region

The Strategy provides a concise timeline of key environmental moments and events shaping the history of the Berri Barmera region until the present day. This timeline was collaboratively produced as part of the community engagement process that informed the Strategy's development. It is not intended to be comprehensive but is presented here to put the current Strategy within a historical perspective.



Challenges facing the region:

Environmental assets sustain Berri Barmera's health, lifestyles and livelihoods, and will be increasingly affected by changing climate conditions and water availability. Council will face these challenges by building regional resilience through a proactive approach to climate change adaptation and natural hazard mitigation.

CHALLENGE	LIKELY IMPACT
<ul style="list-style-type: none"> • Decrease in river stream flow and quality of the River Murray • Decreased precipitation over time • Increase in fire events • Hotter and drier conditions • Increased energy use and cost • Threats to food production • More stringent export markets 	<ul style="list-style-type: none"> • Declining tourism • Challenging horticultural growing conditions • Pressure on natural living systems • Pressure on liveability • Loss of habitat and species loss (flora and fauna) • Increasing insurance premiums and liability issues relating to climate change • Need to develop new markets and processes
OPPORTUNITY	LIKELY IMPACT
<ul style="list-style-type: none"> • Circular economy businesses in waste and water • Built form designed for hotter, drier conditions • Creation of urban heat sinks via green infrastructure that absorbs heat from built form • Prioritise energy efficiency and renewable energy generation and use • Increase water security through reuse and management • Adapting to climate change impacts 	<ul style="list-style-type: none"> • Reduce greenhouse gas emissions • Restore habitat and local biodiversity • Retain and enhance tourism • Reconnect people to nature and natural systems • Increase energy self-sufficiency, generation and supply • Attract investment and grow the job market • Multiply benefits for the community (health and wellbeing, lower energy bills, lower maintenance cost)

Success will be measured by:

- Protection and restoration of biodiversity and natural habitats
- Creation of bioregional sustainable economies built around renewable products
- Reduction of waste, reusing where possible and ultimately sending zero waste to landfill
- Increase in energy efficient buildings
- Greening of urban landscapes
- Monitoring, Evaluation, Reporting and Improvement Plan

More specifically, Council can utilise data and mapping tools to monitor and report on progress:

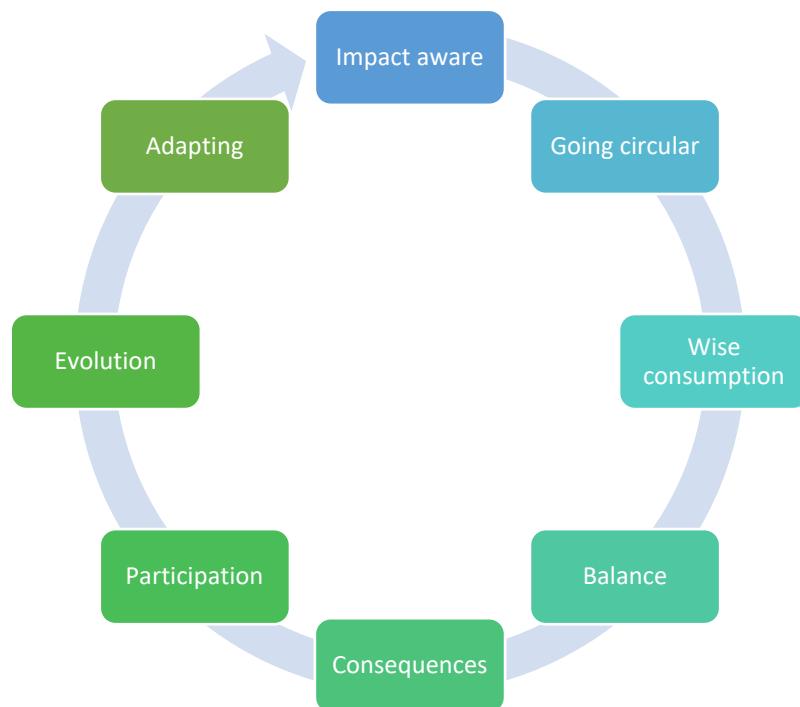
- Local stormwater and wastewater annual reuse
- A decrease in greenhouse gas emissions (Council generated)
- A decrease in energy consumption per capita
- An increase in renewable energy as percentage total district wide consumption or per capita consumption
- The capacity of locally installed renewable energy
- The percent of tree canopy cover in public realm and in total district both public and private
- Carbon credits
- Native Vegetation clearance credit
- Carbon capturing
- An increase in waste diverted from landfill per capita and overall decrease in waste generated per capita
- Area of habitat protected and or restored-use of aerial imagery and DEW data taken periodically to illustrate loss / gain-particularly in native vegetation but also includes all types

