

Alexandrina Council



Environmental Action Plan 2030



In the spirit of reconciliation, Alexandrina Council and its communities acknowledge the Traditional Owners of this region and acknowledge their connections to the land, waters and community. We respect their rights, interests and obligations to speak and care for their traditional lands and waters in accordance with their customs, beliefs and traditions. The Alexandrina Council region intersects the traditional lands of the following Aboriginal Peoples:

- > Ngarrindjeri Nation**
- > Peramangk Nation**
- > Kurna Country.**

We pay our respect to their Elders past, present and future.

On 8 October 2002, Alexandrina Council and the Ngarrindjeri Nation entered into a Kungun Ngarrindjeri Yunnan (Listen to Ngarrindjeri People Talking) Agreement. The KNY Agreement was the first of its type to be entered into between the Ngarrindjeri Nation and any level of Government. The KNY Agreement includes an expression of sorrow and apology to the Ngarrindjeri People and articulates a joint commitment by Council and the Ngarrindjeri Nation to seek ways of working together to uphold Ngarrindjeri rights and advance Ngarrindjeri interests.

In implementing this Plan, Alexandrina Council will have regard to the Ngarrindjeri Vision for Country as expressed in the 2007 Ngarrindjeri Nation Yarluwar-Ruwe (Sea Country) Plan:

“Our Lands, Our Waters, Our People, All Living Things are connected. We implore people to respect our Ruwe (Country) as it was created in the Kaldowinyeri (the Creation). We long for sparkling, clean waters, healthy land and people and all living things. We long for the Yarluwar- Ruwe (Sea Country) of our ancestors. Our vision is all people Caring, Sharing, Knowing and Respecting the lands, waters, and all living things.”

Contents

>	Acknowledgment of Country	ii
>	Message from the Mayor and CEO	02
>	Introduction	04
	Our local context	05
	Our decade to make change	05
	About this Plan	07
>	1. Biodiversity	12
	We are part of nature	13
	Our natural environment	14
	Challenges	16
	Opportunities	16
	Stewardship	17
	Strategic actions – Biodiversity	23
>	2. Waters	26
	Our natural environment	27
	Challenges	29
	Opportunities	29
	Stewardship	30
	Strategic actions – Waters	35
>	3. Community	38
	Everything is connected	39
	Walking together	40
	Connecting with A2040	40
	Challenges	41
	Opportunities	41
	Stewardship	42
	Leading by example	46
	Strategic actions – Community	47
>	Appendix I	50
	Ongoing actions	51
>	Appendix II	56
	Connection to other Council plans and policies	57

Message from the Mayor and CEO

In 2020 we formulated A2040, Alexandrina's 20-year strategic vision, and in doing so put our future in the hands of the community. What we heard was a desire for our region to thrive as a **Liveable, Green and Connected** place for all to enjoy.

So many of the people who choose to live their lives, operate businesses, meet-up with groups or like-minded people or visit Alexandrina do so because this is a place where it's easy to feel alive – part of nature.

This Environmental Action Plan 2030 expresses our commitment and articulates that we will be worthy stewards of the land and waters of this ancient part of the continent; a place that has been integral to the lives of the Ngarrindjeri, Peramangk and Kurna First Nations for millennia.

As a community we have a shared responsibility to look after our natural environment. This plan sets the context, the opportunities, and challenges for making the changes needed to protect our ecosystems, and to manage and enhance our Biodiversity, Waters and Communities.

We are extremely proud to present the Environmental Action Plan 2030 to guide Council's leadership role in this vital area into the future. We give thanks to everyone who took the time to contribute to development of this Environmental Action Plan 2030, and we look forward to working with you to help create a Liveable, Green, and Connected future for our community.

Kind regards



Mayor **Keith Parkes**



Nigel Morris
Chief Executive Officer





Introduction

We are part of the environment. Every organism has its place in a diverse network of relationships that have unique places in our landscapes and waters. Alexandrina Council has a responsibility to lead, advocate and act for the benefit of our local environment.

Alexandrina Council is known nationally and internationally as a region of environmental importance and natural beauty. The Ngarrindjeri, Peramangk and Kurna Traditional Owners have lived here with nature for tens of thousands of years as the custodians of the land and waters. From our 25 kilometers of coastline to the upper catchment of the Mt Lofty Ranges, from the Coorong and Murray Mouth to the stringybark forests or mallee woodlands, Alexandrina is proud of its many ecosystems and species found here.

As a community we have a shared responsibility to look after our natural environment. This Environmental Action Plan 2030 ('the Plan') sets the context, as well as some of the opportunities, and challenges for making the changes needed to protect our ecosystems, and to manage and enhance our Biodiversity, Waters and Communities.

Alexandrina Council recognises that our activities have an impact on the environment and that the community expects us to lead by example. This applies to all that we do, not only the work that may be more traditionally associated with 'the environment', or a specific department of our organisation. Councils are well positioned to effect change in communities, especially in partnership with other government, commercial and community organisations and individuals.

In addition to ensuring we implement appropriate measures to meet our sustainability goals, we can also foster a strong sense of environmental stewardship among our employees, residents, businesses, and visitors to our region.

It is also important that Council's management practices are informed by best available science and that our priorities and actions align with relevant global, national and state strategies and targets.

