



Environmental Sustainability Strategy and Action Plan

2022-2027

Acknowledgement of Country

We acknowledge the Kurna and Ngadjuri Peoples as the Traditional Owners of the Country that makes up the Light Regional Council. We respect their spiritual relationship to their Country and acknowledge that as Traditional Custodians, their cultural heritage and beliefs are still as important today. We also recognise that their relationship with Country was deeply sustainable, and Council can learn much from their way of life and continuing knowledge.

Further, we acknowledge the impact of European colonisation on the Kurna and Ngadjuri Peoples and their Country. We recognise that our landscapes and water systems have changed. This presents a challenge to us all, incorporating plant and animal species, both native and introduced, and the introduced western land management systems.

Light Regional Council is striving to build meaningful partnerships with First Nations, including through the implementation of this Sustainability Strategy and Action Plan, which identifies the inclusion of Kurna and Ngadjuri bio-cultural knowledge and practise in regional environmental management, particularly biodiversity and water management, as a key opportunity.



Figure 1: Roadside reserves conserve some of the last remaining remnant vegetation in the region

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Background to the Environmental Sustainability Strategy and Action Plan

The natural environment of Light Regional Council supports our lifestyles, livelihoods and the liveability of our Council area. It provides fresh water, clean air, food and shelter and underpins our economy.

Locally, nationally and globally our environment is under pressure. Unsustainable use of resources and non-renewable energy, waste generation and land clearing have led to the degradation of natural and productive landscapes and caused rapid changes in our climate. These threaten the future prosperity of our communities, ecosystems and economy.

Light Regional Council has recognised the role it can play in addressing these challenges. Its desire to contribute to a sustainable future is identified in its strategic vision and Council values.

The actions required to address environmental issues present opportunities for Light Regional Council and its community. Taking action to be more sustainable will improve the natural environment and urban amenity and could boost green industries, the local economy and jobs. Increasing energy efficiency, renewable energy production, resource efficiency and water harvesting and reuse across the region will result in cost savings for Council and the community. Actions to address climate change will increase community resilience to extreme events, help protect our primary production, and increase the adaptive capacity of our local natural ecosystems.

Working towards more sustainable practises is a priority for Light Regional Council.

Sustainability in Light Regional Council

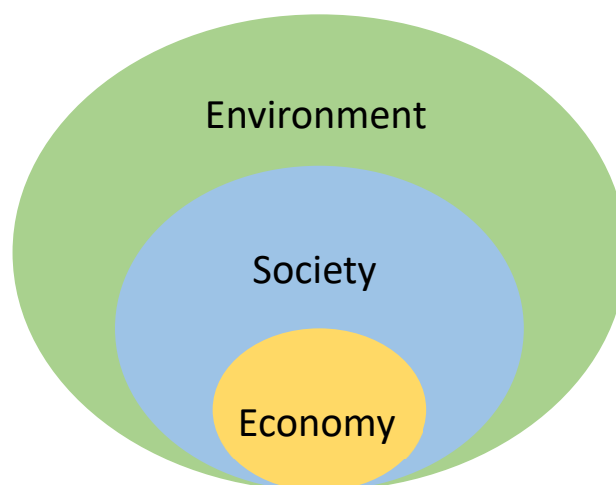
In 1987, the United Nations World Commission on Environment and Development published a report titled *Our Common Future* that called for sustainable economic development – development that meets ‘the needs of the present without compromising the ability of future generations to meet their own needs’.

At Light Regional Council, we use the term sustainability to mean:

the integration of environmental health, social wellbeing and economic vitality to create thriving, healthy, and resilient communities for this generation and generations to come.

This definition acknowledges that sustainability requires consideration of the environment, society (or community) and the economy and requires a balance between these to ensure none suffer because of another.

Being sustainable means thinking about our environment, people and economy in a holistic way and recognising the complex interaction and inter-dependency between them. Being sustainable means thinking about the long term and how what we do now might impact our future.



About this plan

This Environmental Sustainability Strategy and Action Plan is a five-year plan that sets out what Council will do to become more sustainable across their (internal) operations and how they will support their community to do the same. The Strategy and Action Plan promotes an approach to sustainability that is contemporary, pragmatic, progressive, fiscally responsible, and promotes co-benefits.

The Strategy and Action Plan includes a vision, strategies, opportunities and actions with associated targets.



Preparing this plan

Light Regional Council knows that strong collaboration and partnerships are essential to setting and progressing shared sustainability goals that require action beyond Council's direct scope of influence.

This Strategy and Action Plan were developed in consultation with key stakeholders. Workshops and discussions with Council's Sustainability Working Party and the community and partners were held to understand desired outcomes for the Environmental Sustainability Strategy and Action Plan. The workshops supported the development of a shared vision for sustainability, identifying sustainability priorities and opportunities for partnership. Attendees included representatives from local community groups, businesses, industry representatives, funding partners, key government bodies and general members of the community.

The draft Sustainability Strategy was released for public consultation in March 2022. Feedback was provided via an online survey and written submissions were received. Following the consultation period, submissions were collated and feedback used to revise the Sustainability Strategy.

Context

Sustainability is not just an issue for Light Regional Council. Addressing challenges and exploring opportunities for local action in Light Regional Council needs to consider the bigger picture. The actions Light Regional Council takes will be informed and influenced by regional, state, national and global actions, commitments and targets. It is critical that we act locally but think globally.

Light Regional Council's sustainability context

The Light Regional Council area is comprised of a mosaic of agricultural land and remnant vegetation with scattered thriving townships and settlements. Prior to European settlement, the area was covered by woodlands, open scrublands and grasslands. Extensive vegetation clearance has significantly reduced the native vegetation cover across Council and only small pockets of remnant vegetation remain, mostly along roads and waterways (see **Figure 2**).

Light Regional Council contains highly productive agricultural land and includes a significant part of the internationally renowned Barossa Valley wine region. Economic analysis indicates opportunities for future growth in manufacturing, tourism and agriculture among others (Lucid Economics, 2020). Responding to the challenges of climate change and ensuring the sustainable development of these industries will be key to the future of Light Regional Council's economy.

Over the past 15 years, Light Regional Council has experienced sustained population growth, however the rate of growth has declined over the last 5 years. Over the next 10-15 years, the Roseworthy township expansion is expected to house an additional 10,000 people with associated retail and community facilities. This development presents a major opportunity to deliver sustainable development and place Light Regional Council at the forefront of sustainable practise that delivers an amenable and liveable environment.

Light Regional Council's Strategic Plan makes it clear that that the Council is seeking growth. This Environmental Sustainability Strategy will strengthen our credentials, focus and resolve to enable this growth in an environmentally responsible manner.

As a Council, we recognise the challenge of realising sustainable growth and we cannot do this alone. We recognise that the very definition of sustainable population growth is contested and seen as an impossibility by some. As a Council we seek to play our part in learning and evolving towards growth that is as environmentally sustainable as practicable.