Guiding principles

The Strategy is also guided by eight (8) Principles as developed in consultation with community, environmental and business stakeholders.

The Principles have been created to guide the behaviours and practices through which the Strategy will take effect. They are:

1. Impact aware
 - Reducing negative environmental impacts
2. Going circular
 - Prioritising robust 'circular economy' practices
3. Wise consumption
 - Effective and efficient use of resources
4. Balance
 - Balancing environmental and economic needs
5. Consequences
 - Responsibility in all our decisions (consequences factored in and long-term impacts considered)
6. Participation
 - Community and business involvement in decisions and actions
7. Evolution
 - Continuous improvement and implementation of adaption philosophy
8. Adapting
 - Positioning and preparing for the impacts of climate change



A **circular economy** is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life. <http://www.wrap.org.uk/about-us/about/wrap-and-circular-economy>

Our role

Environmental activity and planning in Berri Barmera will rely upon collaboration between Council, State and Federal Governments, communities and business stakeholders. As such, Council will play a variety of roles in leading, supporting and advocating for environmental action.

Throughout this Strategy, the role of Council in undertaking key actions will be specified using the following definitions:

Leader	Council leading the community, modelling activity, resource management, and accountable governance
Service Provider	Council directly delivering services, providing assets or managing community funds
Partner	Council contributing funds and or resources and working collaboratively with others to deliver a service or initiative that improves economic, community and environmental quality of life
Regulator	Council fulfilling a particular role as determined by legislation
Advocate	Council is an informed and compelling voice making representation on behalf of the community

Pillar 1: Healthy Ecosystems

Council's **Healthy Ecosystems** ambitions are to achieve:

- Sustainable water supply and management
- Healthy biodiversity systems
- Climate change readiness

P1. HEALTHY ECOSYSTEMS					
Objectives	Desired outcome	Actions	Timing (Indicative)	Council role	Who else
Sustainable water supply and management	Increase water security and water quality through capturing, retaining and recycling water	Aspire to all parks and gardens being watered with recycled / reclaimed water subject to suitability and availability Encourage where not mandatory all households (new and old) capture of water on site via rainwater tanks or onsite reuse for gardens	ongoing 2020	Leader, Advocate, Partner,	Community Developers State Government Local suppliers Water Sensitive SA
		All new housing and commercial developments to have Water Sensitive Urban Design (WSUD) practices throughout, effectively capturing water on site, funnelling it to gardens and slowing its release from sites	2021+	Leader, Advocate, Partner, Regulator	State Government, Landscape Board, DEW, SA Water, Developers
	A clear vision for water allocation and ecological flows along the Murray River	Define what the local community wants to see as a future for the region. Collectively convey message to the State and Federal Government	2021	Advocate, Partner, Leader	MD Basin, DEW, community, RDA, G3 councils, MRLGA
Healthy biodiversity systems	Increased habitats and healthy naturally occurring landscapes that support wildlife	Engage in large-scale tree planting and habitat restoration programs Recreate localised habitat for local species Plant road median islands with provenance plants and flowering plants that attract insects and small creatures back to the urban realm	2022-25 2020+ 2020+	Leader, Partner, Advocate	DEW, Trees for Life, Schools and Community groups, urban farming groups, Berri Barmera Landcare, NRM Board

