



State of the Mount Barker Environment 2025

Background report to inform a new environment and
sustainability strategy

Final

March 2025

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Version	Date	Authors	For
1.0	March 2025	Jen St Jack & Kat Ryan (Climate Cavalry) and Greg Sarre (MBDC), have collaboratively prepared this report	Final

EXECUTIVE SUMMARY

The Mount Barker Council State of the Environment Report provides an overview of the current environmental and sustainability conditions within the region. It evaluates the health of the local environment, identifies key issues and challenges, and presents an evidence-based foundation to inform the development of the updated Environment and Sustainability Strategy.

Key Findings

Nature and Biodiversity

- The Mount Barker region is home to a diverse range of flora and fauna. However, declining quality and habitat fragmentation and urban development pose significant threats to biodiversity.
- Key areas of concern include the loss of native vegetation, the spread of invasive species, and the decline of certain native species.

Climate Change and Energy

- Mount Barker is experiencing the impacts of climate change, including increased temperatures and changes in rainfall.
- Emissions are rising with population growth but the district has a high proportion of homes with solar panels and South Australia is moving quickly to 100% renewable energy.

Water Use and Management

- Water quality in the region's creek and streams is poor to fair and faces pressures from agricultural runoff and urban stormwater
- Groundwater levels are stable but require ongoing monitoring to ensure sustainable usage.

Waste Management

- The region has made small strides in waste management, with increasing rates of recycling and waste diversion but population growth means the overall waste burden is increasing.
- Continued efforts are needed to reduce the generation of waste, increase recycling and expand the circular economy.

The Urban Environment

- New and existing population and development is impacting nature and wildlife and water quality, increasing the urban heat island effect, encroaching on adjacent agriculture lands, increasing energy consumption, water use, waste production, emissions and transport needs.
- Tree canopy cover is expanding on public land but decreasing on private land as new blocks are smaller in size without a corresponding decrease in house size. Trees are often cleared in new developments.

Land Management

- Rapid urbanisation is a major challenge, necessitating careful planning to balance development with environmental preservation.
- Urban areas are increasing while rural lands and lands for agriculture are decreasing

- Strategies include promoting green spaces, sustainable building practices, and integrated land use planning.

Air Quality

- Air quality in Mount Barker is generally good but with concerns related to wood fire smoke, traffic emissions, seasonal burn-offs and occasional bushfires.
- With population growth, emissions from vehicles are increasing.
- Initiatives to reduce the impacts of wood smoke, vehicle emissions and promote public transportation are essential for maintaining air quality.

Summary Recommendations

Enhance Biodiversity Conservation

- Increase conservation programs to protect native species and restore natural habitats.
- Increase biodiversity sensitive urban design and nature positive strategies.
- Engage the community in biodiversity initiatives and educational programs.

Improve Water Resource Management

- Strengthen measures to encourage more water sensitive urban design and urban stormwater runoff.
- Promote water conservation practices among residents and businesses.
- Increase the use of recycled water.

Promote Sustainable Waste Management

- Expand recycling programs and provide community education and engagement programs.
- Educate the public on waste reduction and responsible disposal practices.

Mitigate Climate Change Impacts

- Invest in renewable energy sources and improve energy efficiency across the district.
- Review climate action to address local vulnerabilities and enhance resilience.
- Increase tree canopy cover.

Lead Sustainable Urban Planning

- Integrate environmental considerations into strategic and statutory development plans.
- Encourage the development of green infrastructure and sustainable transportation options.

INTRODUCTION

This State of the Environment report (SoER) is an update to the 2017 State of the Environment Report which focussed on the natural environment and sustainable living goal area of the Community Plan, as it existed at the time. The SoER focusses on the Environment theme of the Community Plan adopted by Council in 2024, however, as sustainability addresses environmental, social and economic elements, it is also highly relevant to the other theme areas of the Community Plan (People, Place, Economy and Leadership).

The Community Plan 2044 sets out a vision and strategies for the future to assist Council and others to work toward shared environment and sustainability needs and aspirations of residents, workers, businesses and visitors in the region.

“The district is highly valued by the community for its natural assets that need protection and restoration. Council is dedicated to ensuring a thriving and sustainable future through intentional management of environmental assets including biodiversity, land, water and air.” Mount Barker Community Plan 2044

The SoER is part of a first phase of work to develop a refreshed ‘Lead’ Environment and Sustainability Strategy (and its subordinate action plans), as well as to update Council’s priority action plans. The Environment and Sustainability Strategy and connected action plans will inform actions to achieve the 2044 vision for Mount Barker District. The new strategy will align with the Council’s broader corporate objectives, show alignment with other council plans as well as community and partner organisation plans, and define roles and responsibilities to enable effective implementation.

A new Environment and Sustainability Strategy, including this first phase SoER, will be delivered in a way that:

- Incorporates the dynamic and emerging environmental and sustainability risks and opportunities,
- Places stakeholders at the heart of the process, including engagement with First Nations and the broader community,
- Achieves internal engagement and embeds actions and outcomes within business systems and practices,

So that:

- Mount Barker District Council has a strategy that delivers desired environmental and sustainability outcomes and has broad stakeholder acceptance,
- There is clear direction for future success of communities and townships,
- Action owners are supported and accountable for delivering positive change for the community.

This SoER report is presented under the following seven interdependent elements which together form, or impact on, the living environment:

- Nature and Biodiversity
- Climate Change and Energy
- Water Management
- Waste Management

- The Urban Environment
- Land Management
- Air Quality

These elements are consistent with those reported on in 2017, however the headings may differ to the final Environment and Sustainability Strategy.

Key performance indicators (KPIs) will be developed in the final Environment and Sustainability Strategy using this SoER as a baseline to report against.

The report also includes:

- A review of the 2018 Environment Strategy, summarising progress and achievements across key focus areas.
- A summary of emerging environmental and sustainability trends, highlighting challenges and opportunities for the district.
- Findings from a community satisfaction survey, providing insights into public perceptions, concerns, and priorities.

This SoER is provided for internal and external information and is being used to guide the development of an Environment and Sustainability Strategy for the district, which will further develop the objectives and priorities set in the Community Plan. The SoER will serve as background information for community engagement that occurs as a part of developing the Environment and Sustainability Strategy. To monitor progress and assess results, the report will be reviewed in five years (2029).

MOUNT BARKER DISTRICT CONTEXT AND SETTING

The first people of the Mount Barker area are the Peramangk (Eastern and Central parts of the district) and Kurna (Western part of the district). The area is also important to the Ngarrindgeri people to the south and east of the District. Despite the impacts of colonisation, their descendants retain strong cultural and social ties to the area and connection to country.

The Mount Barker District Council area is located east of metropolitan Adelaide in the Mount Lofty Ranges. It covers an area of 597km² and includes a number of smaller townships and villages as well as large rural and natural areas. Significant population growth is occurring in the district, mostly in Mount Barker, Littlehampton and Nairne (referred to collectively as Greater Mount Barker). The township of Mount Barker operates as a regional service centre providing education, recreational, retail, commercial, institutional and business activities and services.

The current district population is 46,277 (March 2025) an increase of more than 30% or 13,000 people since 2017 when the population was 33,117. Average population density is 69.1 people per square km, up from 59 people per square km in 2017. Once fully developed, combined population is expected to be 64,838 by 2046 (*profile .id*).

Almost all the land has been developed for agricultural, urban or industrial uses and less than 5% of the original, intact pre-European vegetation remains, mainly along creeks and roadways or in protected spaces on private land and in public reserves.

Bioregions

The Mount Barker District falls into two bioregions, as defined by the Interim Biogeographical Regionalisation of Australia (IBRA) which identifies geographically distinct bioregions based on common climate, geology, landform, native vegetation and species information. The bioregions are further refined into subregions and environmental associations. The first bioregion is within the Flinders Lofty Block IBRA bioregion and the Mount Lofty Ranges IBRA subregion and on a finer scale, within the Hahndorf Environmental Association. The second falls within the Kanmantoo IBRA bioregion, Fleurieu IBRA subregion and the Scott Hill Environmental Association.

South Australia is also divided into distinct administrative landscape regions based in part on catchment areas and bioregions. In 2019 the *Natural Resources Management Act* was replaced by the *Landscape SA Act 2019* which established Landscape Boards. Where before the district was divided between the SA Murray Darling Basin and the Adelaide and Mount Lofty Ranges regions, now the entirety of the Mount Barker District falls within the Hills and Fleurieu Landscape Board region. The Hills and Fleurieu Landscape Board is a key partner and the Board collects a levy which goes to research, planning and program provision and funding to support healthy environments.

Mount Barker's climate and climate change

The climate in Mount Barker is changing as greenhouse gases (GHGs) produced by human activity continue to be released into the atmosphere, well above background levels. Since the 1950s, South Australia has experienced over 1 degree of warming and a reduction in average rainfall. This trend is projected to continue. The anticipated effects of climate change in Mount Barker district includes increasing annual temperatures, declining annual rainfall, more days above 35 and 40 degrees annually, and greater risk of bushfire. These changes will have an impact on air quality, biodiversity, agricultural practices, water availability, community infrastructure, and the urban environment and

associated impacts to community health and wellbeing (*Department of Environment and Water Climate Projections Guide, 2022*)

In 2019 Council declared a climate emergency calling on all levels of government to increase their emission reduction efforts. It is generally accepted however that global action to limit the impacts of climate change is currently inadequate and will not be enough to avoid future temperature rises and the catastrophic impacts expected. The status of corporate and community GHG emissions is addressed further in the body of this report.

Working across boundaries and with partners

Many environmental and sustainability issues cross boundaries and solutions require a regional, state, national and/ or international approach. While cognisant of national and state plans and laws, Council also participates in the development of initiatives at a regional scale, including regional plans of the Hills and Fleurieu Landscape Board and the regional climate partnership, Resilient Hills & Coasts. Council develops its own plans and strategies related to the environment and sustainability, such as the Biodiversity Plan, Climate Change Action Plan, Waste to Resources Management Plan and individual land and reserve management plans.

COMMUNITY INSIGHTS

Across the region there is a great deal of concern, activity and interest in addressing the climate and biodiversity crisis (as demonstrated through MARKYT Community Scorecard 2023) and it is important that Council's biodiversity, climate and water plans in particular, align to maximise outcomes, partnerships and funding opportunities.

In recent engagements, particularly the Community Plan 2044 update, key themes the community have raised include:

- Loss of significant trees and habitat
- Declining condition of native vegetation
- Lack of investment in nature conservation
- Condition of local watercourses
- Impact of urban development on the environment
- Quality of urban development
- Concerns about climate and biodiversity crises
- Impacts of waste on the environment
- More sustainable transport options

COMMUNITY SCORECARD 2024 RESULTS

Council undertakes annual independent community survey with invitations sent to 15,000 randomly selected people from the customer contacts invited to participate. In 2024 this work was completed by using Markyt method by Catalyse with 1,810 community members providing responses. Some excerpts of the results on questions relating to environment from the Markyt report are included below.

Nature conservation and environmental management - was identified as good and improving, above industry average but well below industry high.

Efforts to promote and adopt sustainable practices was identified as good and improving, just below industry average so certainly room to improve.

Efforts to manage climate change were identified as weak and improving, where progress could be celebrated but further efforts are required.

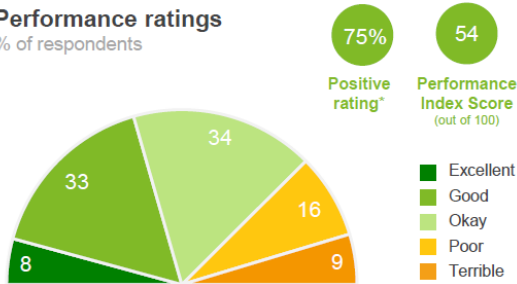
Waste management services were identified as strong and improving, where community see that good progress is being made.

Wastewater treatment and recycled water use was identified as excellent, above industry average but still room to improve to industry high.

Streetscapes trees and verges identified as good and improving, right on industry average, but room for improvement to industry high levels.

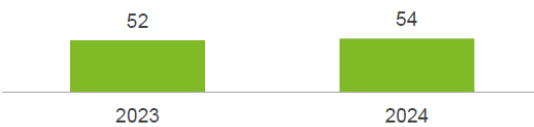
Nature conservation & environmental Management

Performance ratings % of respondents



Trend Analysis

Performance Index Score



MARKYT Industry Standards

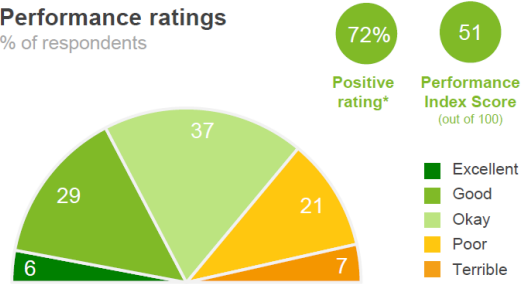
Performance Index Score



Q. How would you rate performance in the following areas?
Base: All respondents, excludes 'unsure' and 'no response' (n = 1360).

Efforts to promote and adopt sustainable practices

Performance ratings % of respondents



Trend Analysis

Performance Index Score



MARKYT Industry Standards

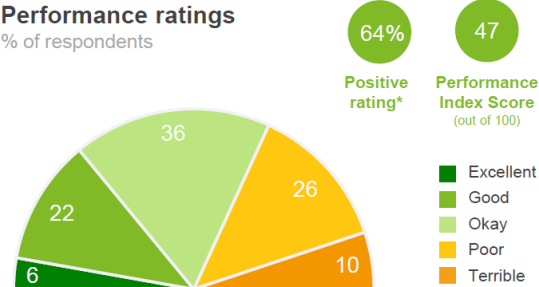
Performance Index Score



Q. How would you rate performance in the following areas?
Base: All respondents, excludes 'unsure' and 'no response' (n = 1197).