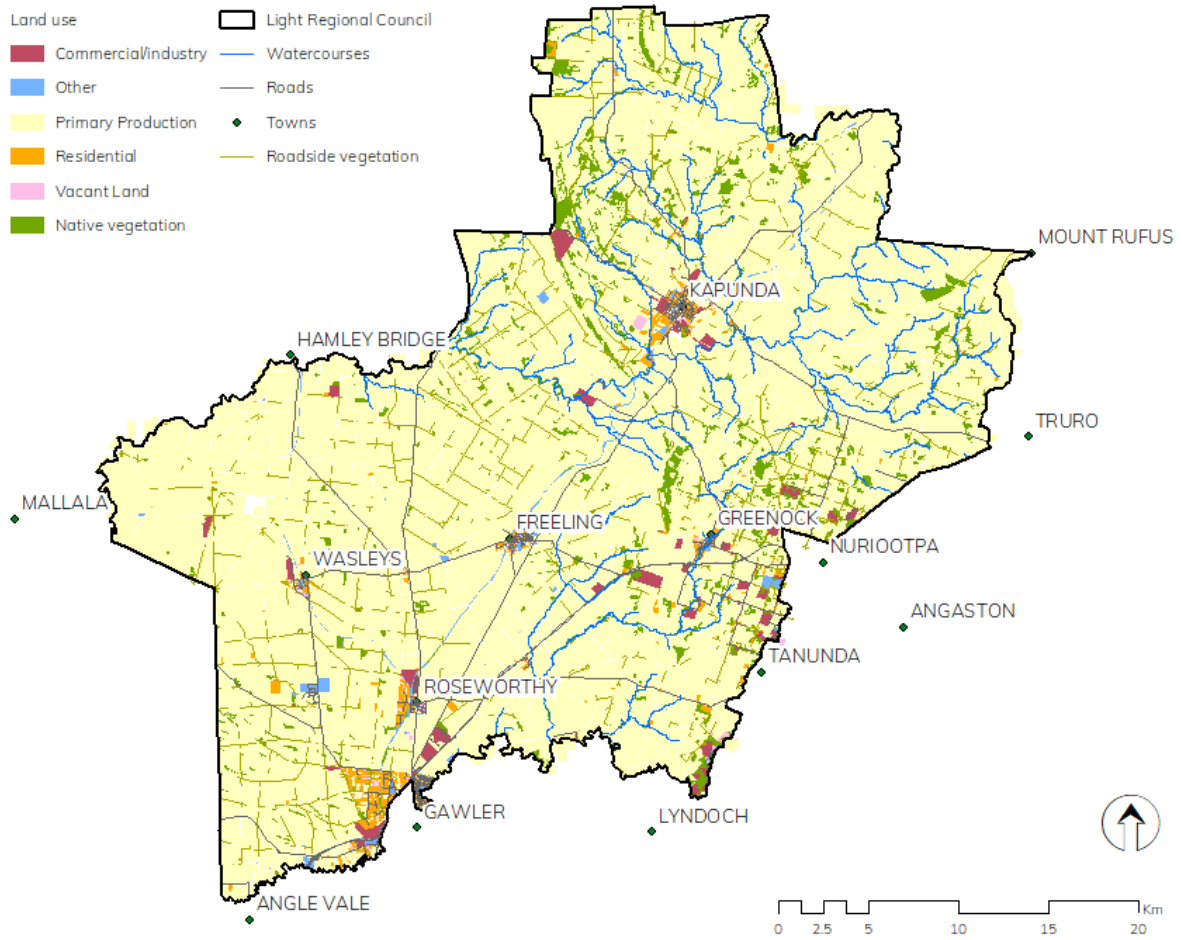


Figure 2: Light Regional Council
 (data source: data.sa.gov.au, LRC)

Policy and regulatory context

Responsibilities of local government in sustainability

Councils have legislated responsibilities for sustainable development identified in the *Local Government Act 1999* which describes the principal roles of a Council to include developing 'its community and resources in a socially just and environmentally sustainable manner'. Further to this, the Act defines the functions of a Council to include to 'manage, develop, protect, restore, enhance and conserve the environment in an ecologically sustainable manner, and to improve amenity'. The Act also describes the principles of Councils to be upheld and observed including to 'seek to facilitate sustainable development and the protection of the environment and to ensure a proper balance within its community between economic, social, environmental and cultural considerations'.

Light Regional Council's policy context

Light Regional Council has a range of existing plans and policies that describe their approach to delivering sustainable outcomes.

Strategic Plan 2021 to 2025

Light Region Council's Strategic Plan describes a vision of 'Respecting the past, partnering with our community, and sustainably creating our future.'

Strategic priorities for the environment described in the Strategic Plan include:

- Comprehensive environmental planning and program delivery with a focus on hazard reduction, preservation of biodiversity, waste reduction, management of resources and innovative adaptation solutions as guided by Council's Sustainability Working Party
- Encouragement of (and investment in) further green technologies e.g. green energy
- Advocating, supporting, and delivering place management and place-making initiatives
- Plan for emergency events in terms of disaster risk reduction, incident support and recovery initiatives

Climate Emergency declaration:

Council declared a Climate Emergency in March 2019. In response to this declaration and the emergence of challenges and opportunities in the waste management and circular economy space, a Sustainability Working Party was established as a committee of Council to focus on the operational and strategic directions for sustainability. These directions include climate change adaptation and greenhouse gas emissions reduction.

Other Council plans and policies

A number of other Council plans and policies have direct connections to sustainability including:

- Economic Development Plan
- Infrastructure and Asset Management Plan
- Tourism Plan
- Annual Business and Long Term Financial Plan
- Annual Reports
- Stormwater Management Plans
- Tree Management Policy
- Waste and Recycling Services Policy
- Roadside Vegetation Management Plan
- Proposed Reconciliation Action Plan

Regional policy context

At a regional level, there are a range of regional plans that outline commitments to sustainability and have been referenced in the preparation of this plan, including:

- Climate Change Adaptation Plan for the RDA Barossa Region
- Northern and Yorke Climate Change Sector Agreement
- Legatus Group Waste and Resource Recovery Strategy
- Barossa Water Allocation Plan
- Northern and Yorke Landscape Plan
- Yorke and Mid North Regional Development Australia Regional Roadmap 2018-28
- Barossa, Light and Lower North Region Open Space, Recreation and Public Realm Strategy
- Barossa Region Extreme Heat Preparation & Response Planning Project

State policy context

The South Australian Government has a range of plans and commitments to enhance sustainability including:

- South Australian Government Climate Change Action Plan 2021–2025
 - A range of climate and energy goals including:
 - At least 50% greenhouse gas emission reduction by 2030 and net zero emissions by 2050
 - 100% net renewable energy generation by 2030
- *Climate Change and Greenhouse Emissions Reduction Act 2007*
 - Sets a target to reduce Statewide greenhouse gas emissions by at least 60% to an amount that is equal to or less than 40% of 1990 levels by 2050.
- South Australia’s Waste Strategy 2020-2025
 - Sets a target of zero avoidable waste to landfill by 2030
- State Landscape Strategy 2022
 - Includes seven priorities for the next ten years, relating to sustainable primary production, soils, water, pest plant and animal management, impact-causing native species, nature conservation and biodiversity and fire, flood and drought recovery
 - Foundational commitments to climate change mitigation and adaption, First Nations participation and community leadership are also included
- Urban Water Directions Statement 2022 – Smart water management in our towns and cities
 - Includes strategies around water security, water in the landscape, flooding and drainage and community resilience and capacity applicable to towns with more than 1000 people
- *Character Preservation (Barossa Valley) Act (2012)* and Environment and Food Production Areas
 - Legislation to protect food producing and natural rural landscapes from urban development and conserve tourism and environmental resources

National policy context

The Australian Government has made several commitments to national action on sustainability:

- Australia’s Long-Term Emissions Reduction Plan 2021
 - Target of net zero emissions by 2050.

- National Waste Policy and Action Plan
 - Targets including reaching 80% average recovery rate from all waste streams by 2030 and phasing out problematic and unnecessary plastics by 2025
- Australia’s Strategy for Nature 2019-2030
 - Goal 1: Connect all Australians with nature
 - Goal 2: Care for nature in all its diversity
 - Goal 3: Share and build knowledge
- National Water Initiative
 - Aims for a nationally compatible, market, regulatory and planning based system of managing surface and groundwater resources for rural and urban use that optimises economic, social and environmental outcomes

Global policy context

Global commitments to sustainability have progressed since the release of *Our Common Future* in 1987. In 1992, more than 178 countries including Australia adopted Agenda 21, a comprehensive plan of action to build a global partnership for sustainable development. Since then, United Nations (UN) Sustainable Development conferences have seen further commitments including the 2015 adoption of the 2030 Agenda for Sustainable Development that describes 17 Sustainable Development Goals (SDGs).

Other global treaties, conventions and agreements that aim for unified environmental action across the world include:

- The Paris Agreement on Climate Change: 195 nations agreed to take action to keep average global temperatures to “well below” a 2°C rise from pre-industrial temperatures, and aimed to limit the increase to 1.5°C. This ambition was strengthened at COP26 by the Glasgow Climate Pact
- The Convention on Biological Diversity: 157 nations including Australia have ratified the convention and its objectives to conserve biological diversity and its sustainable and equitable use

Vision and strategies

This Environmental Sustainability Strategy and Action Plan focuses on actions Light Regional Council can take to enhance sustainability. Recognising that more can be achieved by working together, the strategies and actions explain how Council will work with its partners, businesses, industries and community to support them to take action for a more environmentally sustainable future.

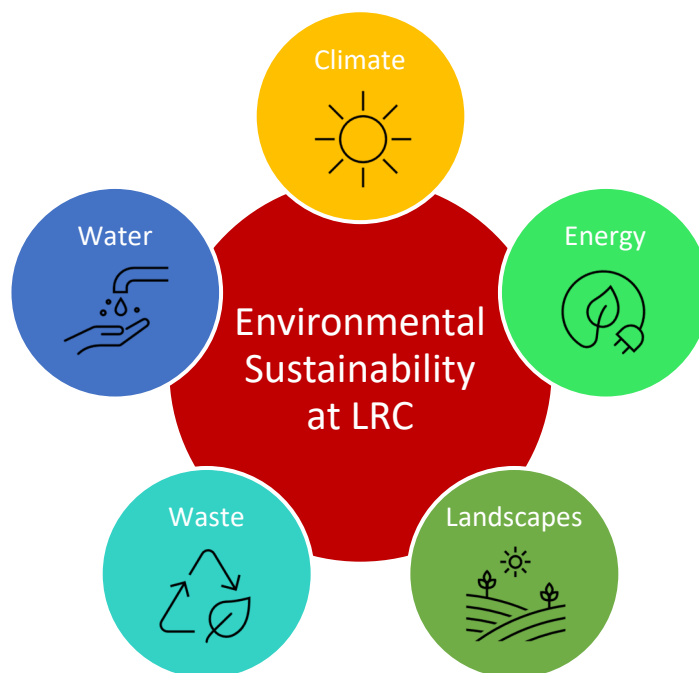
Vision for sustainability

Light Regional Council's vision for Sustainability was developed with input from Council partners and the community.

A thriving, healthy and resilient community working together to protect and restore our environment now and for the future.

Strategies

The sustainability strategies are arranged across five themes – waste, climate, energy, landscapes and water. The themes are connected and implementation of many of the strategies will result in benefits for other themes. The following sections describe opportunities to progress each strategy in the next five years and one or more targets are proposed for each theme.



Waste

Background

Waste can have far-reaching adverse impacts through the pollution and contamination of natural environments and subsequent impacts on human health, and release of greenhouse gases (from the breakdown of organic waste). Sustainable resource use requires conserving and reducing the use of raw materials, then reusing and recycling processed materials to minimise waste generation.

A circular economy is one that maximises the efficiency of use of finite resources, and through the reuse, repair, recovery and reprocessing of processed materials produces no waste and pollution. Improving waste management in this way benefits human health, the environment and the economy.

The recently prepared regional Waste Resource and Recovery Strategy (Legatus Group, 2021) includes a vision to grow the regional circular economy and a kerbside landfill diversion target of 55% for Light Regional Council.

Single-use plastics have a significant environmental impact associated with their disposal, associated carbon emissions and impacts on the natural environment. Since March 2021, the sale and supply of single use plastic straws, cutlery and beverage stirrers has been prohibited in South Australia. In March 2022, a number of polystyrene products were also banned. Recent state-wide public consultation has investigated support for expanding the ban of other single-use plastics.

Council's role

Community waste management is a key responsibility of Council and across South Australia, councils have been acting to encourage recycling and minimise waste going to landfill.

Council currently spends around \$700,000 annually on waste collection and disposal and is a large consumer of materials across its facilities and operations. Council can influence community behaviour through the provision of services and facilities, and associated education and awareness raising. Council can also optimise their own use of resources and reduce the waste generated, as well as investigate opportunities to consider whole of life costs or requirements for recycled or low impact materials through procurement processes.