Council's ability to act effectively is partly dependent on funding for environmental activities. This is a constant challenge and Council will focus on facilitating the delivery of outcomes in partnership with First Nations peoples, our community, and all level of government, through mutually beneficial relationships.



Our local context

“Care for Country, listen to Country”.

- Cedric Varcoe, 2022 -

Alexandrina’s population is projected to increase, at the same time our communities are experiencing the impacts of climate change, such as reduced rainfall, warming, extremes of weather and natural disasters like bushfires and flooding. Forward-thinking planning and urban design strategies will be critical to ensure that, despite increased urbanisation, we are able to protect existing natural areas and indeed, allow for their extent to increase.

We are all part of the environment, and the Plan acknowledges the significance of biodiversity and waters for ecological and human communities. It acknowledges especially the role First Nations peoples play in Care for Country, and the value the community places in protecting our natural environment and regenerating the land.

The Plan’s priority actions must consider this and pragmatically address opportunities and challenges as they arise. We will need to be responsive to these factors and adapt our activity as we annually review progress against our priority actions.

Our decade to make change

We are part-way through a decade that is widely considered to be our last to change the trajectory of global warming and biodiversity loss.

The 2021 Intergovernmental Panel on Climate Change’s (IPCC’s) Sixth Assessment Report shows that the world will reach or exceed 1.5°C of warming within the next two decades. Whether we limit warming to this level and prevent the most severe climate impacts depends on actions taken this decade.

“Climate change is no longer a scenario. It is the baseline for decision making.”

- Deloitte Access Economics, 2020 -

We have a responsibility to accelerate our work to reduce emissions and build our resilience to the effects of climate change. This is why Alexandrina Council has declared a Climate Emergency, and Alexandrina’s Climate Emergency Action Plan sets out how we, as a community, can respond together by mitigating our contributions to climate change and doing what we can to adapt to its effects. The natural environment is very much affected by climate change, and it is known that healthy, biodiverse ecosystems can also be part of the adaptation and resilience story.

At a national level, the Australia State of the Environment report of 2022 presents more sobering news of the state of natural environments, with increases in the number of threatened animal and plant species, deterioration of marine environments, high rates of land clearance and the proliferation of invasive species and pathogens. Extreme weather events have had dramatic effects on our ecosystems.

The good news is that we have the ability to make a positive change. Innovation and collaboration will be critical in making change, with a focus on valuing traditional knowledge and a holistic management approach. These are principles that inform this Plan.





The Millennium Drought

Our region was severely impacted by the Millennium Drought (2001–2009). The worst drought conditions in a century combined with over-extraction along the length of the River Murray. This resulted in extremely low water flows, bringing the Lower Lakes to the brink of ecological collapse.

Many aquatic and riparian ecosystems were severely affected in this time and most have not recovered to pre-Millennium standards, due in part to the low environmental flows that persist to the present day. This is poignantly symbolised by the near-permanent presence of dredging near the Murray Mouth, a familiar sight for more than a decade. Keystone species such as *Ruppia* in the Coorong are no longer capable of supporting dependent waterbirds and fish species. Migratory waders and other birds have had their breeding cycles disrupted, with this influencing activity at a global scale.

During the Millennium Drought, the lack of freshwater impacted on a range of irrigation-reliant industries such as viticulture and dairy farming. Low water levels in the Goolwa channel also had a significant impact on tourism and related industries, such as boat building and repairs, not to mention overall community wellbeing.

It is impossible to describe the cultural impact this has had on the Ngarrindjeri and other First Nations peoples. Many local families and fishermen whose livelihoods relied on healthy lakes and waters were no longer able to remain in places they had lived for generations.

Many of these challenges persist, exacerbated by high water prices, declining inflows, and reduced groundwater supply, rising temperatures and sea levels, and increased bushfire risk.

While the River Murray has subsequently experienced high flows and water levels in the Lower Lakes have returned to pre-drought levels, conditions such as those experienced during the Millennium Drought are likely to become more frequent and intense under predicted climate change conditions.

These are all realities we must consider as we work together.

About this Plan

Background

This Environmental Action Plan 2030 ('this Plan') has evolved from its previous environmental action plans, the Sustainable Alexandrina Action Plan 2001, the Sustainable Alexandrina Policy Direction and Action Plan 2007–2010, and the Environmental Action Plan 2014–2018. This Plan also aligns with Council's highest level strategic planning document, Alexandrina 2040 (A2040).

Following adoption of A2040 in 2021, a gap analysis has been undertaken to compare the Environmental Action Plan 2014–2018 against A2040; to align with the new vision and narrative of the A2040 structure; and how we can achieve this in this 20-year vision. The Village Conversations were used to meet with the community and understand their priorities regarding environmental matters in a very local context. The Environmental Advisory Panel also provided vital input into the development of this new Plan.

The review in September 2022 identified that of the actions listed in the former Environmental Action Plan 2014–2018, progress has been made against:

- 92% of short-term actions (of these 72% are implemented);
- 88% of medium-term actions (of these 52% are implemented); and
- 77% of long-term actions (of these 38% are implemented).

71% of all actions remain ongoing (62% are implemented but require ongoing tasks) and are listed in Appendix I of this Plan.

Our environmental stewardship towards 2030

This Plan sets the context, the opportunities and the challenges for making the changes needed to protect our ecosystems, and to manage and enhance our Biodiversity, Waters and Communities aligned with Alexandrina's 20-year vision.