Efforts to manage climate change

Performance ratings % of respondents



Trend Analysis

Performance Index Score



MARKYT Industry Standards

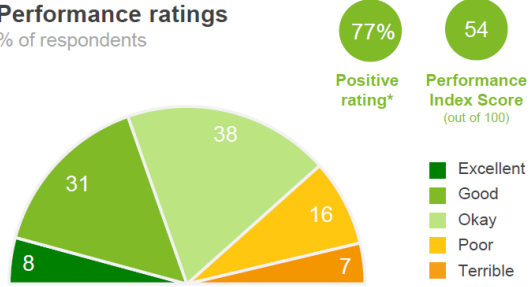
Performance Index Score



Q. How would you rate performance in the following areas?
Base: All respondents, excludes 'unsure' and 'no response' (n = 915).

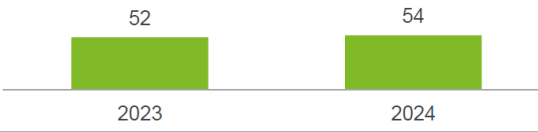
Waste management services

Performance ratings % of respondents



Trend Analysis

Performance Index Score

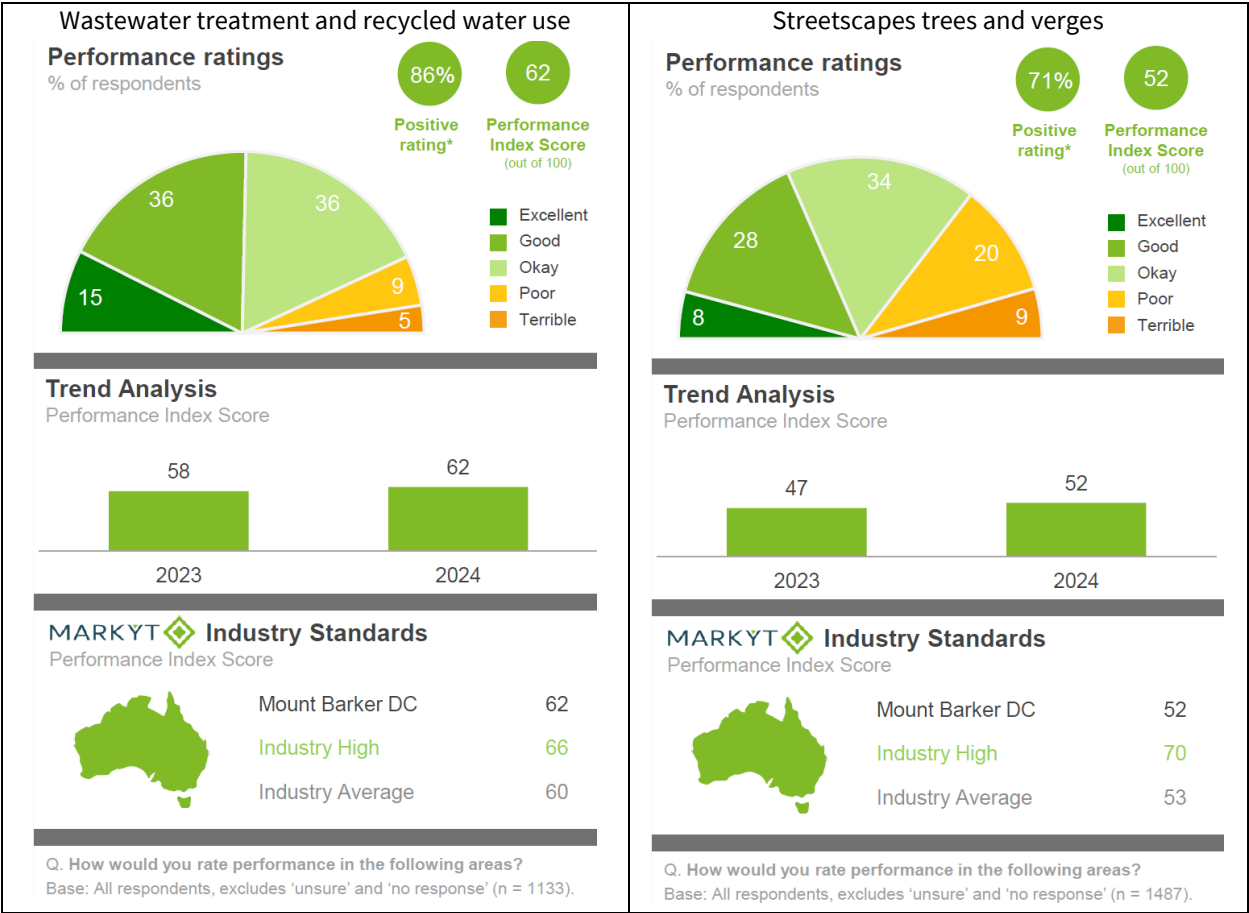


MARKYT Industry Standards

Performance Index Score



Q. How would you rate performance in the following areas?
Base: All respondents, excludes 'unsure' and 'no response' (n = 1454).



POLICY CONTEXT

In addition to the Community Plan, the strategy is guided by global, national, state, regional, and local policies, plans, and legislative frameworks. It ensures Council's environmental goals are aligned with broader strategic priorities and regulatory requirements while supporting the region's long-term sustainability. The Australian and South Australian Governments' State of the Environment Reports provide valuable context on the condition of the environment. Some of the key legislation, plans, and reports are listed below.

GLOBAL

The 2015 Paris Agreement commits Australia to reducing emissions to limit global warming to well below 2°C, with the Glasgow Climate Pact calling for faster action. Together with the Intergovernmental Panel on Climate Change (IPCC) reports, these agreements highlight the urgency for local governments to address climate risks and build resilience.

The United Nations Sustainable Development Goals (SDGs) outline a shared vision for global sustainability by 2030, encompassing 17 goals that address social, economic, and environmental priorities. This Strategy aligns with several key SDGs, including Climate Action (Goal 13), Life on Land (Goal 15), Sustainable Cities and Communities (Goal 11), and Clean Water and Sanitation (Goal 6).

Relevant global policies and frameworks include:

- **Paris Agreement** – International commitment to limit global temperature rise to well below 2°C.
- **Glasgow Climate Pact** – Agreement to accelerate action, phase down coal, and enhance finance.
- **United Nations Sustainable Development Goals (SDGs)** – 17 global goals for 2030.
- **United Nations Convention on Biodiversity** – International framework to conserve biodiversity.
- **Global Biodiversity Framework** – Targets to halt and reverse biodiversity loss by 2030.
- **Intergovernmental Panel on Climate Change (IPCC) Reports** – Scientific assessments of climate change impacts and solutions.
- **United Nations Declaration on the Rights of Indigenous Peoples** – Global standards for protecting Indigenous peoples' rights, including traditional land use.
- **State of the Global Climate 2023** – Annual report on global climate trends and extreme weather.
- **ICLEI** – Local Governments for Sustainability network which Mount Barker is a member Council.

NATIONAL

The Australian Government has committed to reducing emissions by 43% below 2005 levels by 2030 and achieving net zero emissions by 2050 under the Paris Agreement. This commitment is supported by national strategies for climate resilience, biodiversity conservation, and resource recovery.

National frameworks also emphasise protecting Australia's unique biodiversity and addressing climate risks through adaptive management. The 2021 State of the Environment Report and the Nature Positive Plan (2022), provide critical insights into the environmental challenges we face and the opportunities for restoration and sustainable growth.

Relevant national policies, strategies, and legislation include:

- **Climate Change Act 2022** – Sets emissions reduction targets of 43% by 2030 and net zero by 2050.
- **National Climate Resilience and Adaptation Strategy 2021-2025** – Guides climate adaptation actions across sectors.
- **Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)**– Australia's central environmental legislation, currently under review with proposed reforms including the establishment of a new Environmental Protection Agency under the Nature Positive Plan.
- **Nature Repair Act 2023** – Establishes a voluntary market for biodiversity restoration projects.
- **Threatened Species Strategy 2021-2031** – Focuses on the conservation of priority species and habitats.
- **Australia's Strategy for Nature 2019-2030** – National framework for biodiversity conservation.
- **National Waste Policy Action Plan 2019** – Targets 80% resource recovery by 2030 and a 10% per capita waste reduction.
- **State of the Environment Report 2021** – Highlights key environmental pressures and opportunities for action. Air Quality, Biodiversity, Climate, Extreme Events, Heritage, Indigenous, Inland Water, Land and Urban chapters are relevant to Mount Barker.
- **Nature Positive Plan 2022** – Supports a sustainable and nature-positive economy.
- **Basin Plan 2012** – Manages water resources in the Murray-Darling Basin to ensure sustainable use.
- **National Greenhouse and Energy Reporting Act 2007** – Requires reporting on emissions and energy use.

The following is an extract from the overview of the National State of Environment 2021 report.

- *Overall, the state and trend of the environment of Australia are poor and deteriorating as a result of increasing pressures from climate change, habitat loss, invasive species, pollution and resource extraction. Changing environmental conditions mean that many species and ecosystems are increasingly threatened. Multiple pressures create cumulative impacts that amplify threats to our environment, and abrupt changes in ecological systems have been recorded in the past 5 years.*
- *The Australian Government's 2015 Threatened Species Strategy 5-year action plan achieved partial success by improving the trajectories of 24 priority species by 2020, but many did not*

show improvements and, overall, the number of listed species has grown by 8% since 2016. The number of listed entities will increase substantially in coming years as a result of the 2019–20 bushfires.

- *Our inability to adequately manage pressures will continue to result in species extinctions and deteriorating ecosystem condition, which are reducing the environmental capital on which current and future economies depend. Social, environmental and economic impacts are already apparent.*

STATE

South Australia is recognised as a leader in renewable energy and climate resilience, with legislation and programs supporting the transition to a net zero emissions economy and initiatives to safeguard communities, ecosystems, and the economy. This includes a net zero emissions goal by 2050 and 100% renewable energy by 2027.

Relevant state policies, strategies, and legislation include:

- **Climate Change and Greenhouse Emissions Reduction Act 2007** – updated in September 2024 to strengthen requirements for government planning, risk assessment and action on climate.
- **South Australian Climate Change Action Plan 2021–2025** – Focuses on clean energy transformation, climate-smart built environments, resilient communities, and low-emission transport.
- **Urban Water Directions Statement (2022)** – Guides sustainable urban water management.
- **SA Waste Strategy 2020–2025** – Targets a circular economy and progressive landfill diversion.
- **Environment Protection Act 1993** – Governs pollution prevention and environmental management.
- **State of the Environment Report 2023** – South Australian SoE report published every five years by the EPA. Relevant to Mount Barker for the Climate, Air, Land, Waters, River Murray and Livability chapters.
- **Native Vegetation Act** – Protects native vegetation and regulates its clearance.
- **Landscape South Australia Act 2019** – Provides for the sustainable management of the states landscapes.
- **Green Industries SA Act 2004** – Supports innovation and leadership in resource recovery.
- **Local Government Act 1999** – Provides a framework for council responsibilities in sustainability.
- **Greater Adelaide Regional Plan** – currently under review in 2024/2025
- **Single-use and Other Plastic Products (Waste Avoidance) Act 2020** – Reduces plastic waste impacts.
- **SA Food Waste Strategy** – Promotes reducing food waste and landfill diversion.
- **SA Solid Waste Levy** – fee charged for every tonne of waste sent to landfill in SA.
- **Biodiversity Act** (*new Act currently in development, could replace Native Vegetation Act*)
- **Urban Greening Strategy for Adelaide** – new strategy in development

REGIONAL

Resilient Hills and Coast - In collaboration with its partners in the region, Mount Barker District Council has contributed to the Resilient Hills & Coasts adaptation framework, to make sure the region remains a strong and vibrant place to live, work and visit; and that businesses, communities and environments can respond positively to the challenges and opportunities presented by a changing climate. Its Adaptation plan was recently updated in 2025 and a new sector agreement committed to by partners.

Landscape Board - Mount Barker is part of the Hills and Fleurieu Landscape Board. It is guided by the Hills and Fleurieu Landscape Plan 2021-2026 to address environmental issues in the region, including water, biodiversity and climate change. They also include strategies to build community knowledge and involvement in environmental stewardship.

Adelaide Hills Waste Management Authority - Mount Barker is one of the four member councils of the Adelaide Hills Region Waste Management Authority (AHRWMA). AHRWMA's receives and processes waste material at its facilities promoting a cleaner and healthier environment by increasing recycling options and reducing waste going to landfill. AHRWMA plays important role in assisting Council meeting our objectives under the SA Waste Strategy and Reporting Guidelines.

Southern and Hills Local Government Association (S&HLGA) Regional Public Health and Wellbeing Plan 2022-2027: Developed collaboratively by six constituent councils, including Mount Barker, this plan outlines strategies to enhance public health and wellbeing in the region, recognising the interconnectedness of environmental sustainability and community health.

REVIEW OF PREVIOUS STRATEGY

Since the adoption of the 2018 Environment Strategy, Mount Barker District Council has made significant progress toward its environmental goals. This chapter provides an overview of key achievements across the strategy's five focus areas: Low Carbon & Resilient, Biodiverse, Liveable, Water Wise and Resource Efficient. Many of these actions have been advanced through dedicated implementation plans, including the Biodiversity Strategy and Climate Change Action Plan, which provide more detailed guidance on delivery.