Current action

Light Regional Council currently supports and promotes sustainable waste management in the following ways:

- Operating a kerbside waste collection service including weekly general waste and fortnightly recycling for both township and rural areas. Townships also have fortnightly organic bin collection
- Planning a one year trial for free green organic waste collection services for a select area of Council to encourage more food and garden organics collection and recycling.
- Engaging KESAB environmental solutions to deliver education in the community that supports Council's efforts to reduce waste and recycle
- Running a waste transfer (Kapunda Materials Recovery Facility) for the collection of green waste, scrap steel, e-waste, DrumMuster containers, tyres and waste oils
- Creating the Solo app in partnership with Solo Resource Recovery providing important waste information to residents in replacement of the annual hardcopy waste calendar
- Conducting a waste audit with KESAB, which showed that organic waste was the largest contaminant in recycling bins

Strategies and opportunities

Waste Strategy 1: Optimise diversion of community waste from landfill

- Identify and implement opportunities for improvement in local reuse and recycling

Waste Strategy 2: Reduce Council's generation of waste and increase diversion of Council waste from landfill

- Review Council's procurement policy to promote Council use of local, sustainable products with reduced reliance on virgin materials and products with excessive packaging
- Better understand Council's internal waste stream (buildings and operations) to identify and implement opportunities for reduced waste generation and increased reuse and recycling

Waste strategy 3: Raise community awareness about waste management to support more sustainable community waste management

- Build knowledge and awareness of the community, local businesses and Council staff to support behaviour change in the way waste and resources are managed
- Actively seek funding and partnership opportunities to enhance sustainable waste management

Targets

Zero avoidable waste to landfill by 2050

At least 55% kerbside landfill diversion by 2026



Figure 3: Reducing waste to landfill is a key part of progressing a circular economy

Climate

Background

Climate change is one of the greatest risks to the world today (United Nations 2022). The scientific consensus is clearly expressed in the reports of the International Panel on Climate Change (IPCC). The Sixth Assessment Report and prepared by 270 authors from 67 countries states that *'it is unequivocal that human influence has warmed the atmosphere, ocean and land'*. The generation of greenhouse gases (GHGs) including carbon dioxide and methane, primarily from the burning of fossil fuels, has increased global temperatures which is affecting weather and climate extremes in every region across the globe (IPCC, 2021). Across South Australia and the world, communities are being exposed to more frequent and intense droughts, storms, heatwaves, bushfires, reduced rainfall and sea level rise.

Action on climate change requires mitigation and adaptation.

Mitigation is action to prevent further climate change through the reduction of GHG emissions, including carbon capture and storage methods such as tree planting. The amount of future climate change will depend on how well global economies can reduce emissions. All levels of government have a role to play and Light Regional Council is aiming to increase mitigation efforts through the actions described in this plan.

Adaptation is needed to respond to the impacts of climate change. Historic GHG emissions mean that at least 1.5°C of warming is extremely likely and action is needed to support communities, economies and the natural environment build resilience to the climate impacts (IPCC 2021).

Council also acknowledges the growing body of scientific evidence suggesting that increasing atmospheric carbon dioxide may result in an increase in plant biomass, and potentially an increase in yield and drought tolerance of food crops. Greater uncertainty exists, however, in how rising carbon dioxide levels will affect the ecological functioning of multi-species, complex plant and animal communities. Council will be guided by expert advice as this area of understanding evolves over the duration of this Strategy & Action plan.

The costs of responding to increasing extreme weather events are increasing and Councils across Australia are facing increasing costs associated with repairing or replacing damaged or destroyed assets. Responding to climate change presents opportunities for Councils that increase asset resilience, promote green industries and increase energy efficiency.

Responding to climate change requires an interdisciplinary approach. The strategies included in this theme intersect with all of the other themes, meaning the climate actions Council implement are likely to have multiple co-benefits.

Council's role

Light Regional Council has committed to support global action on climate change through the declaration of a climate emergency.

Global action is required to achieve GHG reduction targets and Light Regional Council recognises it can play its part by acting to reduce its own emissions, and by supporting the community to do the same by sharing positive progress on climate action.

Council can take action to increase the climate resilience of the community and Council buildings, infrastructure and operations by planning infrastructure upgrades with consideration of future climatic conditions, helping to keep towns green and cool, supporting emergency preparedness, considering whole of life emissions in procurement processes, and purchasing carbon offsets.

As a Council, we acknowledge that there are differing views in our community about the impacts and causes of climate change. However, there was sufficient consensus in Council to declare a Climate Emergency in March 2019. This strategy now seeks to outline how we will respond to this climate emergency in a way that is respectful of this diversity of views.

To do this, Light Regional Council's response will prioritise actions that simultaneously deliver benefits to Council and the community while adapting to, or mitigating climate change. For example, reducing energy costs while reducing emissions, or improving the health and productivity of our landscapes while increasing carbon storage.

Further, we act on this Climate Emergency with the knowledge that the world is already transitioning to a low-carbon economy. We can either prepare for this transition and seek to benefit from it, or we can resist in futility. We choose the former.

And finally, there are ever-increasing prudential risks for public and private organisations who do not mitigate the risks of their activities in contributing to climate change. Our Council will appropriately manage this risk by responding appropriately to this Climate Emergency.

Current action

Light Regional Council is currently taking action on climate change in the following ways:

- Installing solar panels on most council buildings
- Cooling townships through raingarden trials, biodiversity and town beautification actions and selection of climate appropriate plants
- Participating in water reuse schemes including the Roseworthy Stormwater Management Scheme and the Gawler Water Re-use Scheme which provides additional water to keep the region green and cool
- Installation of real time temperature monitors in partnership with SA Water
- Preparing for bushfire events though maintaining a Fire Prevention Officer and Bushfire Advisory Committee as well as maintaining membership of the Flinders Mid-North Yorke Bushfire Management Committee who prepare and enact the Flinders Mid-North Yorke Bushfire Management Area Plan
- Promoting climate smart design in the Roseworthy township expansion
- Playing a facilitation role to explore a locally connected research and development opportunity in Low Carbon Animal Fodder production

Strategies and opportunities

Climate Strategy 1: Increase Council's resilience to climate change

- Enhance Council resilience to climate related emergency events
- Assess climate change risks to Council infrastructure and take action to ensure council infrastructure is climate ready

Climate Strategy 2: Support the community and local businesses adapt to climate change

- Support the community to be better prepared for more frequent extreme weather events and bushfire
- Support business and industry to take informed and effective action to prepare for and manage the impacts of climate change
- Partner with neighbouring councils and other regional organisations to facilitate a strong, widespread approach to climate change
- Implement urban cooling measures to reduce the impact of urban heat island effect and create amenable and cooler townships

Climate Strategy 3: Reduce council emissions in the most efficient and cost-effective way to reach net zero with minimal need for offsets

- Understand Council's current emissions profile
- Work toward net zero greenhouse gas emissions by 2050, consistent with the Australian and South Australian Government's commitments

Climate Strategy 4: Support the community and other stakeholders to reduce their greenhouse gas emissions

- Support community members, agriculture, businesses and industries to reduce their greenhouse gas emissions
- Advocate for other tiers of government to embrace stronger climate policies, emissions reductions targets and frameworks for mitigation and adaptation

Climate change strategy 5: Increase community awareness about climate change to support community climate action

- Provide high-quality, reliable and accessible climate change science and information to the community

Targets

Achieve net zero Council emissions by 2050 and help community to achieve similar emission reductions

Identify an interim emissions target by 2023 (informed by the emissions audit)

Energy

Background

The energy sector is the largest contributor to South Australia's greenhouse gas emissions, including transport fuels (28% of net state emissions), energy industries including energy generation (19%), and other energy including manufacturing and construction (17%). Emissions from transport have increased steadily over the past three decades. Cars contribute nearly 13% of the state's emissions with light commercial and heavy vehicles contributing a further 11% of emissions (DEW 2021).