To address the climate change and ecological emergencies we face, we need to:

1. prevent any further loss of threatened species habitat;
2. manage fire with ecologically suitable fire regimes;
3. manage invasive species, including those ecosystem-transforming weeds;
4. manage our water resources and become water smart; and
5. mitigate and adapt to climate change.

For this we need strong partnerships with all levels of government, our community, First Nations peoples, environmental community groups, agriculture and landowners who manage and love our land, waters, and biodiversity.

This Plan focuses on three main themes: Biodiversity, Waters and Community. Each theme contains five contemporary strategic actions. These strategic actions outlined at the end of each chapter set out an overarching Climate priority. This acknowledges and contextualises the primacy of climate change challenges and opportunities across our Biodiversity, Waters and Community themes.

Each priority action states why it is important ("Why"), and how we assess progress ("Outcome"). It also identifies the parties required to make it work ("Who"), as only by working together can we make a difference. Engaging with our community and conservation partners will help drive and measure our progress.

Connecting with Alexandrina 2040

In 2021, Council developed a community strategic plan known as A2040. A2040 sets out our vision for thriving communities. We have three aspirations as a community and five action areas.

Aspirations

- Liveable Alexandrina is defined by distinctive townships, places, spaces, and transport networks that support active lifestyles, vibrant cultures and productive enterprise.
- Green Alexandrina is climate-ready, a place where nature is valued, and resources are managed sustainably and creatively to support a new economy.
- Connected Alexandrina is created for, with and by the community. We are safe, healthy and all enjoy accessible infrastructure and services.



Action areas



Climate Response

Climate change is the issue of greatest concern to the people of Alexandrina. Increasingly frequent adverse events, the fragility of our ecosystems and the security of our water supplies led to our 2019 Climate Emergency declaration.



Appropriate Growth

Well managed development relies on the best available social and physical infrastructure and services. Appropriate growth supports residents, farmers, businesses, community organisations and the many visitors central to job creation and our economic destiny.



Community Inclusion

Bringing generations and communities together, welcoming visitors into our region and embracing diversity will support our growing population, stimulate spending and attract investment.



Transport Connections

Our community needs a high-quality road, water, rail and trail network that is safe, well maintained, supportive of healthy lifestyles, and is environmentally sustainable.



Environmental Innovation

It is clear that we can go well beyond the management of waste, water and energy and extend to circular resource systems, regenerative farming, aquaculture and nature-based recreation and ecotourism.

Our strategic actions outlined in the following chapters on Biodiversity, Waters and Community helps support many of A2040's actions. The table overleaf shows how this Plan's strategic actions for Biodiversity, Waters and Community align with A2040 to deliver on our aspirations for a Liveable, Green and Connected Alexandrina.

How the Environmental Action Plan 2030 and A2040 connect

The following table shows the Plan’s priority actions for Biodiversity, Waters and Community and how they align with A2040 in order to deliver on our aspirations for a Liveable, Green and Connected Alexandrina.

	Liveable Alexandrina	Green Alexandrina	Connected Alexandrina
 <p>Biodiversity</p>	<p>1.4 Increase township tree canopy</p>	<p>1.1 Regenerate our local biodiversity across Alexandrina</p> <p>1.2 Protect and enhance native and remnant vegetation</p> <p>1.3 Connect and restore degraded habitat</p>	<p>1.5 Healing Country Together</p>
 <p>Waters</p>	<p>2.3 Creatively manage and conserve our water resources</p> <p>2.4 Promote water sensitive urban design and development</p>	<p>2.1 Protect and enhance our aquatic ecosystems and waterways</p> <p>2.2 Healthy and thriving Coorong, Lower Lakes, and Murray Mouth Murray</p>	<p>2.5 Provide leadership and education to community and stakeholders</p>
 <p>Community</p>	<p>3.3 Support sustainable food systems</p>	<p>3.2 Shift to a circular economy</p>	<p>3.1 Walking together</p> <p>3.4 Share knowledge</p> <p>3.5 Connect with what we love about our environment</p>

Connecting with other Plans

This Plan is one of several dedicated strategies, that better articulate and organise Alexandrina’s plans to meet our aspirations of a ‘Liveable, Green, Connected’ Alexandrina. These are listed in Appendix II.

The priority actions identified in this Plan, hence complement other plans that support Council and community action for sustainable and regenerative outcomes, most notably our Climate Emergency Action Plan and the Community Wellbeing Action Plan.

The Climate Emergency Action Plan outlines how Alexandrina Council will play its part in supporting the community to reduce emissions and work towards a stated target of net zero community-based emissions by 2040. Alexandrina Council will act as a role model for the community by adopting corporate commitments and driving change in our community. The Climate Emergency Action Plan will guide the community to act now to tackle the challenges of a changing climate, protect and enhance our natural assets, and create a sustainable built environment and future.

Alexandrina’s Community Wellbeing Action Plan encourages an active and healthy community through a holistic approach to improving the health and wellbeing of our community, and where sustainable environments are created.





1. Biodiversity



We are part of nature

Biodiversity is the variety of all living things on Earth: the different plants, animals and micro-organisms, the genetic information they contain and the ecosystems they form.