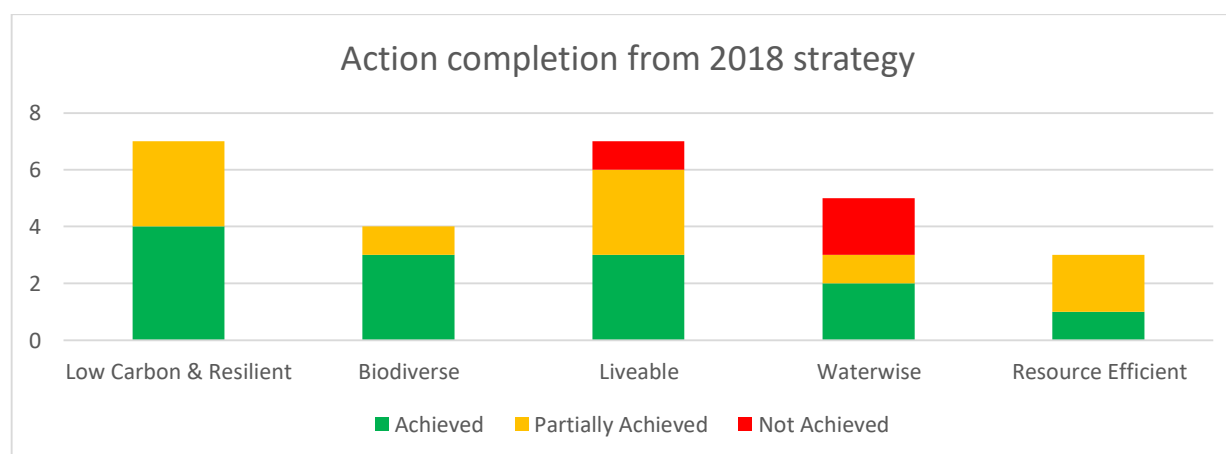
Some notable achievements include:

- Planting a minimum 10,000 local native plants in council reserves annually;
- Establishing the community native plant nursery;
- Updating a native species planting and sustainable gardening guide to include 'firewise' species.
- Increasing human resourcing for environment and sustainability initiatives with the employment of a Senior Sustainability Officer and the establishment of an outdoor biodiversity team;
- Running a number of community events and engagement activities, including 2 Bird Fairs, annual national tree day community planting, the Dynamic State event and involvement in the Living Lightly Locally behaviour change program;
- Establishing 3 new 'Friends of' groups;
- Developing and implementing a Climate Change Action Plan;
- Developing and implementing a Corporate Emissions and Energy Reduction Plan;
- House of Tomorrow research and campaign development;
- Council support for and involvement in the Hills and Fleurieu Food Future Project;

Council's continued involvement in the Resilient Hills and Coast collaboration with regional council, Hills and Fleurieu landscape board, RDA and the Department for Environment and Water.

For the 27 actions in the 2018 strategy, as at end of 2024, 14 were completed, 10 partially completed and 3 not achieved. This is an overall positive result, especially when you consider;

- includes some actions beyond full control of council (e.g. support design of driverless car),
- some of the partially achieved actions are ongoing in their nature (e.g. improve public waste management).
- strategies typically include some ambitious elements which are subject to annual funding cycles or attracting grant funding and therefore are rare to be 100% achieved across every action.



A breakdown of the action an individual progress summary is provided below.

Environment Goal 1 – Low- carbon & resilient	
Action	Progress
Develop and implement an action plan to reduce greenhouse gas emissions	Achieved. Climate change action plan was completed in 2019. A Corporate Emissions and Energy Reduction Plan (CEERP) was completed in September 2024.
Investigate carbon neutrality	Partially achieved. This action is currently being progressed through the CEERP.
Install a high-speed electric vehicle charging station in Mount Barker township	Achieved. Various opportunities were investigated during the period but this action was eventually achieved through the RAA installation at the Mount Barker Homemaker Centre
Complete Council's Local Climate change Adaptation Plan with implementation strategy	Achieved Completed as part of the climate change action plan and Resilient Hills and Coasts sector agreement
Develop an energy action plan that prioritises recommendations of the LGA energy efficiency audit and includes opportunities for the local green economy	Partially achieved. This action is currently being progressed through the CEERP.

Explore potential for the new regional sports hub, wastewater treatment plant and other Council facilities to be energy neutral	Partially achieved. Investigations are currently being undertaken through the Wastewater strategy and as part of the Regional Aquatic and Leisure Centre development.
Install solar panels on Council rooftops	Achieved. Solar panels have been installed at the Environment Services Centre and at Wastewater treatment facilities.

Environment Goal 2 – Biodiverse	
Action	Progress
Select priority actions from the biodiversity strategy each year and ensure they are resourced sufficiently to be implemented	Achieved. Increased resourcing to establish an outdoor biodiversity team. Funding to establish the Mount Barker Community Nursery. Ongoing contractor engagement for works in bushland areas Ongoing support for volunteer programs including Bush for Life and Friends of groups
Review and update undeveloped road reserve audit	Partially achieved. An audit of roadside marker sites has been undertaken and a new Roadside Vegetation Management Plan is currently in draft form
Raise community awareness of biodiversity values and provide opportunities for people to connect with nature	Achieved. This action has been progressed via events such as annual tree day, Bird Fairs (x2), wetland tours, information and resources included on Council's website and social media posts. A new bee hotel was established at Laratinga and Laratinga interpretive signs have been installed.
Coordinate development of linear parks, greenspace and reserves along watercourses with trails development	Achieved. The annual revegetation program and biodiversity team established are significant achievements as a part of this program. A new Open Space Strategy is currently being developed to assist in this effort. New linear reserves are being included in the design and construction of new developments

Environment Goal 3 – Liveable	
Action	Progress
Increase the uptake of lower environmental footprint housing through demonstration and by encouraging homebuyers to choose more energy efficient housing options	Partially achieved. The House of Tomorrow research and House of Tomorrow marketing reports have been completed to inform future actions including the marketing campaign currently being progressed in partnership with other councils. A video promoting the benefits of a Passive House built in Mount Barker has also been produced.
Progress and enable models of sustainable development throughout the district	Partially achieved. This action is being progressed through the House of Tomorrow project as well as through various means, including web and print resources, media releases around events and support for the ‘My Cool Home’ webinar series.
Hold events and workshops to raise public awareness about the characteristics and benefits of sustainable development in urban and rural settings	Achieved. A Sustainable Living workshop series was support as well as a webinar series Sustainable living is supported through involvement in the Living Lightly Locally project as a foundation Council Council support for and involvement in the Hills and Fleurieu Food Future Project Support for and involvement in the Dynamic State event and follow up 2040 film screening
Design a future Council building to follow best practices in energy efficiency	Partially achieved. Energy efficiency features have been included in the Regional Aquatic and Leisure Centre design. The Environmental Services Centre included energy efficiency features.
Undertake canopy cover mapping to identify urban heat sinks and guide additional tree planting	Achieved. Canopy mapping has been completed for Mount Barker
Encourage walking and cycling by promoting benefit and enhancing trail amenities and connectivity to greenspaces, residential areas and schools	Achieved. This action is being implemented through the development/maintenance of the linear trail network and the Trails Plan review and Integrated Transport Plan planning initiatives.
Advocate for expanded public transport services and improvements to traffic flow to benefit bus passengers	Achieved. Council initiated and was the majority funder of the Regional Public Transport study in 2019. The Integrated Transport Master Plan places significant emphasis on public transport and Mount Barker District Council Council Agenda 5 August 2024 169 consultation on a draft public transport action plan has recently been undertaken. Council has supported the introduction and expansion of the Keoride bus service
Support the design of a driverless car community in the district	Not achieved. There has been no progress on this action.

Environment Goal 4 – Water Wise	
Action	Progress
Provide information and incentives to encourage more water efficiency	Partially achieved. The Wastewater treatment program and rainwater installation at Council facilities is the primary way in which this action has been progressed. Community information is provided through web and print resources and involvement in Living Lightly Locally.
Require Water Sensitive Urban Design (WSUD) to be presented as part of all development in accordance with Council and regional policy	Not achieved. WSUD outcomes are pursued through the development assessment process but significant progress is limited. Education opportunities and materials are used promoted consistently. There was 2 rounds of coordinated WSUD training for staff via grant funding through Resilient Hills and Coasts
Establish local native vegetation in riparian zones to prevent erosion where needed	Achieved. Council has an extensive revegetation program along watercourses and requires developers to establish native vegetation in watercourses where appropriate. The linear trail network largely runs along watercourses and is adding to habitat and watercourse health outcomes.
Work with neighbouring councils and LGA to lobby the State government for more stringent WSUD requirements in new development	Not achieved. No significant action, apart from WSUD training mentioned above
Identify and implement ways to use more recycled wastewater	Achieved. Substantial progress through the recycled wastewater program

Environment Goal 5 – Resource efficient	
Action	Progress
Improve public waste management along Hahndorf Main Street and Gawler Street in Mount Barker and at selected events	Partially achieved. A food and organic waste trial program in Gawler street is one way in which this action has been progressed and new recycling bins are being planned.
Collaborate with partners to raise awareness about landfill waste, recycling, e-waste and composting, and to promote waste reduction	Partially achieved. Mainly progressed through the Adelaide Hills Regional Waste Management Authority partnership
Develop and implement the Mount Barker Waste to Resources Management Plan	Achieved. A waste to resources management plan was completed in 2018 and is reported on separately.

THE STATE OF THE DISTRICT'S ENVIRONMENT

The following data presented on the 7 key elements that form this SoER is from many different data sources at the state and local level. While every attempt has been made to ensure data accuracy, it is subject to updates and improvements, as and where possible. Where data assumptions are made, these are noted.

NATURE AND BIODIVERSITY

Biological diversity or biodiversity is the variety of all life forms on earth – the different plants, animals and micro-organisms, their genes, and the terrestrial, marine and freshwater ecosystems of which they are a part.

The three levels of biodiversity – species, genetics and community – are interrelated and interdependent. Species population is dependent on its genetic variation and habitat (ecosystem) for survival, and an ecosystem is dependent on the full variety of the species it comprises.

Biodiversity allows human life to exist, and we rely on the resources provided by many species and ecosystems. The understanding and appreciation of biodiversity highlights the benefits of the natural world and allows us take steps to conserve it. As well as its intrinsic value, biodiversity can be valued by understanding its contribution to the economy, recreation, culture, health and science.

Native animals are important to ecosystems in many ways: they act as indicators of healthy ecosystems, waterways and habitats; they play balancing roles in ecosystems; they provide human health and social benefits of being in nature; and they offer economic benefits and the provision of educational experiences. Wildlife plays an important role in keeping some animals from becoming too numerous (predators), managing vegetation growth and providing food (herbivores), and recycling organic matter (decomposers).

Prior to European settlement, the district was covered in forests, woodlands and grasslands, which supported a diverse range of flora and fauna. In the 19th and 20th Centuries, approximately 95% of the original vegetation was cleared for agriculture, mining and human settlement. Currently, less than 5% of original native vegetation remains in the district and a number of fauna and flora species are at risk; a risk that will increase with the impacts of climate change and population growth.

Despite extensive clearing, the district has important ecological and biological assets and provides habitat for numerous species on public land and protected areas as well as on private land. The following data is current as of March 2025:

- Up to 50,000 street and reserve trees estimated (24,162 trees recorded in the Forestree program)
- 17.5 volunteer-run 'Bush for Life' sites
- Two nationally-threatened ecological communities: Iron-grass Lomandra species Natural Temperate Grassland; and Peppermint Box Grassy Woodland
- 826 parcels (836 ha) of community and crown land under Council's Community Land Register, most of which contain remnant native vegetation in some form
- 364 road marker scheme (RMS) sites

Listed Species

The Hills and Fleurieu Landscape Board monitors rare and threatened plant and animal species, as shown indicated in chart 1 below. Note that this information is useful for general context, however, not all species are located within the Mount Barker district as the Landscape regions include other local government areas.

The Hills and Fleurieu region contains 2,302 flora species with 38 of these threatened or extinct, and 518 fauna species with 47 species threatened or extinct.

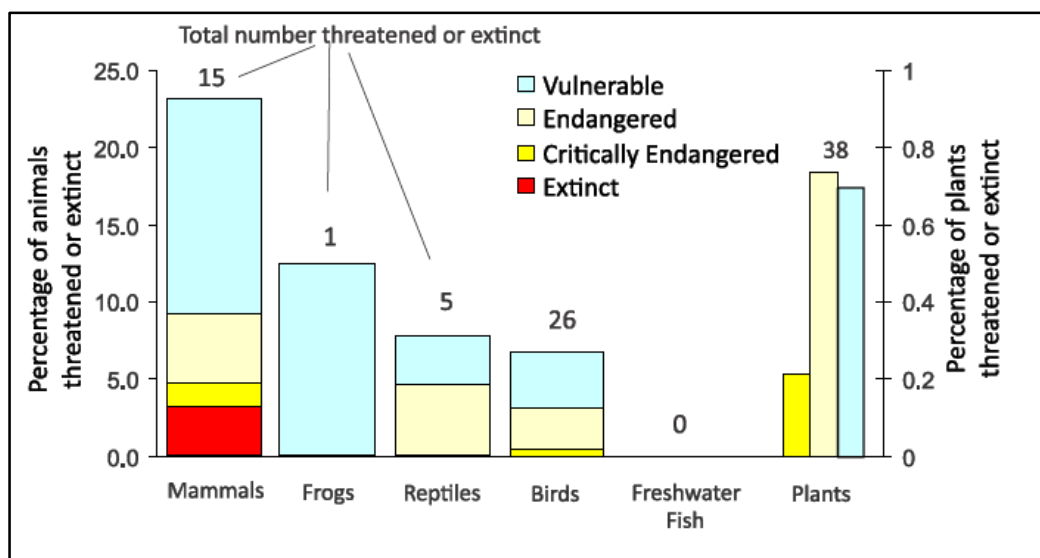


Chart 1: Hills and Fleurieu region threatened or extinct flora and fauna species

Roadside Marker Scheme (RMS)

Roadsides adjacent sealed and unsealed roads can contain significant natural vegetation including rare and endangered species. The Roadside Marker Scheme (RMS) helps to monitor and protect this vegetation. Roadside vegetation in the district is categorised according to existence of remnant vegetation (canopy cover, understory flora and strata, ground cover), weed invasion, mechanical disturbance, natural ecosystem stability, and biodiversity and habitat integrity. **Category 1 sites are the most intact and category 5 the most disturbed.** Category 1 areas are classed as a priority for conservation because remaining vegetation is high quality and weed infestation is low, hence a greater likelihood of successful rehabilitation. However, all roadside vegetation is important and there are currently 364 roadsides that are protected under the RMS, including 59 category 1 sites, 71 category 2 sites, 115 category 3, 88 category 4 and 20 category 5 sites, as recorded in the Forestree program (chart 2).