P1. HEALTHY ECOSYSTEMS					
Objectives	Desired outcome	Actions	Timing (Indicative)	Council role	Who else
	Biodiversity outcomes achieved across the council	Incorporation of environmental protection zones in planning policy. An Environmental Zones is an area with ecological, scientific, cultural, aesthetic, scenic or conservation values/attributes.	2020	Partner, Leader, Advocate	DEW, Landscape Board, CFS, Trees for Life, Berri Barmera Landcare
	Council and community is prepared for potential impacts from carp removal	Council monitor and responds accordingly to Federal Government National Carp Control Plan	ongoing	Advocate	DEW, Federal Government, MRLGA
Climate change readiness	Council transitions from fossil fuel to renewable energy	Incorporate climate change science into decision making for assets, investment and infrastructure	2021+		RDA, industry, private sector, community NGOs, Federal and State Government, NRM Board
	Council reduces its greenhouse gas emissions	Conduct a comprehensive climate change governance and risk assessment for council infrastructure.	2021	Leader, Advocate, Partner, Service Provider	LGA insurers, MRLGA, expert consultants
	Community is better prepared for climate change	Build up education, volunteerism and hazard training program across more communities	2021+	Leader, Advocate, Partner, Service Provider	Traditional landowners, State Government, CFS, CIT, MDBA, MRLGA, G3 Councils, Berri Barmera Landcare
	Prepare for natural disasters	Collaborate with other agencies to build a stronger connection with burning and flood planning Collaborate with other agencies to prepare for and respond to droughts Develop, review and assess a local disaster management plan Identify and coordinate disaster resources Provide community education around disaster preparedness	ZEST timeframe?	Partner, Advocate,	SES, RMMAC (First Peoples), CFS, Zone Emergency Management

Pillar 2: Quality Lifestyle

Council's **Lifestyle** ambitions are to achieve:

- Green towns and built form
- Sustainable consumption patterns
- Zero waste
- Planned and environmentally regenerative tourism

P2. QUALITY LIFESTYLE					
Objectives	Desired outcome	Actions	Timing (Indicative)	Council role	Who else
Green towns and built form	Towns that are climate resilient, liveable and affordable	Review and update building codes and planning regulations to mandate climate resilience in new and retrofitted buildings (<u>NABERS</u> six star rating minimum and or <u>Passive House</u> standards) Encourage permeable pavements, rainwater tanks and planting on residential blocks Use permeable pavement to assist with water retention/capture and soil moisture content Encourage the use of green roofs, walls and facades	2022 2020+ 2020+	Advocate and partner	Federal / State Government, Developers
	Aesthetically pleasing towns that provide cooling (heat sinks) in the public realm	Develop a tree scape plan that focuses on heat sinks – trees, greenery, and grassed areas Develop streetscapes with shade bearing trees	2021 2021+	Leader and partner	
		Increase Water Sensitive Urban Design (WSUD) in Council infrastructure and practices, including rain gardens and more permeable pavements	2021+	Leader and partner	Berri Barmera Landcare
	Biodiversity thriving in our townships	Select street trees that attract native birds and insects and promote natural habitat mimicry Plant local native (provenance) species in public gardens	2020 ongoing	Leader and partner	Berri Barmera Landcare