Three levels of biodiversity work together to create the complexity of life on Earth:

- Ecosystem diversity – the variety of ecosystem types across the planet. An ecosystem is any group of living things (flora, fauna, vegetation communities and micro-organisms) interacting as a system in conjunction with the non-living components of their environment (like air, water, and soil).
- Species diversity – all the different species of plants, animals, and micro-organisms. Some ecosystems have higher species diversity than others.
- Genetic diversity – the genetic differences between individuals of the same species be they plants, animals, or micro-organisms.

Healthy ecosystems are essential to support biodiversity, as well as our physical, social, cultural, and economic wellbeing. We all rely on these ecosystem services to provide for us, such as oxygen to breathe, clean water to drink, fertile soil for food production, physical materials for shelter and fuel, and places to relax and connect with our spiritual and/or cultural identity. Intact vegetation communities reduce erosion, keep us cool, and provide important habitat for our native flora and fauna.



Our natural environment

Alexandrina Council is known nationally and internationally as a region of environmental importance and natural beauty.

The Ngarrindjeri, Peramangk and Kurna Traditional Owners have lived here with nature for tens of thousands of years, even prior to the last ice age.

Prior to the impacts of colonisation that began in 1836, the Alexandrina Council area was covered by a continuous mosaic of vegetation that enabled native fauna to move freely across the landscape and which provided essential resources for First Nations peoples, also supporting trade across the continent.

An understanding of pre-European vegetation coverage is important for many reasons, not least to highlight the extent of past clearance, identify vegetation types that are not well protected in reserves, and help guide future restoration and revegetation activities.

Vegetation communities were diverse and included the shrubby dunes and low grassy woodlands of the coastal strip; the reed beds and grasslands adjacent to the freshwater Lower Lakes and creeks; inland swamps and creeks; the mallee communities of the plains surrounding Lake Alexandrina; the widespread woodland communities of the foothills; plus some denser stringybark forests on the higher ridges to the north of Ashbourne and Mount Compass.

From the 1840s onwards, vegetation within our Council area has been subject to broad-scale clearance and disturbance for agriculture as well as urban and coastal development. The Alexandrina Council area now only contains less than 12% of our original vegetation, and only 2% of the pre-European extent of high-value native vegetation, with most of this remaining vegetation found along road corridors, which are challenged by increasing vehicle sizes and fire-related concerns.

Land clearing and habitat loss are the biggest drivers of flora and fauna extinction in recent years; and Australia's rate of land clearing has ranked among the highest in the developed world. This alarming trend continues to this day, as noted in the 2022 Australia State of the Environment report.

Our last remnants of native vegetation are contained in fragmented patches on both private and public land, and along our roadsides. Many of these parcels are small in area and/or linear in shape, making them more vulnerable to threats such as weeds, pest animals, diseases, and disturbance (known as edge effects). They are often also isolated from each other, limiting the ability of native fauna to move safely across the landscape through biodiversity corridors.