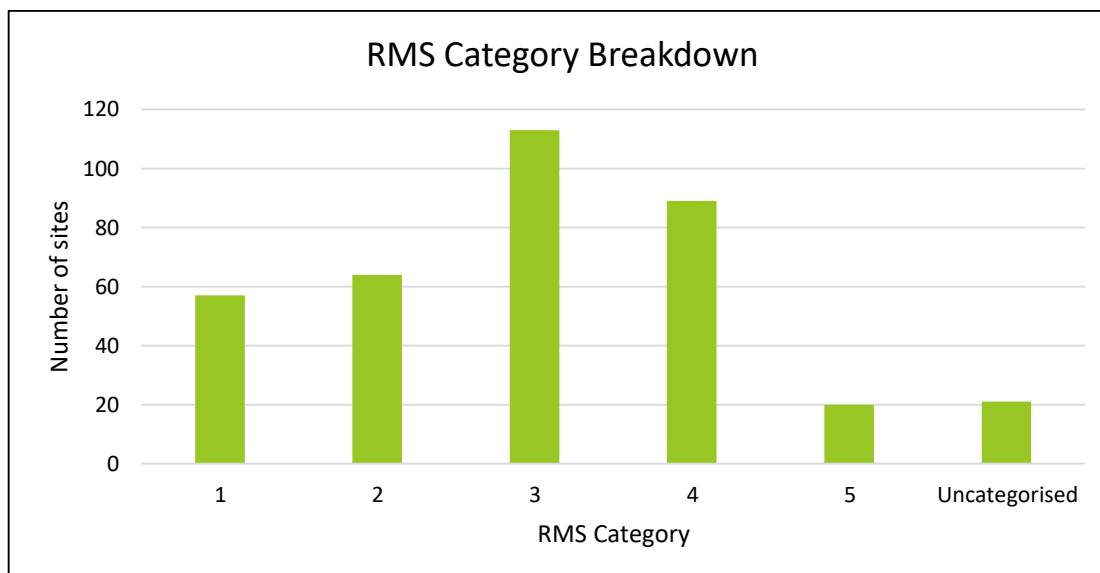


Chart 2: Roadside Marker Scheme (RMS) sites, by category (Mount Barker District Council)

Unmade Road Reserves

Traditionally, road reserves in South Australia were implemented to allow public right of way between cities, towns and private property. Some road reserves which were initially developed and used for public access have over time become disused. Other reserves have never been developed, often due to steep terrain or other physical landform impediments such as watercourses, or because the sections of land adjoining these road reserves have been owned by one landowner and right of way access to individual sections has never been required. Under the control of Council, road reserves also serve a number of other functional purposes, which include:

- Remnant areas suitable for the conservation of indigenous plant species and associations,
- Wildlife corridors and habitat for native fauna,
- Amenities such as walking tracks, horse riding trails and bicycle tracks,
- Stockpile and borrow pit areas for maintenance and construction,
- Corridors for public utilities

There are approximately 150kms of unmade road reserve in the district with about 17% of those reserves with native vegetation in good or moderate level condition (category 2 and 3). The remaining 83% is either category 4 or 5 with no category 1 sites.

Management of the undeveloped road reserve system is often determined through consensus between community interest groups, road reserve lease holders, adjacent land owners and the managers of public utilities, including Council.

At the time of writing, the Native Vegetation Roadside Management Plan was being reviewed and updated.

Bushland, Revegetation and Habitat

The amount of native bushland is currently less than 5% of total district land area. This is very low and will affect the viability of species and ecological communities in the future. It is general scientific consensus that 30% of any given area needs to be under native vegetation in order to maintain healthy biodiversity values and to halt species extinctions.

Notwithstanding the 5% figure mentioned, mapping conducted by the Hills and Fleurieu landscape Board shows that of the 59,500ha in the Mount Barker LGA, native vegetation covers 16,000 ha, or 27% of the Council area. Approximately 2,500 ha of this is in government parks and reserves with 23% of the LGA privately managed native vegetation.

The 27% figure is misleading however as it likely includes large areas of tree cover but overall poor quality/condition of the native vegetation, i.e. much of that area will be weed infested, include trees but no native understory and be a mix of local and out of region natives and exotic trees. It does indicate there is great potential to improve quality and establish new areas to work towards the 30% figure.

Council supports Bush for Life, a volunteer-run program that conserves existing bushland reserves on public land and roadsides. Each year, volunteers provide a report on site conditions. The program relies on Council's financial support to ensure existing sites are maintained. There are currently 17.5 Bush for Life sites on land under council's area and control in the Mount Barker district (note: the 0.5 of a site is in a reserve which crosses into Alexandrina Council, which funds 50% of the site fee).

Council also directly supports several volunteer groups that work to protect and improve bushland and revegetation sites. Groups include the Laratinga Wetland Warriors, Friends of Mount Barker Summit, Friends of Yantaringa and the Friends of the Bluestone wetland. Other bushcare and landcare groups active in the district include Macclesfield Bushcare, Nairne Landcare and Callington Landcare.

The Laratinga wetland has developed into a habitat for many species with the number of birds in the wetland offering some indication of the biodiversity of the region and what is possible through intentional rehabilitation efforts. Connected creeks and linear trails through Mount Barker are progressively being rehabilitated to improve their health and biodiversity value as part of the greater Mount Barker parklands. In addition to rehabilitating public land, many private landholders are rehabilitating their properties (large and small) to support biodiversity and nature.

Threats to biodiversity

Overall, despite the efforts of community volunteers, private land holders, council, government and non-government programs and grant funding the condition of natural areas in many situations is declining. There are many threats to biodiversity with some of the key threats including:

- Population pressures and urban development
- Pest plants and animals
- The impacts of climate change (for example dieback of some species of Eucalypt)
- Level of investment in the management of natural areas
- Recreational activity such as mountain bikes, 4WDs, horses and trails
- Fire management regimes

Pest Plants and animals

The Mount Barker district falls within the Hills and Fleurieu landscape region, a national biodiversity hotspot that also supports important agricultural enterprises. Its mosaic of urban, peri-urban and rural properties, and diversity of landscapes and land uses means there are many avenues for pest plants and animals to enter, become established and cause major impacts. Pest plants and animals cost the Hills and Fleurieu community millions of dollars each year through production losses, environmental impacts, social impacts, infrastructure damage and management activities.

The Hills and Fleurieu Regional Pest Plant and Animal Strategy 2024-2029 was adopted by Landscapes Hills and Fleurieu in early 2024. The Strategy provides guidance on how to prioritise pest plant and animal management in the Hills and Fleurieu region. It outlines the responsibilities, principles, and objectives to provide a foundation for collaboration and action for the protection of agricultural, environmental and cultural assets. The Pest Strategy is intended to provide high level guidance to all land managers including which species to focus on and why.

Regional Pest Strategy

For Council owned land, the top 10 environmental weed species are Gorse, English broom, Cape Broom, Bridal Creeper, Blackberry, Watsonia, Ash, Monterey Pine, Boneseed and Spiny Rush. Rabbits, cats and foxes are the most significant pest animals with deer and goats emerging threats.

Domestic cats

Domestic cats that are allowed to roam free are a considerable threat to native wildlife and a nuisance species to humans. In 2019 Council endorsed a cat bylaw to help reduce the impact cats have on the environment. Rules include compulsory registration, limited number of cats allowable on a property and cat confinement. Since 2017 Council has received **482 complaints** about domestic cats, an average of **68** per year. There are currently **2626** cats registered in the district.

CLIMATE CHANGE AND ENERGY

Greenhouse gases (GHGs) trap radiation in the atmosphere and keep the Earth's surface warm enough to sustain life. Human activity has increased the level of atmospheric GHGs, causing a rise in temperatures and leading to global climate change. The main GHGs released by human activity are carbon dioxide, methane and nitrous oxide, measured together as carbon dioxide equivalent (CO₂e). These are released by burning fossil fuels (coal, oil and natural gas), organic waste decay in landfills, and agricultural and industrial activity.

GHG emissions levels in South Australia in 2021/22 were 21.5 Million Tonnes of CO₂e. South Australia has a reduction target to reduce emissions by more than 50% below 2005 levels by 2030 and to achieve net zero emissions by 2050. Transport and agriculture are the highest emission sources at 29% and 28% respectively (*SA Department for Environment and Water*).

Mount Barker District Council has been involved in various programs to address climate impacts and emissions and as part of its broad approach to the complex challenge presented by climate change. These include through the Cities for Climate Protection program (2006 to 2011), the Global Covenant of Mayors (2017 - present) and the Cities Power Partnership (2018 – present) and via the regional climate partnership Resilient Hills and Coasts as well as direct action such as installation of solar systems and hybrid vehicles as part of the light fleet. In 2024 Council developed a Corporate Energy and Emissions Reduction Plan.

Corporate Emissions

Total emissions in 2023 for the Mount Barker District Council were 8,509t CO₂e (including wastewater) with the highest emissions sources being electricity (40%), wastewater (34%) transport (13%), waste (3%), ICT services and equipment (3%) and machinery and vehicles (3%) (see chart 3). This makes up 2.9% of the total emissions of the district. If wastewater is excluded the total corporate emissions are 5,643t CO₂e or 1.9% of total emissions.

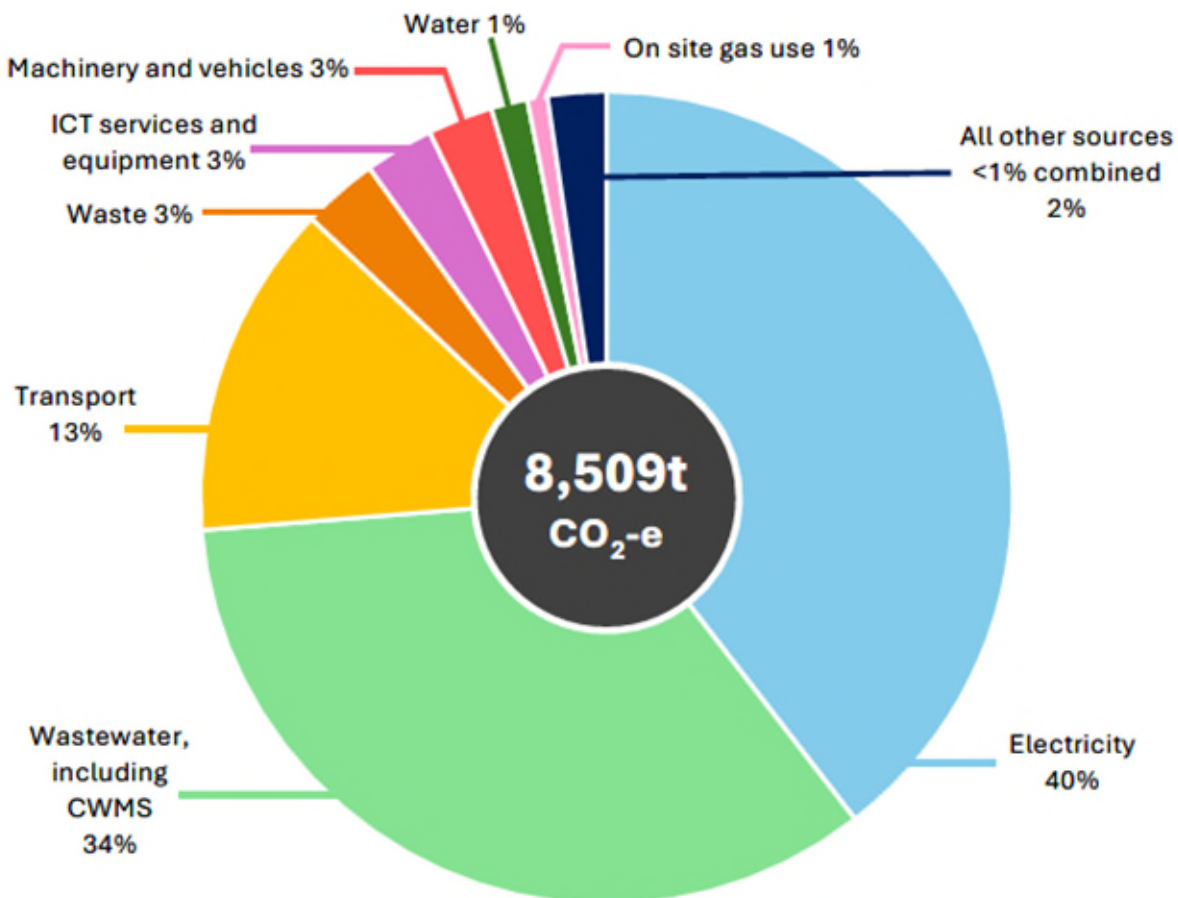


Chart 3: Mount Barker District Council corporate emissions 2023 (including wastewater)

Community emissions

The Snapshot Climate website collects data and presents Climate's emissions profiles to support decision makers to reduce emissions at the speed and scale required. [Snapshot Climate - Mount Barker](#)

Snapshot uses a common framework to allow for comparison between regions and all the local profiles add up to the national emissions total.

The Snapshot community climate tool was developed by Beyond Zero Emissions and Ironbark Sustainability.

The total emissions for Mount Barker for the 2022/23 year were **234,000t CO₂e**. Total emissions from each source and sector are shown in chart 4.