South Australia is a global leader in renewable energy production and storage, producing over 60% of its energy from renewable sources in 2020. 41% of this energy came from wind farms and an estimated one in three homes has solar panels (Renewables SA, 2021). The State Government is aiming for 100% net renewable energy generation by 2030. The State Government has a range of electric vehicle and renewable energy schemes and subsidies for businesses and the community to support uptake.

The South Australian Government's *Electric Vehicle Action Plan 2020* describes a framework to accelerate the transition to electric vehicles (EVs) and achieve the vision to be a national leader in EV uptake and smart charging by 2025. To progress this vision, the State Government has recently awarded a grant to the RAA to construct and operate a state-wide EV rapid charging network. No sites have been proposed within the Light Regional Council area.

Improving the sustainability of energy use presents a huge economic, social and environmental opportunities. Combustion of fossil fuels is becoming increasingly expensive, releases harmful pollutants which impact human and environmental health, and contributes to climate change.

Council's role

Council's operations, buildings and infrastructure consume a significant amount of energy. Through improvements in building energy efficiency, energy planning, use of low emissions materials and use of renewables, Light Regional Council can reduce the emissions from its operations and service delivery while delivering cost savings.

Light Regional Council can also promote more active and sustainable travel. Converting the Council fleet to more fuel efficient vehicles, providing electric vehicle charging stations for the community, and designing streets and the public realm to promote walking and cycling are some of the opportunities Council can pursue.

Council can also partner with businesses and community members to support them to improve the sustainability of their energy use.

Current action

Light Regional Council is currently improving energy efficiency in the following ways:

- Trialling the use of an electric fleet vehicle
- Supporting the Buy Local campaign in Barossa to minimise food miles and the associated fuel usage and promote local businesses

Strategies and opportunities

Energy Strategy 1: Support a council-wide transition to renewable energy

- Maximise the percentage of energy purchased by Council that is generated from renewable sources
- Increase the amount of renewable energy generated and stored by Council infrastructure
- Support local renewable energy generation in the community

Energy Strategy 2: Support efficient regional electricity consumption

- Increase energy efficiency of Council infrastructure and operations
- Support local businesses to increase the efficiency of their energy use
- Continue and expand energy partnerships and funding opportunities
- Identify how Council can best improve the energy efficacy of current and future local housing

Energy Strategy 3: Reduce greenhouse gas emissions from transport

- Increase the use of active and public transport in the community
- Support a switch to electric and fuel efficient vehicles
- Support food miles minimisation

Targets

100% of Council buildings and operations are powered by renewables by 2040 or earlier

Identify interim targets for renewable generation and transport emissions by 2023

Landscapes

Background

Natural resources underpin Light Regional Council's economy and landscape. The soil, water and native plants and animals provide ecosystem services including nutrient cycling, crop pollination and water quality maintenance. Since European settlement, urbanisation and agricultural expansion have led to the widespread clearance of vegetation and the introduction of pest animals and plants. Most of the native vegetation that now remains exists in narrow corridors along road reserves and these remnants must be valued, protected and enhanced, and efforts made to connect them together.

Agriculture is a significant contributor to employment and the local economy. Climate change presents a growing challenge to agriculture, however adapting and diversifying practices to reduce emissions and store carbon in the soil and trees presents a growing opportunity for landholders. Based at the University of Adelaide's Roseworthy campus, the South Australia Drought Resilience Adoption and Innovation Hub has been established to help farmers adopt innovative tools to become more drought resilient. Hub partners including industry bodies and government will share and promote findings to local farmers. Enhancing biodiversity, protecting and improving soil health and reducing water use will also contribute to sustainability.

Greening urban centres can contribute to amenity and liveability. Tree planting, landscaping, and water sensitive urban design (WSUD) features such as rain gardens and wetlands can reduce urban heat and create habitat for native animals. Selecting species that are suitable for their location and will thrive in a warmer drier climate is important. A mix of native and exotic trees can provide different shade and habitat benefits. These approaches are consistent with the opportunities identified in the *Future Drought Fund – Opportunities for the Northern and Yorke region* (Edge Environment, 2020)

Council's role

Light Regional Council has a key role to play in the protection and enhancement of native vegetation on roadsides and Council reserves. Council manages roadside vegetation and can work collaboratively with private landholders to optimise this space. Council can also increase vegetation cover through effective management of Council open spaces, parks and reserves.

The *Character Preservation (Barossa Valley) Act 2012* protects our natural and agricultural landscapes from inappropriate development. Council will be proactive in using this Act when assessing development applications to maintain the visual amenities and agricultural prosperity of the region.

Supporting sustainable agricultural production is the role of the Northern and Yorke Landscape Board. Light Regional Council can promote, support and partner with the Board, community, landholders and other regional partners to progress sustainable landscapes.

Current actions

Light Regional Council is currently supporting sustainable landscapes in the following ways:

- Surveying roadside vegetation to identify priority areas and key threats that require addressing (weeds, roadworks, inappropriate spraying and landholder education)
- Protecting roadside verges, including allocating budget for the highest quality road verges supporting the highest levels of biodiversity
- Ongoing management of natural reserves including weed control, revegetation and regeneration
- Establishing relationships with Ngadjuri and Kurna communities to develop a Reconciliation Plan together and share information on natural resource management such as ecology and water management as well as cultural burns

- Tree planting and irrigation improvements on Council parks and reserves



Figure 4: Light Regional Council runs an annual native plant give away in Kapunda where 2,000 tree, shrub and groundcover seedlings are provided to local residents.

Strategies and opportunities

Landscapes Strategy 1: Support our primary producers to manage sustainable productive landscapes

- Support land managers to protect and enhance biodiversity
- Support local farm to plate initiatives
- Promote carbon offset opportunities to local landholders (tree planting and soil management)

Landscapes Strategy 2: Protect and enhance our natural landscapes

- Identify opportunities to increase native vegetation cover and biodiversity across Council
- Further protect and enhance native vegetation
- Work with the Landscape Board and other partners to develop demonstration sites that show how to improve management of native vegetation on private land
- Promote biodiversity and green spaces in urban centres
- Use the *Character Preservation (Barossa Valley) Act 2012* to achieve biodiversity and landscape benefits
- Advocate for the ongoing protection and strengthening of the *Character Preservation (Barossa Valley) Act 2012* to achieve biodiversity and landscape benefits
- Embed cultural values into regional biodiversity management

Targets

Actively manage roadside vegetation for biodiversity outcomes

Plant 100 new trees each year in open space and public realm within townships

Water

Background

Water is critical to sustaining community health, our way of life, our economy and our environment. Climate change impacts including warmer and drier conditions as well as more frequent and intense heavy rainfall events are influencing water supplies as well as increasing demand for water by the community and agriculture. Expanding urban populations and growing industries mean we need to manage and protect water resources more than ever before. Sustainable water management requires consideration of both the quality and quantity of water for all users including the environment.