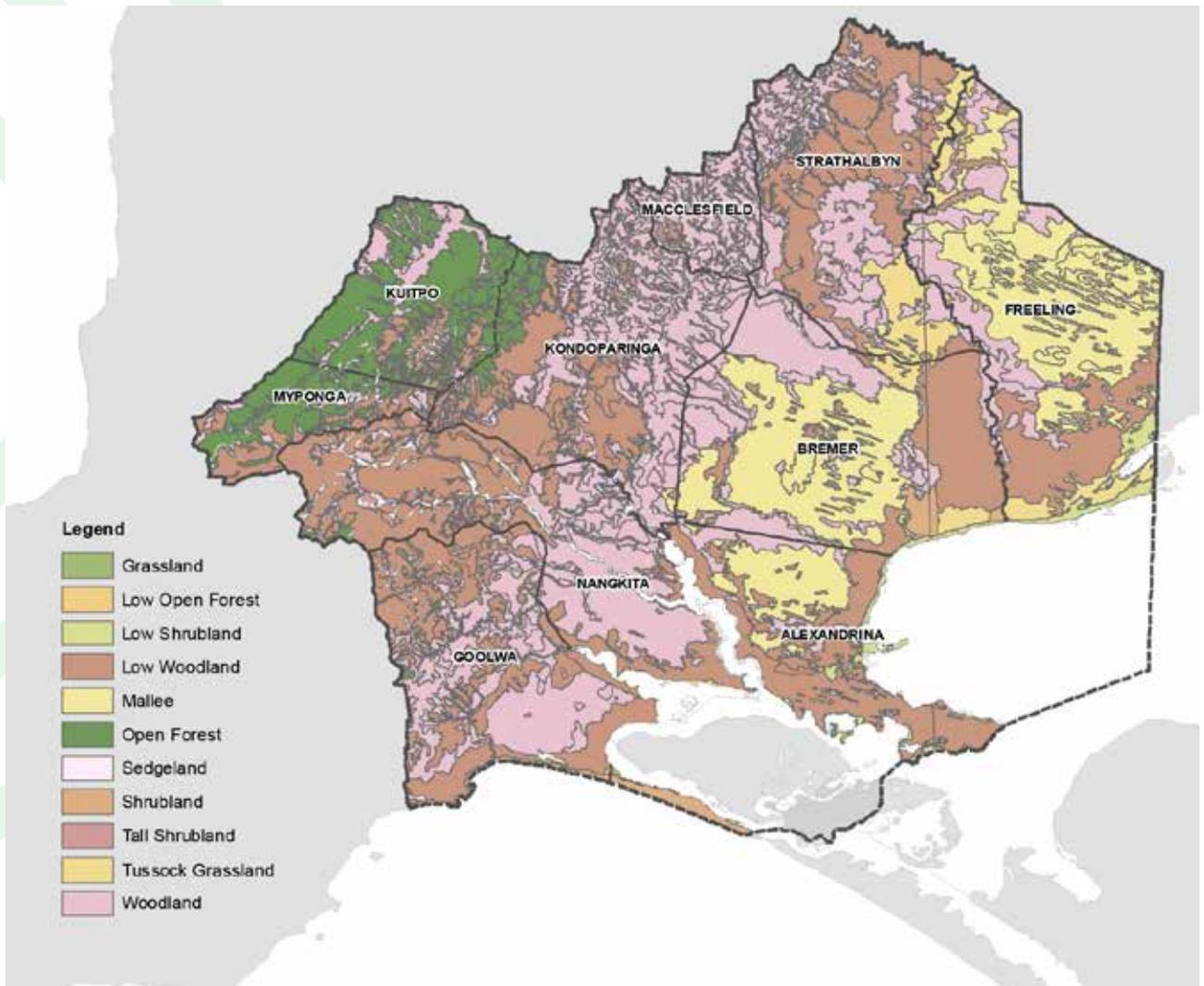


Figure 1. Pre-European Vegetation of Alexandrina Council. Source: Department for Environment and Water Digital Data (2014). Data not available for Hindmarsh Island.

Challenges

Alexandrina's natural environment is highly valued by our community, but our biodiversity is facing several key threats such as:

- habitat loss, degradation, and fragmentation, including soils;
- population growth;
- invasive species;
- unsustainable use and management of natural resources;
- changes to the aquatic environment and water flows;
- changing fire regimes; and
- climate change.

Managing these impacts, as well as embracing the opportunities they offer, is a challenge to be collectively faced by all levels of government, the private sector, and the community.

Opportunities

Alexandrina Council continues to protect our species and ecosystems and to help increase the resilience of our local ecosystems. Actions can be taken to maximise our potential to halt or slow the existing trend of biodiversity decline, such as:

- protecting and improving the condition of remnant native vegetation on land and waters under Council's care and control;
- increasing the tree canopy cover in our townships and conservation areas;
- protecting our threatened flora and fauna species;
- acknowledging and supporting First Nations peoples' management of land and sea;
- collaborating across government agencies (e.g. Department for Environment and Water, Landscape Boards, other local government organisations);
- supporting, and adding value to, biodiversity works undertaken by the many community conservation groups and volunteers working within our Council area (refer to Figure 2);
- educating our community and landholders about the value and management of biodiversity on Council and private land; and
- ongoing advocacy for the care and conservation of our natural assets and biodiversity.

Stewardship

The effective protection and enhancement of biodiversity assets on Council land requires:

- both project initiation and ongoing management activities to be properly resourced;
- threatening processes to be identified, prevented, and reduced; and
- collaboration with the community conservation sector, government agencies, adjacent landholders, and the wider community.

Council will prioritise the location and level of biodiversity management on land under our care and control in accordance with the following hierarchy:

- the protection, maintenance, and then enhancement of remnant vegetation with its flora and fauna;
- restoring sites that have been degraded; and
- revegetating open space to reconstruct habitat elements that have been lost (i.e. buffers, corridors, verges, and urban greening).

Vegetation communities

Biodiversity assets on Council land are important and valued features of the district and include managing and protecting flora, fauna and vegetation communities in urban and rural biodiversity reserves; revegetation sites (e.g. Angas River Corridor); coastal reserves and dune systems (e.g. Ratalang Conservation Area); wetlands (e.g. Swamps of the Fleurieu Peninsula); roadside marker sites; as well Council's network of developed and undeveloped roadside vegetation corridors.

Four ecological communities listed as threatened at a national level are found within the Alexandrina Council area:

- Swamps of the Fleurieu Peninsula (Fleurieu swamps);
- Peppermint Box Grassy Woodland of South Australia;
- Iron-grass Natural Temperate Grassland of South Australia; and
- Subtropical and Temperate Coastal Saltmarsh.

Some of these areas are also covered by a Heritage Agreement and/or a Significant Environmental Benefit (SEB) Management Plan. These are often managed in partnership with Council's third-party conservation partnerships, such as the Hills and Fleurieu Landscape Board, the Second Nature Conservancy (formerly known as the Goolwa to Wellington Land Action Planning Association, GWLAP), and local Landcare and Coastcare groups.

In the year of writing this Plan (2022), our Nature Conservation Team looked after over 300 hectares of natural areas, including more than 50 hectares of Native Vegetation Heritage Agreement areas, and almost 300 kilometres of roadsides for the benefit of nature conservation. Council gratefully acknowledges its conservation partners who actively manage many additional hectares of nature conservation areas.

The most significant remnant vegetation under Council's care includes the Goolwa Dune System, our Native Vegetation Heritage Agreement sites, our Roadside Marker System sites, as well many of our river and lakeside reserves and unmade road reserves.

Other patches of important remnant vegetation located within our Council area, but managed by the South Australian Government, include Cox Scrub Conservation Park; Finniss Conservation Park; Kyeema Conservation Park; Mount Magnificent Conservation Park; Scott Conservation Park; Sir Richard Peninsula; Tokuremoar Reserve; Tolderol Game Reserve; Bullock Hill Conservation Park; as well as our Significant Environmental Benefit (SEB) sites.