Source	Sector	Emissions (t CO ₂ e)
● Electricity	● Residential	31 000
	● Commercial	20 000
	● Industrial	10 000
● Transport	● On road	96 000
● Waste		18 000
● IPPU		35 000
● Fugitive		0
● Agriculture		24 000
● Land Use		1 000

Chart 4 Mount Barker 2022/23 municipal emissions snapshot by source and sector (Note: IPPU stands for ‘industrial processes and product use’ sector which covers greenhouse gas emissions resulting from various industrial activities which are not directly the result of energy consumed during the process)

Energy

Sources of energy in the district are a mix of non-renewables (coal, natural gas, petrol, diesel) and renewables (wind and solar).

The installation of small-scale renewable energy systems is indicative of progress towards reduced reliance on non-renewable energy and the Mount Barker district has a high percentage of dwellings with solar systems installed, at **54.1%**. This compares with an Australian household average of about around **33%** (*Australian PV Institute*). In the Mount Barker district, **4161** small-scale solar panel systems were installed between 2016 and 2021 (chart 5). This compares with **4,014** systems installed from 2001 to 2014. The total number of roof top solar systems in the district is **10,203**.

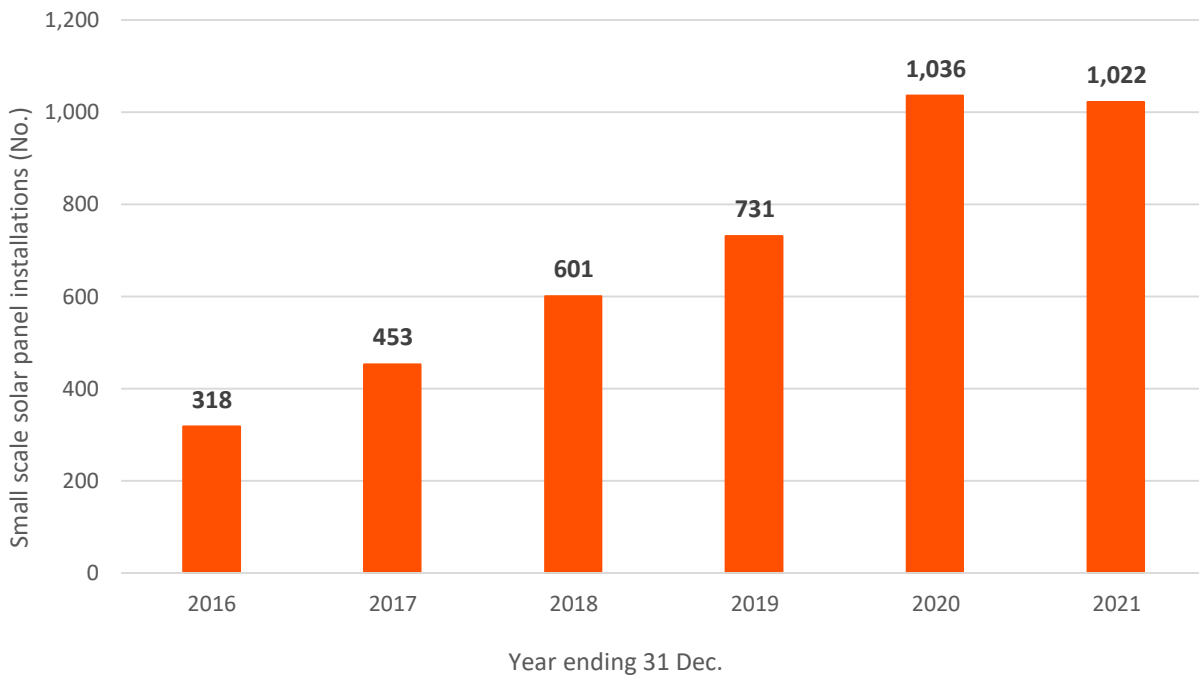


Chart 5 - Small-scale solar panel systems installed 2016-2021.

Council has a role in conserving energy and reducing emissions locally per capita by facilitating and encouraging greater efficiency of buildings, renewable energy, a variety of transport options, and reducing the amount of organic waste sent to landfill. Tracking corporate and community GHG emissions, energy mix and the number of solar installations will indicate progress.

Adaptation

Climate change will have long-term impacts locally. Council is gradually adapting its infrastructure, programs and service delivery to best serve the needs of residents, businesses, visitors and the environment, building resilience to a changing climate. Council's ongoing participation in the Resilient Hills and Coast Climate Change Adaptation Plan is a commitment to taking a proactive approach to climate change adaptation. Programs including wastewater treatment and reuse, tree planting and revegetation and fauna rescue and bushland management are examples of Council-specific initiatives that align with a climate adaptation response.

Many organisations are either being required (eg mandatory for Australian Federal agencies, SA State Government and large companies in Australia) or choosing to proactively undertake physical and transitional climate risk assessments of their core assets and services. This can help Councils prioritise which areas are at very high and high risks to focus risk reduction and climate adaptation efforts on.

WATER USE AND MANAGEMENT

Water resources in the district are under pressure due to increased development, population growth and climate change. Good management of water resources will support community needs while enabling ecosystems to regenerate and thrive. This section covers groundwater, surface water (including aquatic habitat), storm water and water use. The State Government and the Hills and Fleurieu Landscape Board play major roles in sustainable water management. Council's role lies in controlling the impacts of development, applying water sensitive urban design principles in its own projects, protecting and restoring the health of riparian areas on public land, and encouraging water conservation.

Groundwater

The groundwater systems of the Mount Lofty Ranges are not regional flow systems; rather, there is local flow into each stream forming the stream base flow. Groundwater discharge across catchment boundaries is negligible, as is flow out of the catchment. Stream flow is the major output from the system (*Hills and Fleurieu Landscape Board*).

Large-scale vegetation clearance has changed the groundwater system, leading to water salinisation. State government monitors both salinity and levels of groundwater, and these vary across the district.

Surface Water

Mount Barker district contains two broad categories of surface water resources. First are creeks that drain in a southwest direction and form part of the Onkaparinga Catchment (including Echunga Creek, Hahndorf Creek and the Biggs Flat area). Second are those that drain in an easterly direction towards Lake Alexandrina and form part of the Murray River Catchment (Bremer River, Angas River and Finnis River catchments). Lake Alexandrina is part of the Coorong and Lower Lakes wetland system, recognised internationally under the Ramsar Convention and protected under the *Environment Protection and Biodiversity Conservation Act 1999*.

Ground and surface water use is considered as part of water allocation plans developed for the eastern and western Mount Lofty Ranges through Landscapes SA. At the time of writing these were being reviewed.

Council is responsible for sections of watercourses throughout the district, however the majority of watercourses are located on private land. Due to multiple land ownership, management of creeks and riparian zones is often not coordinated and management approaches are not consistently applied, therefore, partnerships and collaboration are important. Watercourse management in some townships is especially challenging with multiple small house blocks forming the boundaries to creeks with no public open space access. Landscapes SA Hills and Fleurieu has programs aimed at helping rural landholders manage their watercourses.

The environmental condition of watercourses and associated ecosystems (for example Mount Barker Creek, Hahndorf Creek, Echunga Creek and Biggs Flat area) is described as fair to poor due to development impacts and previous and current land uses (*Hills and Fleurieu Landscape Plan*). Other surface water issues include:

- Reduction in base flows, possibly due to increased groundwater use and lower rainfall

- Increased peak runoff due to development which increases pollutant loads and reduces water quality
- Bank erosion due to grazing along streams

Aquatic Species

Flow regime is the key driver of river, creek and wetland ecosystems. Flow determines stream habitat, which contributes to the survival of aquatic species, including fish, invertebrates, amphibians, birds, reptiles and mammals. Altered flow regimes facilitate exotic species invasion, causing added predation and competition with native species, particularly in fish, crustaceans and macroinvertebrates.

Concerns for aquatic species in Mount Barker district watercourses include introduction of new aquatic pests and weeds, and threatened species recovery. The regional landscape plan highlights aquatic pests as a concern and addressing the issues as a priority.

The Hills and Fleurieu Landscape Board run community monitoring programs such as ‘bioblitz’ to help monitor the health of aquatic species and associated ecosystems.

River Murray (Mains) Water Use

The average mains water use per household in Australia is **175 kilolitres per year** (ABS 2021/22). Translated to the average Mount Barker household of 2.52 people this is around **70,000 litres per person each year**. Greater use of rainwater tanks, more water sensitive gardens and general household water conservation could reduce this amount.

According to the SA State of Environment Report 2023 there has been very little change in the volume of stormwater recycled for urban or agricultural use and water sourced from rainwater tanks. This represents an opportunity for the harvesting and reuse of this water to help secure water supplies for Greater Adelaide, including Mount Barker. Better use of greywater and rainwater tanks could also help secure future water supplies. Lower rainfall and drought will be an increasing concern in the district as rainfall rates are projected to decline with climate change. Good water management and reuse programs and infrastructure are necessary to ensure adequate water availability with no waste. The Hills and Fleurieu Landscape Plan lists, among other things, improving on-ground management of our water resources as a high priority through efficient water use across the region, encouraging reduction in urban runoff and the reuse of storm- and wastewater in urban centres and towns and supporting landholders to restore flows for water-dependent ecosystems

Council can play an influential role with the community to reduce fresh water use overall, including ongoing water recycling infrastructure, programs to encourage rainwater capture systems, water sensitive urban design and public information on water saving techniques.

Since 2006, new homes and extensions of over 50 square metres are required to install a 1500L rainwater tank with plumbing for home use, however the actual take up and impact of this policy is not well understood.

Stormwater

Stormwater is rainwater that flows across surfaces and into drains and street gutters. Traditionally it is not treated and flows directly into rivers, lakes and the ocean. However, stormwater from urban areas should ideally have a level of treatment prior to entering natural water bodies.

Development and urbanisation has increased stormwater volumes, which in turn affects environmental flows of natural water systems. Stormwater introduces pollutants including nutrients, hydrocarbons, heavy metals, suspended solids and pathogens. These pollutants reduce water quality and damage aquatic ecosystems in the receiving environment. The pollutant mass load and flow volume are further increased during storm events. Stormwater runoff will also contribute to watercourse bank erosion.

Stormwater management is the treatment and reuse of stormwater. The benefits of good stormwater management (often referred to as Water Sensitive Urban Design or WSUD) include as a water resource that can help with the greening of urban areas and as a water conservation measure. WSUD is essential to protect and help rehabilitate the ecological health of natural systems, including native species that live in and rely on natural water bodies. While Mount Barker manages stormwater according to standard engineering practices in its townships, including in new developments, it's recognised that more needs to be done to ensure that WSUD is applied well and consistently. In rural parts of the district, Landscape SA - Hills and Fleurieu provide advice to landholders on watercourse restoration and rehabilitation to minimise the effects of stormwater runoff.

Since 2011, **16 major land divisions** have been developed in the district that are the subject of regular surveillance for stormwater and silt management. During this time there have been approximately **580 investigations for development related stormwater issues**, including at least **2 significant interventions** involving the EPA.

Since 2017 there have been an additional **50 complaints** to Council's environmental health section, relating to other water pollution incidents.

Wastewater

Council operates South Australia's largest Council wastewater treatment plant (WWTP) and recycled water scheme, with a commitment to achieving 100% beneficial use of treated wastewater. The current WWTP has a capacity to treat up to 5.4 ML per day. Currently, the Wastewater Service is in the process of replacing the existing WWTP with a state-of-the-art facility, the Laratinga Water Recovery Plant (LWRP), which is expected to commence operations around 2027 at the same location. The LWRP will further improve the quality of water for receiving waters, namely the Mount Barker creek and Laratinga wetlands. The Mount Barker wastewater network and treatment facility were initially developed in the 1970s. In the late 1990s, recognising the need for enhanced environmental performance, the Council took a significant step by establishing the Laratinga Wetland. This artificial wetland was designed to effectively remove nutrients from the treated effluent discharged by the adjacent WWTP. Beyond its primary role in water purification, the wetland serves as a vital habitat for a diverse array of flora and fauna species, contributing to local biodiversity.

Wastewater from the townships of Mount Barker, Littlehampton, Nairne, and Brukunga is directed to the Council's treatment plant at Springs Road, Mount Barker. After treatment, the effluent is discharged to the Laratinga Wetlands for further processing. The treated wastewater from Mount Barker WWTP serves multiple purposes, including irrigation of parks and gardens, dust suppression, and various other

beneficial reuse. In Echunga, treated effluent is directed to the local golf course for summer watering, while in Meadows, recycled water is utilised as a non-potable water supply for approximately half of the township.

A significant development occurred circa 2010 through a public-private partnership between the Council and Hillgrove Resources, resulting in the construction of a pipeline to supply treated wastewater for use as process water in the Hillgrove Kanmantoo Copper Mine. The pipeline was extended to Callington, providing an alternative water source for irrigation, particularly for the Callington Oval and Callington Primary School. This initiative spanned nearly 18km and featured take-off points along the route, facilitating access to recycled water for various properties, thereby fostering economic and environmental benefits.

Since 2017, the volume of recycled water usage has declined notably due to the closure of open mining operations at Hillgrove Resources and the relatively wet weather experienced in South Australia (chart 6).

Currently, the Wastewater Service is extending the recycled water network within the Mount Barker Township, with plans to increase recycled water usage in newly developed areas for irrigation purposes. Additionally, efforts are underway to expand recycled water infrastructure in other areas, including Nairne and Hay Valley.