The Council area includes the North Para River (which forms the southern boundary with the Barossa Council) and Light River. Flood risks along these rivers and in the townships of Freeling, Greenock and Kapunda have been investigated and stormwater management plans prepared for the towns identify opportunities for flood mitigation, water sensitive urban design and stormwater harvest and reuse.

Some of the water resources in the area are prescribed under the *Landscapes South Australia Act 2019* which means the water resources must be sustainably managed and licences are required to extract water for irrigation. The Barossa Prescribed Water Resources Area protects the groundwater and surface water of the eastern part of the Council area including Greenock Creek. The Northern Adelaide Plains Prescribed Wells Area protects the groundwater of an area from Roseworthy west to the Council boundary.

Water security is essential for the agriculture on which the region heavily relies. Climate proofing agriculture to ensure it can survive and thrive in the face of decreasing rainfall and increased evapotranspiration will be key to supporting regional jobs, businesses and economies.

Council's role

Council has a key responsibility to protect its area from flooding, manage water in an ecologically sustainable manner, control development in flood prone areas, and maintain roads and associated stormwater infrastructure.

Council is a large user of water, particularly for the irrigation of green open spaces and parks. Practising and promoting the sustainable use of water through irrigation efficiency and water reuse can result in significant economic savings as well as environmental and social benefits. Council also manages several water reserves which present opportunities for more sustainable water management.

Addressing flood issues associated with the Gawler River is being undertaken at a regional scale. Light Regional Council is working with other local Councils and government bodies to support flood management through the Gawler River Floodplain Management Authority.

Current action

Light Regional Council is currently supporting sustainable water management in the following ways:

- Investing in the Roseworthy stormwater management scheme
- Securing water for economic growth through wastewater and stormwater treatment plants which recycle water to use for crops and industry, including providing a \$10.7 million loan to fund the award-winning Bunyip Gawler Water Reuse Scheme
- Maintaining active membership of the Gawler River Floodplain Management Authority and other schemes to manage flooding of the Gawler Belt and Roseworthy
- Partnering with SA Water to harvest water and use smart irrigation of open space



Figure 5: New fencing installed to protect a water reserve in St Kitts while also facilitating public access

Strategies and opportunities

Water Strategy 1: Ensure Council uses fit-for-purpose water in the most efficient way

- Understand Council's current water usage and identify and implement opportunities for improvement
- Support efficient water use, recycling and reuse for local agriculture, industry and domestic environments
- Incorporate water sensitive urban design principles in townships
- Educate communities about sustainable use of water

Water Strategy 2: Support healthy and sustainable natural watercourses

- Improve management of water reserves and other water dependent ecosystems to protect native flora and fauna
- Embed cultural values into regional water management

Water Strategy 3: Manage stormwater to mitigate flood risks, improve water quality and optimise harvest for reuse

- Continue implementing stormwater management plans
- Support Council and community resilience to flooding events

Target

Establish a target for council mains water use reduction by 2023



Figure 6: Bunyip Gawler Water Re-use Scheme – Wingate Basin

Communication and engagement

Across all themes, Light Regional Council has a key role to play in communicating the importance of sustainability and promoting opportunities for households and businesses to adopt more sustainable practices. To ensure a consistent approach to the communications and a regular and appropriate flow of information to the community, an integrated sustainability engagement plan will be prepared.

Communications Strategy 1: Plan for and deliver a sustainability engagement plan

- Prepare a Sustainability Communication and Engagement Plan



Figure 7: Rain gardens support biodiversity, reduce stormwater runoff and increase resilience to flooding. Communicating the benefits of such installations is critical to their ongoing success.

Sustainability action plan

This five-year action plan sets out the actions Council will take to achieve the above strategies. Each action is supported by realistic timeframes, responsibilities and potential partners to help create accountability and transparency.

Many first-year actions focus on baseline data collection. Determining Council’s current position, weaknesses and strengths is essential to understand how to create change most effectively and to ensure resources are being put into the right places. Future actions that rely on prior data collection remain broad at this stage to allow findings to be implemented best.



Action	Related strategies	Timeframe (years)					Responsibility	Potential partners
		Y1	Y2	Y3	Y4	Y5		
Promote use of recycling and organic bins and other home recycling/composting options, using waste audit results to drive focus areas	Wst1, C4						LRC I&E, Information Services team	KESAB, GISA
Investigate costs, benefits and opportunities for implementation of farm biogas units or other biogas options	Wst1, C4						LRC I&E	GISA
Include soft plastics, polystyrene and other plastics in the waste types collected at Council’s waste transfer facility	Wst1						LRC I&E, Kapunda Materials Recovery Facility staff	
Conduct another kerbside waste audit in 2025 to measure progress since the 2020 waste audit	Wst1						LRC I&E	KESAB
Review Council’s procurement policy and identify opportunities to amend to increase waste and sustainability considerations in selection of goods and services	Wst2, C3						LRC I&E	
Conduct an internal waste audit into Council buildings and operations	Wst2						LRC I&E	KESAB
Identify and implement opportunities for reducing Council waste generation and increasing reuse and recycling including but not limited to: <ul style="list-style-type: none"> - Investigating benefits of incorporating reused materials in Council road construction 	Wst2, C3						LRC I&E	

Action	Related strategies	Timeframe (years)					Responsibility	Potential partners
		Y1	Y2	Y3	Y4	Y5		
<ul style="list-style-type: none"> - Investigating benefits of using the waste from the green bin stream as a reusable product for Council's parks and gardens - Council staff education 								
Continue to implement community and business waste education programs in partnership with KESAB and GISA and look for opportunities to expand this	Wst3, C4						LRC I&E	KESAB, GISA, NAWMA
Improve preparedness and resilience to bushfire through implementing relevant Council bushfire management responsibilities as set out by the Flinders Mid-North Yorke Bushfire Management Area Plan and associated mapping, acknowledging the increased risk of bushfire as a result of climate change	C1, C2, L1						LRC Fire Prevention Officer	Flinders Mid-North Yorke Bushfire Management Committee
Ensure Council's emergency management and work, health and safety procedures are up to date and consider the increased effects of climate change	C1, C2						WHS officer, environmental health officer	
Investigate how process and approaches used by other regions can inform Council's understanding of climate risk, in particular Resilient South's Resilient Asset Management Plan	C1						LRC I&E	Other councils, LGA, Resilient South
Encourage landowners to reduce their risk from bushfire through community education programs including use of fire retardant plants on property fringes, appropriate house and yard design, grounds maintenance, storage of fuels and solvents etc.	C2, L1						LRC Fire Prevention Officer	CFS, DEW
Promote climate smart design in the Roseworthy township expansion	C2						LRC I&E	
Provide support to local businesses to help them prepare business continuity plans that set out arrangements for managing emergency events	C2						LRC Economic Development (LRC ED)	
Undertake green cover mapping of the Council region to identify hotspots to target greening action	C2, L2, E2						GIS & Assets Officer	Northern and Yorke Landscape Board
Install additional temperature monitors in partnership with SA Water	C2						LRC I&E	SA Water
Accelerate greening/tree planting and other carbon sequestration and urban cooling projects such as water sensitive urban design in priority areas, to minimise the need to purchase offsets	C2, C3, L2, E2, Wtr1						Horticulture team	Northern & Yorke Landscape Board