The watershed areas around Mount Compass, Hope Forest and Ashbourne also contain significant patches of native vegetation and Fleurieu swamps on private land. This more vegetated western portion of our Council district stands in contrast to the land around Strathalbyn, Langhorne Creek and Milang which is much more extensively cleared.

Flora and fauna

Alexandrina is home to an amazing variety of flora and fauna species across many terrestrial, marine, riverine, and estuarine ecosystems. These provide important habitats for many native and visiting species. For example, over 230 migratory bird species travel each year from as far as Siberia to Lake Alexandrina and the Coorong to feed in summer, before making the return journey to breed.

While we are home to so many flora and fauna species, some of these are listed as threatened under state and federal legislation. It is vital to identify where these species are located and how the locations are affected by weed infestation, diseases, disturbance, and climate change. Having this information readily available for use by Council and the community is an important task that we are continuously working on.

Some of the threatened flora species that can be found within our natural environments include:

- Fat-leaved Wattle (*Acacia pinguifolia*);
- Mount Compass Oak-Bush (*Allocasuarina robusta*);
- Resin Wattle (*Acacia rheticarpa*);
- Silver Daisy-Bush (*Olearia pannosa*); and
- Coloured Spider Orchard (*Caladenia colorata*).

Habitat loss due to development, the introduction of invasive species, the unsustainable use and management of natural resources and climate change (more extreme weather events, bush fires) threaten not only our flora, but also our local native fauna species such as the Orange Bellied Parrot, Mount Lofty Ranges Southern Emu Wren, Hooded Plover, Southern Brown Bandicoot, the Golden Bell Frog, and the Southern Pygmy Perch.

One of our winter guests, the orange bellied parrot (*Neophema chrysogaster*), breeds in Tasmania, and visits us in winter. It is one of the rarest birds in Australia, with around only 50 individuals remaining. Migration across Bass Strait starts in February each year when they arrive in Victoria and South Australia. In Alexandrina, they winter near the coast in saltmarshes and near beaches and dunes, mainly around lakes Alexandrina and Albert.

The critically endangered Mount Lofty Ranges Southern Emu-wren (*Stipiturus malachurus intermedius*) is unique to the Mount Lofty Ranges and Fleurieu Peninsula. It is dependent upon our vanishing Fleurieu Swamps for its survival.

Our Eastern Hooded Plovers (*Thinornis cucullatus cucullatus*) are one of the threatened bird species that call our local beaches and dunes home. Unfortunately, the bird's breeding season overlaps with the busiest time of the year for beach recreation (spring and summer) and their nests are often disturbed by beach goers, dogs, and vehicles.

The endangered Southern Brown Bandicoots (*Isodon obesulus obesulus*) can be found in dense scrubby habitats or areas with dense, low ground cover like Cox Scrub Conservation Park. Cats and foxes pose the biggest threat to these small marsupials.

The Southern Pygmy Perch (*Nannoperca australis*) is currently listed as endangered in South Australia. Remaining populations include a patchy distribution in swampy areas and drains near Lake Alexandrina, Eastern Hindmarsh Island, Black Swamp and near Milang, a small catchment of the Tookayerta Creek, Finniss River, and a single pool of the Angas River.

Our southern coastline acts as an annual nursery for Southern Right Whales (*Eubalaena australis*). This endangered species travels all the way from Antarctica to South Australia to mate and give birth in winter.

Local stories: Hooded Plovers

The threatened Hooded Plovers make simple nests in the sand and lay well camouflaged eggs that are difficult to spot when walking, riding, or driving along the beach.

To help these birds to successfully raise their chicks, Alexandrina Council works closely with the Landscape Board and volunteers from BirdLife Australia to monitor and manage our four to five Hooded Plover pairs on our beaches. This includes the erection of signs and temporary fencing to protect nesting birds or chicks. Volunteers spend countless hours observing chicks, providing chick shelters, giving out leaflets, educating beach goers and campaigning on social media.

Across Adelaide and the Fleurieu Peninsula, 31 pairs are known to breed with up to 14 offspring surviving. Unfortunately, dogs are one of the biggest threats to breeding Hooded Plovers as the tiny chicks must venture to the water's edge to feed themselves.

We all have a role to play by keeping our distance and by having dogs on leashes during the breeding season. In collaboration with the Landscape Board, Council continues to eradicate foxes that are known to predate on nests.