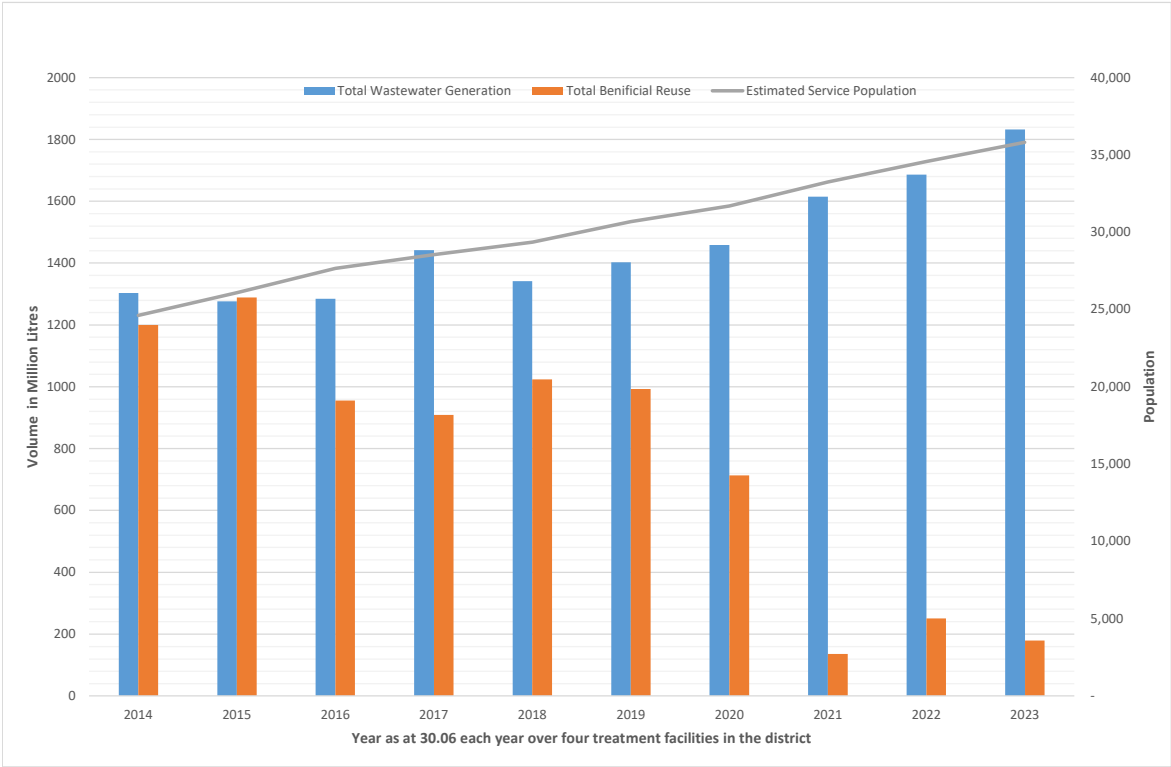


Chart 6: Wastewater generation, beneficial reuse and growth is service populations 2014-2023

Council water use

The operations and maintenance of council property and facilities uses water from 3 main sources; SA Water (mains water), Recycled Water and Ground Water (see chart 7).

Irrigation of Parks and Gardens is the highest user of mains water at approximately 40.5 megalitres (ML) with the next highest user being the Mountain Pool (due to be decommissioned in early 2025). Around

45.5 ML of groundwater is used to irrigate a number of our sports fields while nearly **50ML** of recycled water is used at other facilities, with the Summit Sports and Recreation Park being the largest user.

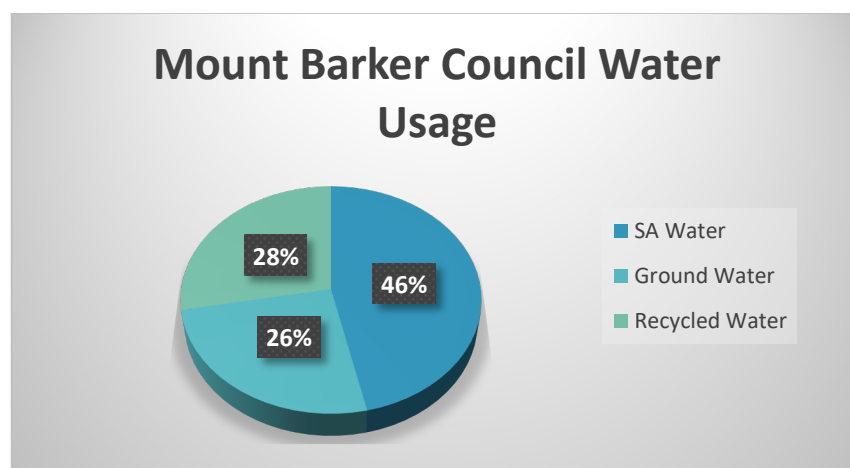


Chart 7: Mount Barker Council water usage 2023

Water use and agriculture

The ABS “Water Use on Australian Farms” dataset contains statistics on irrigation, including pastures and crops irrigated and water sources. These statistics provide data to support agricultural water use policy and planning by governments, industry, research organisations and regional communities. The water use and irrigation water source statistics presented here relate to the 2020-21 financial year and have been produced primarily using data from the 2020-21 Agricultural Census.

Some key statistics for the Mount Barker District from the “Water Use on Australian Farms 2020-21” dataset are:

- There are 150 agricultural businesses in the District
- 55 agricultural businesses irrigate (36%)
- Total volume of water taken from all sources – 4,124 ML (megalitres).

Water sources on farms

In 2020-21, 4,124 ML of water was taken from all sources for farming in the Mount Barker District. Almost 60% of the water came from groundwater (e.g. bores, springs, wells), with 17.1% coming from rivers, creeks, lakes etc. and 12.1% from irrigation channels or irrigation pipelines. Just over 10% of water use on farms came from on-farm dams or tanks (table 1).

Water Source	Total volume used (ML)	% of water from all sources
Water taken from irrigation channels or irrigation pipelines	499	12.1%
Water taken from on-farm dams or tanks	427	10.4%
Water taken from rivers, creeks, lakes, etc.	704	17.1%
Groundwater (e.g. bores, springs, wells)	2,472	59.9%
Recycled/re-used water from off-farm sources (e.g. re-use schemes, mines)	20	0.5%

Town or reticulated mains supply	3	0.1%
Total volume of water from all sources	4,124	100%

Table 1 – Water sources by type on farms, Mount Barker District (2020-2021). Source: ABS

The overall South Australian sources of water on farms differs to that of the Mount Barker District:

- 44% of South Australian water used on farms was sourced from groundwater, compared to 60% in Mount Barker District.
- 28% of South Australian water used on farms was sourced from rivers, creeks, lakes etc. compared to 17% in Mount Barker District.
- 24% of South Australian water used on farms was sourced from irrigation channels or irrigation pipelines, compared to 12% in Mount Barker.
- 1.8% of South Australian water used on farms was sourced from on-farm dams or tanks, compared to 10% in Mount Barker District

Water use on farms

In 2020-21, 3,992 ML of water was applied to farm use in the Mount Barker District. Almost 54% of water was applied to vegetables, 20.5% to grapevines, 13.7% to Fruit trees, nut trees, plantation or berry fruits and nearly 11% to Pastures (including lucerne) and cereal crops used for grazing or feed (Table 2).

Water Use	Total volume of water applied (ML)	% of all water use
Pastures (including lucerne) and cereal crops used for grazing or fed off	435	10.9%
Pastures (including lucerne) and cereal crops cut for hay and silage	27	0.7%
Vegetables	2,151	53.9%
Fruit trees, nut trees, plantation or berry fruits	548	13.7%
Grapevines	817	20.5%
Nurseries, cut flowers and cultivated turf	15	0.4%
Total volume of water applied	3,992	100%

Table 2 – Water use by type on farms, Mount Barker District (2020-2021). Source: ABS

The overall South Australian water use on farms differs to that of the Mount Barker District:

- 29% of South Australian water use on farms was for grapevines, compared to 20.5% in Mount Barker District.
- 25% of South Australian water use on farms was for fruit trees, nut trees, plantation or berry fruits, compared to 13.7% in Mount Barker District.
- 23% of South Australian water use on farms was for pastures (including lucerne) and cereal crops used for grazing or fed off, compared to 10.9% in Mount Barker District.
- 9.7% of South Australian water use on farms was for pastures (including lucerne) and cereal crops cut for hay and silage, compared to 0.7% in Mount Barker District.

- 7.7% of South Australian water use on farms was for vegetables, compared to 53.9% in Mount Barker District.

The “Water Use on Australian Farms” dataset also contains statistics regarding the total area watered by type of water use, per hectare (chart 7). In the Mount Barker District:

- Vegetables were the most intense water use in farming per hectare (8.3 ML per hectare)
- Fruit trees, nut trees, plantation or berry fruits used 4.5 ML of water per hectare
- Nurseries, cut flowers and cultivated turf used 3.0 ML of water per hectare.

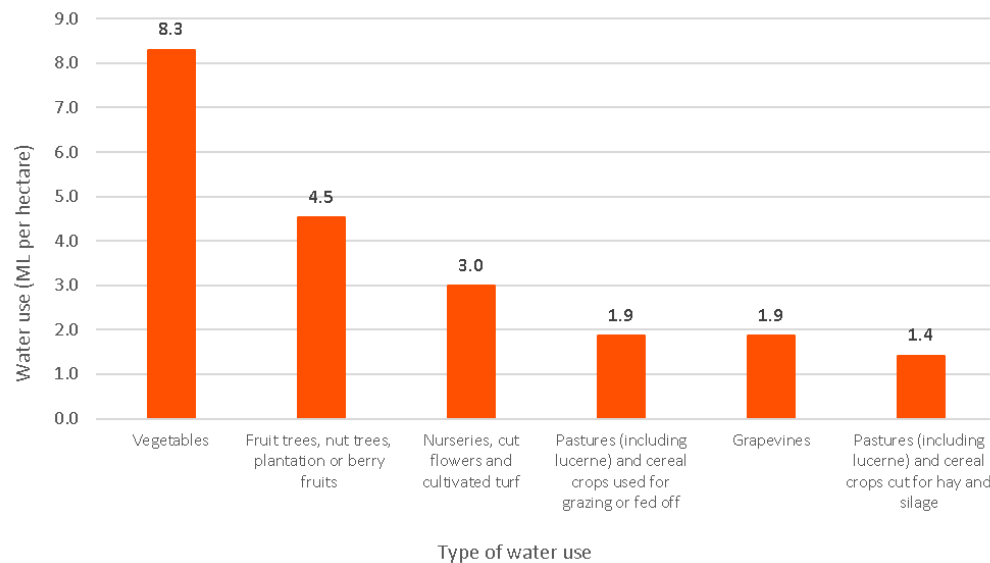


Chart 8 – Water use per hectare by type of water use (2020-21). Source: ABS

Regional landscape indicators

Regional landscape indicators can be a useful summary of the Biodiversity, land Management and Water topics. Table 3 is an extract from the Hills and Fleurieu Landscape Plan 2021-2026 which shows the condition and trend of key landscape indicators across the region, many of which are relevant to the Mount Barker Council district, as discussed above.

Indicator	Condition	Trend in health
 Soil acidity	 Poor	 Declining
 Pest animals	 Poor	 Variable
 Weeds	 Poor	 Variable/Declining
 Groundwater	 Fair	 Stable/Declining
 Surface water	 Fair	 Stable
 Native vegetation	 Variable	 Stable/Declining
 Terrestrial ecosystems	 Variable	 Declining
 Freshwater fish & macro-invertebrates	 Fair/Poor	 Declining
 Coastal & marine ecosystems	 Good	 Variable
 Carbon emissions	 Poor	 Unknown
 Conservation volunteering	 Unknown	 Increasing
 Land manager engagement	 Fair/Good	 Stable

Table 3 – Landscape indicators Hills and Fleurieu Landscape region 2021. Source: Hills and Fleurieu Landscape Plan 2021-2016

WASTE MANAGEMENT

Mount Barker District Council is a member of the Adelaide Hills Region Waste Management Authority, which operates the Brinkley Landfill. All waste from the district, that is not otherwise diverted for recycling or composting, is sent to this landfill. Council operates a transfer station at Windmill Hill in Hahndorf. In 2019, Council adopted a new Waste to Resources Management Plan (Waste Plan) [Waste to Resources Management Plan](#) to meet the resource recovery targets in South Australia's Waste Strategy 2015-2020. The Waste Plan set a target of a per capita 20% reduction of waste to landfill by 2025, advancing the 10% target set in the Environment Plan 2017.

Townships have a three-bin collection system with weekly 140L waste collection and alternate fortnightly 240L kerbside green waste and recycling collection. Rural areas outside of townships receive weekly kerbside waste and recycling collection only.

Waste to landfill from the kerbside collection system decreased while recycling and organics rates increased. However, waste diversion rates overall have not shifted substantially since 2011 and total waste disposal has increased at a faster rate than population growth. This indicates there is room for more waste diversion.

In 2018/2019, a total of **12,879 tonnes** of waste was collected through the kerbside waste program. Approximately 47% of this waste was diverted to recycling or green waste composting with the remaining **53%** going to landfill. At the time this was equivalent to around **190 kg of waste disposed to landfill per household each year, per person.**

In 2024/25 a total of **16,410 tonnes** of waste was collected through the kerbside waste program. **47%** of this waste was diverted to recycling or green waste composting with the remaining **53%** going to landfill, the equivalent of **194 kg of waste disposed to landfill per person each year (see charts 9 and 10)**

The data shows that there has been little change in the amount of waste diverted from landfill as a percentage. With population growth the amount of waste generated each year is increasing as is the overall amount of waste generated for each person.