P2. QUALITY LIFESTYLE					
Objectives	Desired outcome	Actions	Timing (Indicative)	Council role	Who else
Sustainable consumption patterns	Local consumption patterns are sustainable, based on local produce and have low carbon miles	Council to support creation of community food gardens and growing produce at home Encourage access to local produce Carbon storage through cropping	2022	Advocate	Supermarkets, growers and suppliers of home garden equipment
	Reduce tonnes of waste going to landfill	Return a useable product to the community from kerbside green waste Educate the community on how to recycle Council to support and advocate businesses that focus on new modes of sharing, buy-backs etc Regional Waste Strategy which will include an audit of current regional waste management service provisions with a view to identifying collaboration opportunities	2021 2020+ 2022	Partner, Leader, Advocate, Service Provider	Cleanaway, KESAB, Green Industries SA (GISA), service providers e.g.: Jefferies; Berri Barmera Landcare, MRLGA, NRM Education Team
	Increase resource efficiency of Council's core activity	Include principles of sustainability to councils Procurement Policy	2021	Leader, Service Provider	LGA Procurement
	Alternate less fossil fuel-dependent forms of transport for domestic and commercial use	Develop a planned program for eliminating vehicular reliance on fossil fuel, including: <ul style="list-style-type: none">- Introduction of more charging stations for electric cars and trucks- Council to increase electric cars and trucks in the fleet- Working with the Federal and State governments to create tax incentives for electric vehicles- Moving to hydrogen fuel cell technology	2020 2020+ 2021 2023	Partner, Advocate, Leader, Service Provider	Manufacturers, Government – all tiers, finance sector, transport sector, Universities

P2. QUALITY LIFESTYLE					
Objectives	Desired outcome	Actions	Timing (Indicative)	Council role	Who else
Zero waste	Create new products from waste e.g.: food to pharmaceuticals or waste to energy (including farms, building sites and commercial properties)	Develop a 'going circular' policy for Council and the region that focuses on eliminating waste and continually using / repurposing resources retaining them in use for longer		Leader, Partner, Advocate and Service Provider	LGA, MRLGA, G3 councils, RDA, architects, engineers, Universities, planners,
	All Council asset and building projects comply with a <i>Life Cycle and Product Integrity Procurement Policy</i>	Council to develop a <i>Life Cycle and Product Integrity Procurement Policy</i> that factors in: <ul style="list-style-type: none"> - the recovery or disposal costs of buildings and assets - an analysis of recovered / recycled material to be used 	2021/22	Regulator, Service Provider, Leader, Partner, Advocate	Green Industries SA (GISA), water management facilities, Australian Building Council, MRLGA and LGA
	Council led community clean up event	Introduce a 'Beautiful Berri Barmera' day on which clean-up and environmental education activities are held and promoted Include KESAB and utilise their "adopt a patch" program	2021		Berri Barmera Landcare; Barmera Central; Service Clubs, Schools, Berri and Barmera Improvement Committees
		Invest in Research and Development to develop new processes that absorb waste streams and/or by-products and incentivise businesses to reduce single use plastic	2020/21	Advocate	State and Commonwealth Governments
	Encourage community zero waste initiatives	Stimulate/swap/share/borrow opportunities within the community	2021	Leader	Council, Libraries, Services clubs, general community

P2. QUALITY LIFESTYLE					
Objectives	Desired outcome	Actions	Timing (Indicative)	Council role	Who else
Planned and environmentally sustainable tourism	Increase tourism numbers	<p>Create inviting space and places that protect and support our natural resources</p> <p>Connect areas with amenities including public Wi-Fi and electric car re-charging outlets</p> <p>Develop a “way finding” Master Plan that makes it easy for people to visit the council area</p>	Ongoing LBCFCMP timing 2022+ 2022		DEW, Destination Riverland, Traditional Landowners, VICs, RDA
	Demarcate tourism and non-tourism sites for conservation and amenity benefits	<p>Provide high quality camping, driving and walking infrastructure and clear signage, located together with prominent attractions</p> <p>Deploy Rangers to monitor areas</p>	LBCFCMP timeframe 2020-22 As above	Service Provider, Partner, Regulator	RMMAC (First Peoples); SATC, DEW, Chamber of Commerce
		Work with others to maintain a strong ‘destination offering’ e.g.: food, wine, trails, camping, boating, self-guided tours, combined with history etc. Link trails with state government’s “Healthy parks -Healthy people” agenda	2022	Leader, Service Provider, Partner	RMMAC (First Peoples); DEW, Destination Riverland, VICs, RDA
	Create a buzz / magnet (new event and attraction) for the Council	Create a new “Showcase” event that links horticulture, tasting and tourism	2023	Leader, Partner	RDA, State Government, horticulture, MRLGA
	Grow nature-based tourism offering	<p>Work with others to develop nature-based tourism products (within National Parks)</p> <p>Establish Aboriginal heritage and culture through interpretative tourism, signage and dedicated place-making</p> <p>Facilitate more accommodation options developed in natural settings</p>	2022+ 2022+ 2022+	Partner, Advocate, Service Provider, Leader	RMMAC (First Peoples); DEW, Destination Riverland, VICs, RDA, GHS