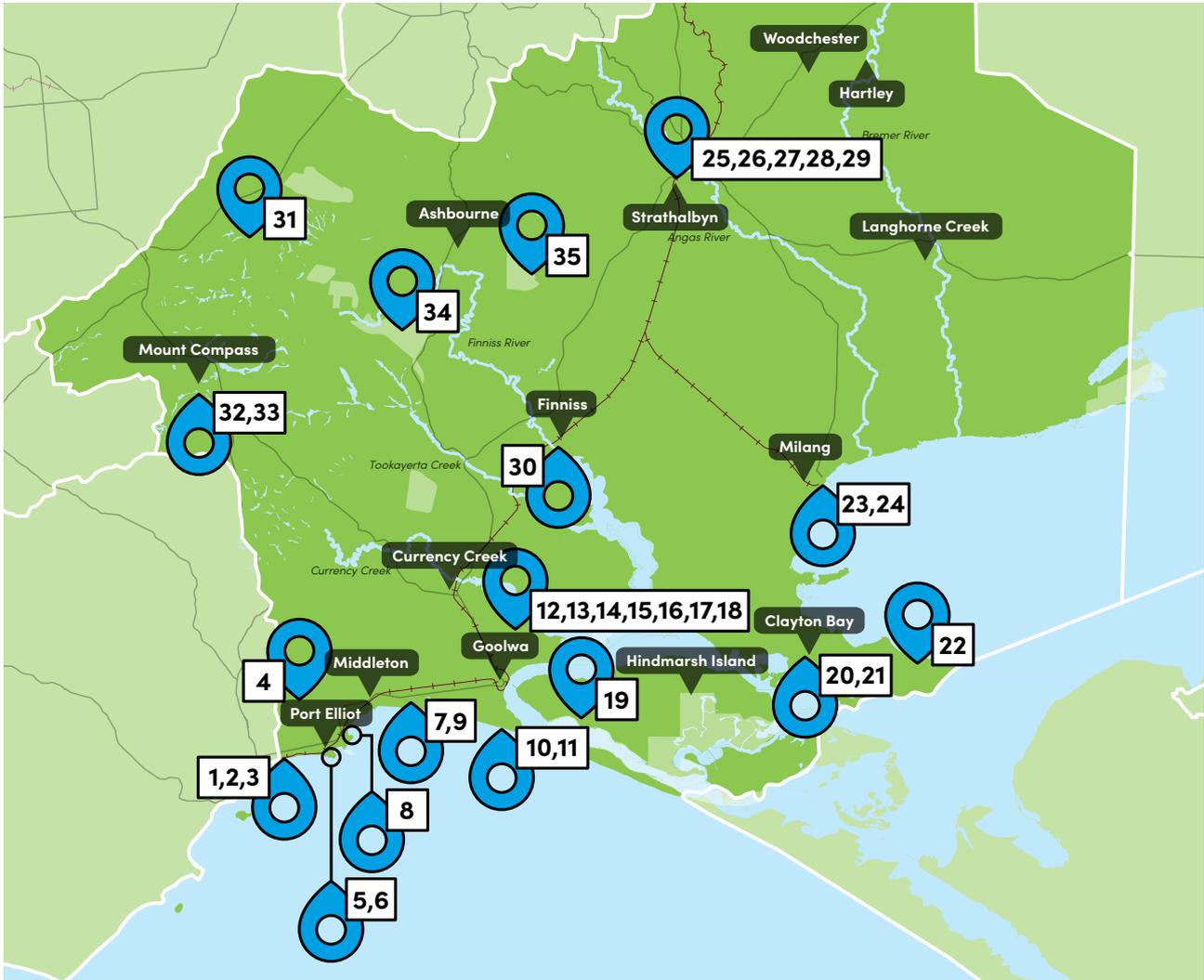


Image: Kerri Barley



Image: JJ Harrison

Figure 2 – Map of Alexandrina showing the location of some of our conservation partners. Alexandrina Council acknowledges the value the community has in protecting our natural environment and regenerating our land. By working together, great outcomes can be achieved.



- | | |
|--|---|
| 1 Friends of Beyond Inc Chiton | 19 Hindmarsh Island Landcare Group Inc Hindmarsh Island |
| 2 Cell 9 Environmental Action Chiton - Port Elliot | 20 Clayton Bay Community Association Clayton Bay |
| 3 Watsons Gap Dune Care Chiton - Port Elliot | 21 Clayton Bay Nursery and Environment Group Clayton Bay |
| 4 Port Elliot Town and Foreshore Improvement Association Port Elliot | 22 Friends of Point Sturt Landcare Reserve Point Sturt |
| 5 Freemans Knob Coastcare Port Elliot | 23 Friends of Nurragi Milang |
| 6 Green Bay Recovery Port Elliot | 24 River Lakes and Coorong Action Group Milang |
| 7 Middleton Town and Foreshore Association Middleton | 25 Goolwa to Wellington Local Action Planning Association Strathalbyn |
| 8 Friends of Ratalang/Basham's Beach Middleton | 26 Angas Bremer Water Management Committee Inc Strathalbyn |
| 9 Middleton Creek Improvement Group Middleton | 27 Angas River Catchment Group Strathalbyn |
| 10 Aquasave, Glenelg Nature Trust Our coast | 28 Strath Neighbourhood Centre / Food Loopers Strathalbyn |
| 11 BirdLife Australia and Hooded Plover volunteers Our coast | 29 Strathalbyn Field Naturalists Strathalbyn |
| 12 Alexandrina Community Nursery Goolwa | 30 Finniss Catchment Group Inc Finniss |
| 13 Alexandrina Wildlife Support Group Inc Goolwa | 31 Prospect Hill Bushland Group Prospect Hill |
| 14 Cittaslow Goolwa | 32 Compass Creek Care Mount Compass |
| 15 Goolwa Coastcare Group Goolwa | 33 Yundi Landcare Group Mount Compass |
| 16 Goolwa KESAB Tidy Towns Group Goolwa | 34 Trees for Life Alexandrina Council |
| 17 Wildlife Welfare Organisation SA Inc. Rescue Group Goolwa | 35 Friends of the Conservation Parks (e.g. Cox Scrub, Scotts, etc) |
| 18 One Millions Trees Project Goolwa | |

Managing land and open space

Council land with environmental significance will only be sold or transferred to others where the transfer will result in long-term conservation benefits (i.e. transfers into the State Government parks system).