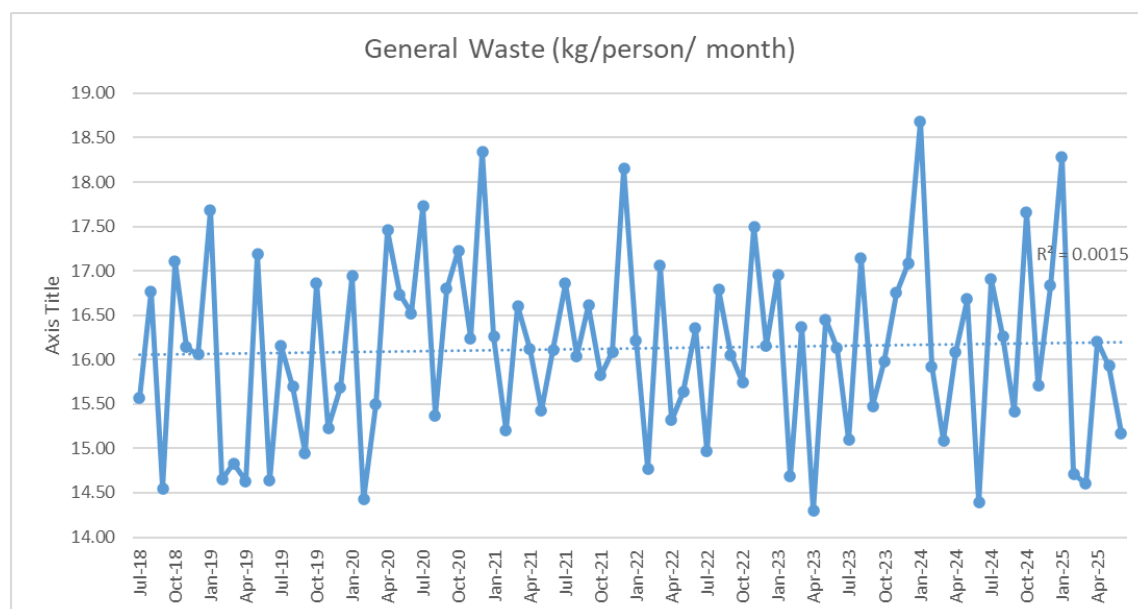


Chart 9: General Waste (kg/person/month)

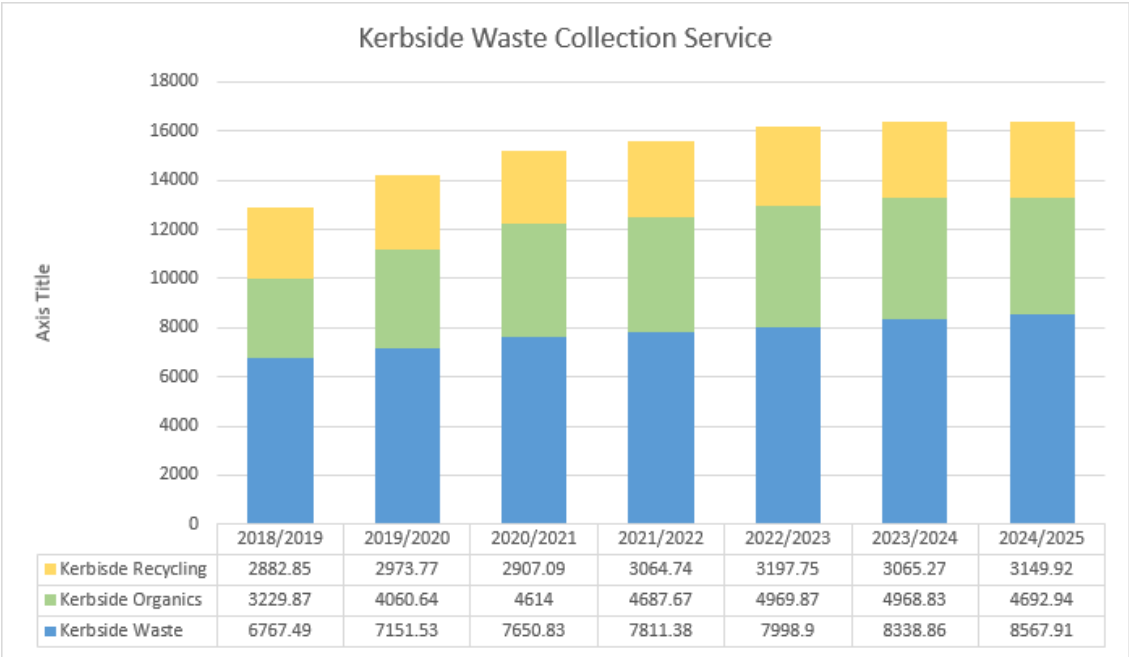


Chart 10: Tonnes of waste, organics and recycling materials and diversion rates, 2018/19 - 2024/25)

URBAN ENVIRONMENT

Urban environments are human settlements with relatively high population densities; a mix of residential, commercial, industrial, institutional land uses and open spaces; and built infrastructure to support the population. Mount Barker has several urban townships within the district, with significant growth occurring in greater Mount Barker and Meadows.

The 30 Year Plan for Greater Adelaide identified Mount Barker as a regional centre for the eastern Mount Lofty Ranges. Approximately 1300 hectares adjacent to the Nairne and Mount Barker townships were rezoned from rural land to designated growth areas for urban expansion. **As of January 2024, the district population was 44,772. Population growth is predicted to increase by 45% by 2046, to approximately 65,000. Most of this growth will be directed to these designated expanded urban areas.**

Population density of the Mount Barker district overall is 71 persons per square km but varies significantly throughout the district. As population grows, density will be directed primarily to the designated urban growth areas rather than across the district overall.

Population growth and development in urban areas affects the environment through impacts to nature and wildlife; increased impervious surfaces, which affect stormwater runoff and contribute to the urban heat island effect; encroachment on adjacent lands such as agriculture or natural areas; and increased energy consumption, water use, waste production, emissions and transport needs. The environmental footprint of urban areas can capture and illustrate this information simply.

Housing

Since 2017 there have been 3898 houses approved for construction in the district (to March 2024), an average of 613 each year. An analysis of one of these years (2019/2020) showed that 89% of houses

built achieved the national construction code minimum energy rating requirement of 6.0 stars, 13% achieved between 6.0 and 6.5 stars and there were no houses built that achieved higher than 6.5 stars.

Between 2017/18 and 2019/20 the average size of new homes grew by 15% increasing the total heating and cooling energy load by 14%. Further, the number of people living in houses didn't increase with there being 10,000 empty bedrooms in the district, or 58% more bedrooms than people (*House of Tomorrow Stage one report: Mount Barker District Council*). This data suggests there is a mismatch between the types of houses being built and the housing needs of the community. Especially noteworthy is the lack of 1 and 2 bedroom houses.

The impact of a growing urban environment can be mitigated somewhat through good design. **Water Sensitive Urban Design (WSUD)** can help to offset the effects of increased impervious surfaces that come with growing urbanisation. WSUD is an integrated approach to water resource management developed through engineering, biotechnology and environment fields, with the aim to maintain water balances, enhance water quality, encourage water conservation and preserve water-related environmental and recreational qualities (*Beecham 2010*). The technologies associated with WSUD include rainwater tanks, vegetated swales, biofiltration swales, bioretention basins, sand filters, infiltration systems and basins, vegetated filter strips, permeable pavements, wetlands, ponds and green roofs.

Similarly, **Biodiversity Sensitive Urban Design (BSUD)** is an approach to urban planning and design that prioritises the preservation, enhancement, and integration of biodiversity within urban areas through the application of key principles such as green infrastructure, native vegetation integration, habitat creation, water management, establishing wildlife corridors and community engagement. BSUD seeks to minimize the negative impacts of urbanisation on natural ecosystems and species while fostering sustainable and resilient urban landscapes. Changes in technology can help monitor and manage issues associated with wildlife, for example Council is participating in an electronic virtual wildlife management fencing tool designed to discourage animals from crossing busy roads.

Tree canopy

Tree canopy cover is another component of good urban design as trees provide shading and help to keep urban areas cooler, among many other benefits. As of April 2024 there were **24,162 trees on council managed land, as recorded in the software program, Forestreet, comprising 16,675 street trees and 7487 reserve trees**. This is estimated to be around 50% of all tree assets on public land, with Council staff continually adding more trees to the database.

Canopy cover has been mapped in the township of Mount Barker and canopy mapping will be extended to other townships in the future. The current average canopy cover in Mount Barker is **16.4%** which is below the average for Greater Adelaide (17%) and well short of the 30% considered desirable to minimise the urban heat effect and provide for liveable, healthy communities. A canopy cover target will be considered through the future development of a greening plan. The 3-30-300 rule depicted in diagram 1 is being used in many local area planning initiatives as a way of setting targets and engaging with the community.

the 3-30-300 rule:



Diagram 1: the 3-30-300 rule C. Konijnendijk via Green Spaces Better Places

Green Adelaide has recently developed a new Urban Greening Strategy. The Strategy sets an increase in tree canopy coverage to 30 per cent by 2055 and aligns to the Greater Adelaide Plan greening target.

LAND MANAGEMENT

Mount Barker contains a variety of lands and the way these are managed have an impact on the environment. This section considers agricultural land, open spaces and former industrial sites which are now contaminated. The urban environment is discussed in a separate section below.

In addition to Council, Landscape boards, land owners and volunteers all play a role in sustainable land management.

Agricultural Land

Sustainable agricultural practices can support healthy soils, improve productivity and extend the life of a farm, all of which have mutual social, economic and environmental benefits. Common issues that arise on agricultural lands in the Mount Barker district include the acidification, salinity, fertility and erosion of soil, as well as weed growth and pest animals.

Agricultural land management is largely a state concern; however, Council monitors the changes in land use over time from agriculture to more urbanised development. Industry trends in agricultural land use, such as increases in farming practices with more intensive water use, are also useful indicators of changes to land management.

Since 2021 Council has been involved in a regional project focussed on food systems. The aim of the Hills and Fleurieu Local Food Future project is to support a resilient food system to ensure healthy, quality, sustainably produced and supplied food is available to all.

Land use

In 2021, 90.1% of Mount Barker District land (536 square kilometres) was primary production land, with 5.6% (33.6 square kilometres) as residential land, 3.2% (19 square kilometres) as parkland and 0.4% (2.1 square kilometres) as other land (table 4).

Since 2016:

- The proportion of Mount Barker District land used for primary production decreased by 1.2% (-7.28 square kilometres).
- The proportion of Mount Barker District land used for residential use increased by 1.8% (+10.98 square kilometres).
- Other types of land use decreased by 0.6% (-3.45 square kilometres).

Land use category	2021 Area (Sq. Km)	2021 % of all land	2016 % of all land	2016-2021 % change
Primary Production	536.0	90.1%	91.3%	-1.2%
Residential	33.6	5.6%	3.8%	+1.8%
Parkland	19.0	3.2%	3.2%	no change
Other	2.1	0.4%	0.9%	-0.6%
Water	1.6	0.3%	0.3%	no change
Commercial	1.1	0.2%	0.2%	no change
Education	0.8	0.1%	0.1%	no change
Industrial	0.7	0.1%	0.1%	no change
Hospital/Medical	0.06	0.01%	0.01%	no change

Table 4 – Land use in the Mount Barker District 2016-2021. Source: ABS

Open Spaces

Council is responsible for over 836 ha of open space which is an increase of 136 ha since 2017 with more land gifted to Council as part of new development. Of this land, 544.7 ha is owned by council with the remaining 291.6 ha crown land under council's care and control. These lands include parks, sport fields and natural areas; lands for council operations, community and tourism use; as well as undeveloped land. Both made and unmade road reserves make up the remaining open space in the district with 432km of sealed roads and 409 km of unsealed roads and 150km unmade roads . Many of these open spaces and road reserves contain remnant native vegetation which is important for biodiversity, however, much of it is fragmented and in declining condition.

Generic Community Land Management (CLM) plans are in place for all Council reserves but overdue for updating. CLMs are classified under three categories: Natural Areas, Parks, and Recreation & Sport. The Natural Area schedule contains one or more of the assets that contribute to biodiversity outcomes such as bushland, watercourses, wetlands and grasslands. CLM plans are intended to help ensure both appropriate management of council-owned land and community involvement in decisions about these spaces and contain strategies to improve environmental conditions of open spaces to benefit biodiversity, air quality and water management:

- Natural Areas: Linking natural areas, native species revegetation, reduced grazing on natural areas, weed reduction, reduction of bushfire impacts, reduced encroachment
- Parks: Growing park lands
- Recreation & Sport: River sediment control, natural stormwater control, riverbank stabilisation, reduced dumping, reduced encroachment

Contaminated sites

Certain agricultural, industrial and commercial practices release chemicals that may cause soil and/or groundwater contamination. The EPA notifies Council of site contamination audits within the district and records them in an online index available to the public.

The EPA may undertake investigations where site contamination extends outside the boundaries of a contaminated site, possibly affecting adjacent land parcels. Currently, there are no such investigations of contaminated sites in the Mount Barker district.

AIR QUALITY

Ambient air quality is affected by the emission of air pollutants, how well the pollutants disperse in the atmosphere and the natural or chemical processes they are influenced by. There are many emission sources in the greater Adelaide region, from domestic and transport activities to industrial activities. Dispersion of pollutants is influenced by local meteorology and topography and will vary from one area to another. Air pollutants monitored in the greater Adelaide region include particulate matter from industrial boilers, motor vehicles, and domestic wood heaters; carbon monoxide from motor vehicles; lead; oxides and nitrogen oxides; sulphur dioxide; and, ozone. All pollutants that exist are at levels below the national standard.

In the Mount Barker district, the air quality is significantly better than in the Adelaide CBD (SA EPA), and better than in other cities across Australia or around the world. However, air quality can be a concern in parts of the district under certain conditions; wood fire smoke, dust and tailpipe emissions may pose some concern at times. The Neutrog business at Kanmantoo has been of significant concern to residents for odour and dust issues and is the subject of EPA regulation and investigations.

Since 2017 there have been **108 complaints** received by Council (15 per year) about air pollution, mostly related to domestic wood fires and burning off.