Pillar 3: Regional Prosperity

Council's [Regional Prosperity](#) ambitions are to achieve:

- Energy security and low carbon communities
- Productive and landscape sensitive horticulture
- Connected transport and infrastructure

P3. REGIONAL PROSPERITY					
Objectives	Desired outcome	Actions	Timing (Indicative)	Council role	Who else
<i>Energy security and low carbon communities</i>	Increase self-generated energy	Install solar panels on Council buildings Support emerging renewable energy initiatives and industries (e.g.: hydrogen, and waste to energy)	2020+ ongoing	Partner, Advocate, Leader	Trility, other industry, Energy experts, State Government
	All Council buildings and other facilities to be powered by renewable energy	Undertake review to determine how all Council buildings can use renewable energy (either 100% or partially)	2021	Lead, Partner and Advocate	LGA, Energy retailer, Trility.
	Support community uptake of renewable energy	Council to work with others to bring affordable solar / battery options to the region, to be used both for domestic and commercial properties	2021/22	Leader, Partner, and Service Provider	State and Federal Government, local suppliers and or contractors, the community
	Increase investment in waste to energy	Fund investment, sponsor funding applications for Research and Development for local waste to energy projects	2023		Industry, Federal and State Government
<i>Productive and landscape sensitive horticulture</i>	Waste reduction on farms through the circulation of waste back into production	Develop agricultural / horticultural waste reduction policy supporting zero waste practices for local landowners	2023	Advocate	PIRSA, Universities,
	Sustainable crops	Invest in Research and Development to understand crops best suited to the environment and anticipated conditions (e.g.: wine grapes)	2023	Advocate	PIRSA CCW, Riverland Wines Universities, Wineries, Industry Leaders

P3. REGIONAL PROSPERITY					
Objectives	Desired outcome	Actions	Timing (Indicative)	Council role	Who else
	Planning code promotes and supports right to farm	Farm activities are supported through legislation, including opportunity to value add Halt further progression of irrigation practices on unirrigated land through the planning zone amendments. Support viable and alternative uses for non irrigated land in 'growing' areas	2022 2022	Advocate, Partner and Leader	Almond industry, Grape industry, State Government, CIT, community
	Horticultural practices are supported through planning	Planning codes promote the "right to farm"	2022	Partner, Regulator, Advocate	State Government (DPTI), RDA, MRLGA, PIRSA
	Support produce to market	Creation of protocols to support traceability of local produce	2021	Advocate	State Government (DPTI), RDA, MRLGA, PIRSA, LGA
		Advocate effective trade agreement with State Governments	2021	Advocate	State Government (DTED), RDA, PIRSA
Connected transport and infrastructure	Walking and cycling promoted through design	Walking and cycling infrastructure is integrated across and between townships	2020+ LBCFCMP and Regional Strategy timing	Leader , Partner	G3 Riverland Councils, DEW, State Government
	Durable and cooler roads	Invest in infrastructure that creates cooler and more heat-tolerant roads	2021+	Leader	DPTI