Action	Related strategies	Timeframe (years)					Responsibility	Potential partners
		Y1	Y2	Y3	Y4	Y5		
Investigate reluctance by many residents for programs such as street tree plantings and general re-greening programs and identify how to increase support	C2						LRC I&E	
<p>Audit Council’s operational greenhouse gas emissions. This audit shall:</p> <ul style="list-style-type: none"> – Assess the Scope 1, 2 and 3 emissions arising from Council’s operations – Deliver a unit rate of emissions per unit of typically delivered Council infrastructure like roads (gravel, spray seal, asphalt), emissions saved by improving road surface and shortening travel times, cycle trails (dolomite, spray seal, asphalt), stormwater pipes, carpark areas, public park infrastructure like toilets, BBQ shelters, etc. This will enable Council to estimate the emissions arising from future packages of infrastructure investment – Identify “low-hanging fruit” for emission reduction opportunities, together with medium and longer-term opportunities – Calculate likely carbon offsets that would be required in the short, medium and long-term that would be needed to offset Council’s forecast emissions at these stages – Identify current options for carbon offsets that can realise maximum local co-benefits, while also outlining indicative estimated costs (and comparing to cheaper international offsets) 	C3, E1, E3						LRC I&E	External consultant
Use the findings of Council’s emissions audit to prepare an Emissions Reduction Options Paper and Investment Strategy to identify and implement emission reduction actions	C3, E1, E3						LRC I&E	External consultant
Continue to investigate strategic partnership opportunities to support the livestock industry to implement emissions reduction measures such as feed supplements to reduce methane and carbon offsets	C4, L1						LRC I&E	SARDI, PIRSA, Johnson’s, S. Kidman & Co. Ltd., Meat & Livestock Australia, Thomas Foods, MBB-CRC
Continue to participate in the Building Upgrade Finance program to help businesses make sustainable, renewable energy and heritage building upgrades	C4, E2						LRC I&E	Building Upgrade Finance Program

Action	Related strategies	Timeframe (years)					Responsibility	Potential partners
		Y1	Y2	Y3	Y4	Y5		
Prepare submissions and advocate opportunistically in response to climate change policy public consultation opportunities at a state and federal level	C4						LRC I&E, SWP	LGA
Commit to purchasing green power via the LGA Procurement Board	E1, C3						LRC I&E, SWP	LGA
Increase the amount of renewable energy generated from Council infrastructure	E1, C3						LRC I&E	
Investigate opportunities to install batteries at Council buildings	E1, C3						LRC I&E	
Audit Council's energy usage	E2						LRC I&E	External consultant
Identify and implement opportunities to reduce Council's energy usage (actions will depend on results of the audit)	E2, C3						LRC I&E	
Become a member of the Cities Power Partnership	E1, E2, E3, C3						Mayor	Cities Power Partnership (free to join)
Explore other energy partnerships and funding opportunities	E1, E2, E3						LRC I&E	State Government, Legatus
Complete a market, technical and policy analysis that identifies how Council can best influence an improvement in the energy efficiency of current and future local housing stock, and use the results to prepare a Council business case	E2						LRC I&E	
Progress the Light Regional Council local strategies for active transport identified in the Barossa, Light and Lower North Region Open Space, Recreation and Public Realm Strategy 2013 (particularly LOS2, LOS 3, LOS5, LOS 14, LPR1, LPR2, LPR3, LPR5 and LRP10)	E3, C4						LRC I&E	
Continue dialogue with the South Australian Department of Infrastructure and Transport regarding future public transport needs, especially for the Roseworthy Township Expansion	E3, C4						LRC I&E	Roseworthy Township Expansion Infrastructure Taskforce, DIT
Purchase, trial and promote at least one Council operations electric vehicle to demonstrate the current level of workability and clean transport benefits of these vehicles for Council and the local community	E3, C3						LRC I&E	State Government (subsidies may be available)

Action	Related strategies	Timeframe (years)					Responsibility	Potential partners
		Y1	Y2	Y3	Y4	Y5		
Plan and budget to transition Council's fleet to low emissions vehicles, with an initial focus on small commuter vehicles and using government grants where possible	E3, C3						LRC I&E	State Government (subsidies may be available)
Investigate support to provide fast-charging infrastructure in strategic locations to support local tourism and economies	E3, C3, C4						Civil construction team	
Support collaboration between primary producers, tourism, businesses, residents and other stakeholders to improve local consumption of local product	E3, L1						LRC I&E	
Work with partners to promote and support the protection and enhancement of on-farm biodiversity and native vegetation on private land including shelterbelts and revegetation as a part of a productive system, and promote opportunities for farmers to achieve financial benefit from biodiversity plantings through government programs	L1, L2						Horticulture and biodiversity team	Agriculture Bureau, National Farmer Federation, agronomy advisors, PIRSA, Carbon + Biodiversity Pilot (Australian Government Department of Agriculture, Water and the Environment), Northern & Yorke Landscape Board, RDA
Promote opportunities to local farmers interested in participating in Australian Government and/or global carbon markets via multi-benefit projects	L1, C4						Horticulture and biodiversity team	PIRSA, DEW, Australian Grain Technologies (Roseworthy), Northern & Yorke Landscape Board, Department of Ag, Water and the Environment
Prepare a Council Greening Plan that considers biodiversity, greening, WSUD, amenity, microclimate and other green infrastructure approaches for regional towns Include an on-ground, works-based plan to guide Council's interventions to enhance biodiversity in Council's rural areas	L2, C1						Horticulture and biodiversity team	
Improve management of road verges, including updating the Light Regional Council Roadside Vegetation Management Plan 2016-2021 and implementing associated actions	L2						Horticulture and biodiversity team	Northern & Yorke Landscape Board, RDA