Smoke

The south-eastern part of Australia is subject to severe wildfires due to hot, dry and windy weather conditions in summer. Despite this, the chemical properties of the Australian bushfire emissions are not well characterised and only limited chemical and physical measurements are available to assess the relationship between wood smoke emissions and ambient particle concentrations. Studies have shown that bushfires decrease air quality and increase particulate matter that are smaller than 10 micrometres. This type of air pollution can irritate the eyes and throat. People with existing heart or lung conditions can experience an increase in symptoms, including wheezing, chest tightness and difficulty breathing.

The Country Fire Service (CFS) tracks and records all fires with the last major bushfire recorded in the district being the December 2019 Cudlee Creek fires and the Cherry gardens fires in January 2021.

Wood heaters release the same emissions and fine particles as bush fires, and can have the same health effects. An estimated 14% of households in South Australia use wood fire for heating (SA EPA). Given the Mount Barker district has lower temperatures than metropolitan areas, the percentage is likely much higher in this district however there is no available empirical data to confirm this. In valleys on still winter days, smoke from wood heaters can collect and cause problems for asthma and other respiratory conditions. Smoke from domestic wood stoves used for heating has been identified as an issue in parts of the district and council is partnering with the EPA to monitor this and to provide education and awareness raising to try and reduce wood smoke pollution. To help inform this work, a survey on community attitudes was conducted by the University of Tasmania in April/May 2024.

As well as the impact of wood fires on human health, the sourcing of wood from unsustainable operations and collection of wood from native vegetation areas threatens biodiversity values.

Dust

At construction sites, soil is excavated, loosened and carried away by wind. These dust particles are inhaled and can have adverse impacts on human health, particularly for those with respiratory diseases. Dust release can be minimised in various ways, including limiting soil movement on windy days and reducing vehicle speeds. Since 2011, 16 major land divisions have been established in the district and are the subject of regular surveillance for dust and other issues. During this time, at the allotment level, there were approximately **60** interventions relating to dust nuisance (data provided by Council's development compliance officer, April 2024).

Other dust nuisance issues relate to the many kilometres of unsealed roads including those used by industry such as the Hanson quarry and (historically) Hillgrove mine at Kanmantoo. These issues are part of the licenses for these operations and compliance is the responsibility of the Department of Mines and Energy, however Council works with industry and government to help address dust nuisance issues where appropriate (for example road sealing).

Transport

The district currently has **432km of sealed roads (an increase of 108km since 2017)** and **409 km of unsealed roads (a decrease of 30km since 2017)**. Public transport use is by bus only and is limited by connections from rural areas and some townships to Mount Barker. Private vehicle use is the dominant transport mode.

Public transport use is lower in the Mount Barker District compared to Greater Adelaide (4% and 9% respectively (*Australian Bureau of Statistics*)). The existing public transport (bus) network in Mount Barker is a mix of all-stops, limited and express buses from the two Park and Ride facilities in Dumas Street and Dutton Road, Mount Barker. Mount Barker has a total of 41 bus routes with 10 routes operating to Adelaide CBD via the South Eastern Freeway. The eight regional bus routes extend to Strathalbyn, Macclesfield and Murray Bridge.

The KeoRide on-demand bus service has provided additional public transport options in Mount Barker, Littlehampton and Nairne since being introduced in January 2020, however this service has yet to be made permanent.

Air pollution (including GHG emissions) from motor vehicles is directly related to the number of vehicles on the road and their energy source. Between 2016 and 2021 the number of vehicles on the road decreased as a proportion of population but the total number of cars on the road increased (ABS). Note that these numbers have been affected by the Covid pandemic including more people working from home.

The change in the main method of traveling to work is shown in table 5.

Main method of travel to work	2016	2021	Change 2016-2021 (%)	Change 2016-2021
Car (as driver)	64.5%	67.3%	-2.8%	+1,913
Did not go to work	12.8%	12.2%	-0.6%	+349
Worked at home	5.5%	11.7%	+6.2%	+1,449
Car (as passenger)	4.5%	3.7%	-0.8%	+11
Bus	4.5%	3.0%	-1.5%	-138
Walked only	1.9%	1.9%	no change	+80

Other	1.1%	1.2%	+0.1%	+54
Truck	0.7%	0.6%	-0.1%	+1
Motorbike	0.9%	0.5%	no change	-51
Bicycle	0.2%	0.3%	no change	+22

Table 5 – Main method of travel to work for employed Mount Barker residents, 2016-2021. Source: ABS

Continuing with the current high levels of car based travel within the district, and in particular the Greater Mount Barker urban area, can be expected to contribute to significant levels of traffic congestion, residential amenity impacts, poor road safety outcomes, wildlife impacts and increases in local air pollution.

Petrol and diesel vehicles continue to be the dominate fuel types with hybrid electric and battery/fuel-cell electric making up just 2.2% of vehicles registered in the district (chart 9 - Bureau of Infrastructure and Transport Research Economics (*Bureau of Infrastructure and Transport Research Economics*)). This data will likely shift quite quickly as more electric vehicles come on to the market. For example, in the first quarter of 2024, 7.3% of all new car sales in South Australia were Electric Vehicles (*Motor Trade Association via InDaily*). A shift to electric vehicles (EVs) will reduce the tail pipe pollution from those vehicles.

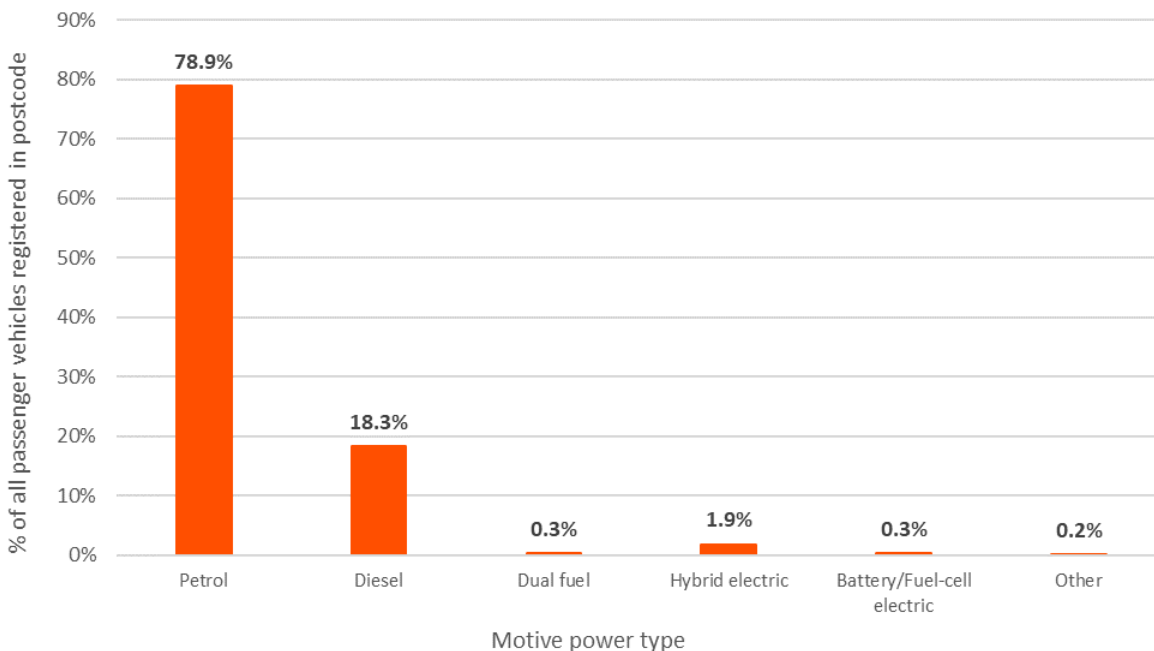


Chart 11 – Type or motive power for passenger vehicles registered in Mount Barker postcodes (incl. overlapping postcodes) (2023). Source: BITRE

CURRENT AND EMERGING TRENDS

The Mount Barker District faces a rapidly evolving environmental and social landscape, with both challenges and opportunities shaping the way we plan and act for sustainability. While Council plays a critical role in addressing these issues, many factors influencing the district's future extend beyond its direct control. Collaboration with the community, businesses, other levels of government, and industry will be essential to respond effectively. While many of these were mentioned within the state of the environment chapter, a summary here can help Council anticipate future pressures, harness opportunities, and work in partnership to achieve the best outcomes for our local environment and the community.

URBAN GROWTH AND LAND USE PRESSURES

The Mount Barker District is transitioning into a small city, with rapid urban expansion transforming rural lands and impacting biodiversity, water quality, and agricultural areas. This growth presents opportunities for sustainable planning and infrastructure, balancing development with environmental preservation. Thoughtful urban design can reduce negative impacts by incorporating green spaces, promoting urban greening, and ensuring energy-efficient, climate-resilient buildings.

LOW CARBON ECONOMY TRANSITION

Climate change continues to affect rainfall patterns, temperatures, and extreme weather events, posing risks to ecosystems, biodiversity, infrastructure, and community well-being. At the same time, South Australia's leadership in renewable energy presents a significant opportunity for the district to embrace a low-carbon economy. With many local homes already equipped with solar panels, we can build on this momentum to further reduce emissions through energy-efficient practices, electrification of transport, and integrating renewable technologies in new developments. Purchase power of Council also presents opportunities such as using recycled materials in road renewal projects, we can reduce the carbon footprint of those projects, while diverting waste from landfill.

ADVANCING CIRCULAR ECONOMY

The shift from a linear "take-make-dispose" economy to a circular model offers significant environmental and economic benefits. By promoting reuse, repair, recycling, and the development of closed-loop systems, the district can reduce waste generation and create local jobs. Opportunities include expanding food organics and garden organics (FOGO) programs, improving resource recovery technologies, and integrating circular economy principles into procurement and construction.

DECLINING NATIVE VEGETATION AND HABITAT LOSS

The amount and condition of native vegetation, significant trees and habitat areas in the Mount Barker District is deteriorating due to pressures from urban expansion, invasive species, climate change and land clearing. This loss threatens biodiversity and ecosystem health, reducing habitat for native flora and fauna, including species of conservation concern. Addressing these challenges requires balancing development with conservation through initiatives such as protecting significant trees, restoring degraded landscapes, and integrating native vegetation into urban planning. Opportunities also exist to support private landowners with incentives to conserve and enhance native habitats on their properties.

WATER RESOURCE MANAGEMENT

Water quality in the district's creeks and streams is under pressure from urban and agricultural runoff, and while groundwater levels remain stable, sustainable management is essential. Advances in water-sensitive urban design (WSUD) and stormwater harvesting provide opportunities to improve water quality and enhance local water security. As the district grows, innovative approaches to water reuse and conservation will become increasingly critical.

TECHNOLOGICAL INNOVATION

Advancements in technology are reshaping environmental management. Smart sensors, data analytics, and artificial intelligence offer opportunities to monitor ecosystems, optimise resource use, and improve operational efficiency. For instance, automated systems for tracking waste streams or smart irrigation for urban greening can enhance sustainability outcomes while reducing costs. The next ten years are also likely to see transition of Council fleet and waste management trucks to electric or hydrogen.

POLICY AND REGULATORY SHIFTS

Policy changes at state and federal levels, such as development planning, emissions reduction targets, state landfill levy increases, and biodiversity conservation frameworks, create both challenges and opportunities for the district. While adapting to new requirements may require adjustments, they also open pathways for innovation, funding, and alignment with broader sustainability goals.

COMMUNITY ENGAGEMENT AND BEHAVIOUR CHANGE

Strong community interest in sustainability, coupled with growing public awareness of environmental issues, offers a foundation for positive change. Engaging residents and businesses through education, participatory initiatives, and local partnerships can drive shifts toward sustainable practices. The challenge lies in fostering meaningful engagement and overcoming barriers to participation in an increasingly digital and information-saturated world.

BUSINESS AS USUAL

Increasing community expectations around environmental stewardship and climate action are creating more products, services and marketing in the business sector. For example, some tourism operators are getting involved proactively through programs such as 'Solar Slice' where a portion of ticket sales to events goes towards funding environmental or climate action programs.

RESILIENT COMMUNITIES

As extreme weather events and bushfires become more frequent, the need for climate-resilient communities, infrastructure and disaster preparedness grows. Opportunities exist to integrate resilience into transport networks, stormwater systems, and public facilities. Incorporating nature-based solutions, such as urban greening and wetland restoration, can provide multiple benefits, including flood mitigation, biodiversity enhancement, and improved urban cooling.

TARGET SETTING PRINCIPLES

The themes under the State of the Environment chapters include current monitoring data, recent trends and specific information to inform target setting. However there are some overall principles useful in developing evidence based and practical targets in the updated strategy. These are:

- Aligned - Align targets with those in existing strategies (from local to global, where relevant).
- Strategic - Be clear on why the target is being set, with a clear link between strategic objectives and the selected indicators (only measure progress towards your desired goal).
- A realistic stretch - Balance the local context (including the baseline and constraints) with the desired outcomes and ambition.
- Compelling - Set indicators and targets that are easily understood and can be used to inform, engage and inspire stakeholders.
- Transferable - Gather indicator data that is useful for multiple purposes, including adaptive management that prioritises action and investment where it is needed most.
- Cost-effective - Be pragmatic and practical by only setting targets that can be measured using data that is already collected, or that can be collected in a cost-effective manner (including cost of staff time).
- Credible - Use indicators, targets and data collection methods that are widely accepted and supported by scientists and experts.
- Long and short term - Balance indicators with long and short timescales (eg. canopy cover and tree planting).
- SMART - Specific, measurable, attainable, relevant, and time bound.

CONCLUSION

The state of the environment in the district is mixed and Council has led or participated in many initiatives to protect and enhance the condition of the environment. However population growth, urban development and climate change are all making our environmental challenges worse and will continue to do so unless more concerted action is taken. Council, in partnership with others, has opportunities to make ongoing positive impacts on the environment, especially in key areas of biodiversity, climate change mitigation and adaptation, water use efficiency, waste management and urban design. The information contained within this report will be used to help develop the Environment and Sustainability Strategy and key performance indicators will be monitored to measure progress.