Action	Related strategies	Timeframe (years)					Responsibility	Potential partners
		Y1	Y2	Y3	Y4	Y5		
Actively seek increased internal and external funding opportunities for management and protection of remnant vegetation and revegetation of cleared areas	L2						Horticulture and biodiversity team	Northern & Yorke Landscape Board, RDA
Seek opportunities to protect and restore grassland ecosystems, including management of road verges and investigation of carbon capture opportunities	L2						Horticulture and biodiversity team	Northern & Yorke Landscape Board, RDA
Look for opportunities to increase active Council management of reserves as identified in Greening Plan, for example Hanisch Road and Marananga reserves	L2						Horticulture and biodiversity team	
Continue community planting days and native plant giveaways and look for opportunities to expand these programs	L2						Horticulture and biodiversity team	
Protect mature trees from development where possible and investigate requirements for offsets where removal is required	L2						Horticulture and biodiversity team, planning team	PlanSA
Investigate opportunities to establish a hero project to that aims to build community capacity, awareness and connection and change community attitudes to vegetation management on private land.	L2, L1						Horticulture and biodiversity team	Northern & Yorke Landscape Board, RDA
Ensure the Roseworthy Township Expansion minimises impact on biodiversity and capitalises on opportunities to design this expansion for environmental benefits	L2, C1						LRC I&E, planning team	Roseworthy Township Expansion Infrastructure Taskforce
Establish a vegetation cover or tree planting target for urban centres	L2, C1						Horticulture and biodiversity team	
Ensure street trees are chosen with consideration of future climatic conditions	L2, C1						Horticulture and biodiversity team	
Increase and enhance partnerships with Landscape boards, Legatus, RDA, Kurna and Ngadjuri people, Wildlife for Wine, Barossa Bushgardens, Seppeltsfield Road Biodiversity Group, neighbouring Councils and landowners to support regional landscape outcomes	L2						Sustainability Working Party	Northern & Yorke Landscape Board, Legatus, RDA, Kurna and Ngadjuri people, Wildlife for Wine, Barossa Bushgardens, Seppeltsfield Road Biodiversity

Action	Related strategies	Timeframe (years)					Responsibility	Potential partners
		Y1	Y2	Y3	Y4	Y5		
								Group, neighbouring Councils and landowners
Advocate for the ongoing protection and strengthening of the Character Preservation (Barossa Valley) Act 2012 to achieve biodiversity and landscape benefits	L2, L1						Sustainability Working Party, planning team	
Partner with Kurna and Ngadjuri people to incorporate indigenous bio-cultural knowledge into Council's biodiversity management planning and delivery	L2						Sustainability Working Party	Kurna and Ngadjuri people
Audit the quantity and source of water use for Council's operations and buildings including irrigation	Wtr1						Water team	
Investigate opportunities where potable water is used for purposes that only require non-potable water. Implement findings to reduce surface and groundwater use	Wtr1						Water team	
Improve efficiency of Council water usage, which may include investigating initiatives such as the SA Water Smart Irrigation trials	Wtr1						Water team	SA Water, The Legatus Group, RDA Yorke and Mid-North
Investigate further opportunities to increase reuse of harvested stormwater for Council operations	Wtr1						Water team	
Investigate selling Council harvested stormwater to other local users	Wtr1						Water team	
Promote water sensitive urban design principles in all townships	Wtr1, C2						Water team, planning team	The Legatus Group
Increase the number of water reserves actively managed by Council	Wtr2, L2						Horticulture and biodiversity team	
Continue actions taken to improve aquatic habitats for biodiversity outcomes	Wtr2, L2						Horticulture and biodiversity team	Neighbouring Councils
Partner to deliver workshops on watercourse management and restoration for private landowners	Wtr2						Water team	Barossa Bushgardens

Action	Related strategies	Timeframe (years)					Responsibility	Potential partners
		Y1	Y2	Y3	Y4	Y5		
Partner with Kurna and Ngadjuri people to incorporate indigenous bio-cultural water knowledge into Council's water management planning and delivery	Wtr2						Sustainability Working Party	Kurna and Ngadjuri people
Advocate for cultural water considerations to be included in any revisions of regional Water Allocation Plans	Wtr2						Water team	Kurna and Ngadjuri people, DEW
Continue the Gawler Water Reuse Scheme, and the Roseworthy Stormwater Management Scheme to harvest and reuse stormwater	Wtr3, C2						Water team	Roseworthy Township Expansion Infrastructure Taskforce, SA Water, neighbouring Councils
Continue enactment of the Stormwater Management Plans for Freeling, Greenock and Kapunda to manage flooding and achieve other identified stormwater management objectives	Wtr3, C2						Water team	
<p>Prepare a Sustainability Communication and Engagement Plan to structure Council's efforts to educate the community and businesses across all five themes, including:</p> <ul style="list-style-type: none"> - Promotion of Council's waste transfer facility to increase community use - Promotion of Information of products that can be made from recycled items to improve community interest and involvement in recycling - Provision of high-quality, reliable and accessible information to the community for how to adapt to climate change and reduce household greenhouse gas emissions, including the benefits of sustainable household design - Promotion of CFS and DEW resources about use of fire retardant vegetation around homes and broader landscaping areas - Provision of links to credible information sources including Climate Smart SA and the BoM state of the climate reports - Sharing of climate change success stories - Sharing of opportunities for community renewable energy generation and storage support provided by partners to the community 	All themes						Engagement team	<p>State Government electric vehicle subsidies and programs: EV Purchase Subsidy, Smart Charging Subsidy and EV Fleet Pledge Program</p> <p>State Government renewable energy initiatives: Home Battery Scheme, Switch for Solar program and Virtual Power Plant</p> <p>State Government energy efficiency schemes: Retailer Energy Productivity Scheme</p>

Action	Related strategies	Timeframe (years)					Responsibility	Potential partners
		Y1	Y2	Y3	Y4	Y5		
<ul style="list-style-type: none"> - Provision of information for local businesses to support them to increase the efficiency of their energy use and increase the proportion of renewable energy they use - Promotion of electric vehicle packages and grants such as the state government's subsidy package for electric vehicles - Promotion of local produce to the community to increase local consumption of local product - Promotion of the benefits of remnant vegetation and how to get support to protect and enhance vegetation on private land - Promoting of existing partner resources to communicate sustainable water use principles to the community including reducing water use, promoting rainwater tanks etc. - Provision of information and education programs to support emergency management, in particular bushfire, floods and heatwaves - Any other engagement activities and events identified in this action plan 								
Implement the Sustainability Communication and Capacity Building Plan	All themes						Engagement team	KESAB, GISA, NAWMA DEW, CFS, The Legatus Group, RDA, Northern & Yorke Landscape Board

Monitoring and review

Sustainability is a direction and not a destination. Light Regional Council is committed to monitoring and continually seeking ways to improve our environmental, social and economic performance.

The actions contained in this five year Environmental Sustainability Strategy and Action Plan will be reviewed each year to ensure it continues to drive Light Regional Council to achieve its sustainability vision and priority goals. The findings of previous actions will inform and improve subsequent actions. The Council Sustainability Working Party will assist with this review process. Progress towards the sustainability goals set out in this plan will be reported through Council's annual reports. A formal review and revision of this Sustainability Strategy and Action Plan is planned for 2027.

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