Council will only consider purchasing land of environmental significance when all other options have been fully explored (i.e. Native Vegetation Heritage or Land Management Agreements). Council's role does not generally extend to the purchase of land for conservation purposes; however, if exceptional circumstances warrant consideration of such a purchase, external funding support will be sought from State or Federal government agencies and/or non-government land conservation groups.

When developing land and undertaking Council operations, Council will seek to avoid any impacts on biodiversity, and if that is not possible, to minimise and offset any damage using onsite rehabilitation measures in accordance with State and Federal legislation, such as the *Native Vegetation Act 1991* or the *Environment Protection and Biodiversity Conservation Act 1999*. Offsite offsets will be treated as an option of last resort. Council will encourage developers to adopt this same framework.

Within new land divisions, remnant vegetation and other sites of high biodiversity should be protected and incorporated into appropriately designed open space allocations. If no such areas exist, developers will be requested to create new natural landscapes or habitat areas as part of their open space allocation.

The provision, design and management of open space will seek to reduce the impact of uncontrolled access on areas of high biodiversity value (e.g. horse-riding, mountain-bike riding, and walking).

Increasing township greening

As our region is getting warmer, drier, and more vulnerable to heat stress, our residents identified urban greening as a priority at the Village Conversations held across Alexandrina Council (2021). Ongoing township greening and increased canopy cover is also in line with A2040's goals.

A Tree Canopy Baseline Study (2022) mapped for 11 townships across Alexandrina showed that tree canopies vary between 11% and 46% across towns.

We aim to increase our vegetation canopy coverage and biodiversity in our townships or controlled land whilst advocating for similar outcomes on privately owned land.

Council land

Any Council activities that may impact on native vegetation requires Council's Environmental Project Officer to be consulted before any Council application for clearance of native vegetation under the *Native Vegetation Act 1991* is submitted.

When Council activities require the creation of a significant environmental benefit offset, provision will be made in budget of the relevant infrastructure project for at least the first year's on-ground activities (e.g. fencing, weed control, revegetation). After that first year, an annual site-specific budget allocation will be included in the Natural Resources budget for ongoing maintenance until such time as the site becomes self-sufficient and the Native Vegetation Council agrees that no further active management works are required (generally 10 years).

When identifying potential significant environmental benefit offset sites, Council will give priority to improving the condition of existing vegetation rather than revegetating open space.

Private land

Council acknowledges the importance of an integrated, landscape-scale approach to biodiversity management but for the life of this strategy, our primary focus is the protection and enhancement of native vegetation on Council land. Once Council has established best practice management of its own land, further initiatives relating to biodiversity assets on private land can be explored. In the meantime, Council support for biodiversity management on private land will include:

- supporting the Community's One Million Trees Program, a community run project that seeks to plant one million trees by 2030;
- actively restoring Council land which buffers or connects remnant vegetation on private land;
- supporting the community through an annual Environmental Community Grants Program;
- promoting programs delivered by community organisations and other levels of government; and
- educating and providing information to help guide private investment, such as strategic revegetation priorities and species lists.

Fire management

First Nations peoples have been caring for Country for over 60,000 years by using land management techniques that worked with the environment. This includes deep knowledge and skillful practices for burning Country. Today there is a shift to recognise that First Nations peoples have sophisticated sustainable systems, including traditional Aboriginal fire management.

When reducing fuel loads in vegetated areas, Council will aim to recognise cultural burning while minimising harm to our native vegetation. Our fuel reduction methods will be site-specific and appropriate to the significance of the vegetation and proximity to people and/or property.

When developing site-specific management plans for biodiversity assets on Council land, Council's environmental officers will liaise with community safety staff, First Nations peoples and the CFS to assess and manage fire risk.

Strategic actions – Biodiversity

Climate priority

Climate change poses a growing challenge for managing our biodiversity. Increasing temperatures, sea level rise, changes in rainfall patterns, increased catastrophic bushfires, storms and heatwaves will lead to changes in habitats and the abundance, distribution and composition of our native species and vegetation communities.

Our climate priority is to support climate adaptation and mitigation through reducing Council and community carbon emissions, the retention and enhancement of coastal, riparian and wetland vegetation, bolder action on stormwater and wastewater management with benefits to local ecosystems and species.

To manage and conserve our ecosystems we need to anticipate and measure the changes in species and ecosystems, understand their implications and adapt our responses while looking for opportunities for positive change. This can be done by planting more climate resilient native vegetation, increase urban and rural canopy cover to provide shade and refuge for our wildlife; and by removing pest plants that are in direct competition with native plants for nutrients, shade, water and increasing fuel load. Council cannot do this alone and will partner with our community organisations and other levels of government to drive positive change.

Priorities - Biodiversity	Why	Outcome	Who
1.1 Regenerate our local biodiversity across Alexandrina	<p>Biodiversity is essential for the processes that support our ecosystems that we rely on to provide us with the air we breathe and the food we eat.</p> <p>Our community and visitors value Alexandrina's biodiversity.</p>	<p>Our natural environment, our native animals and plants are valued by the community, visitors, and businesses.</p> <p>We work together to improve our knowledge and to preserve, protect and enhance the region's biodiversity.</p> <p>Increase of species diversity and native habitats.</p> <p>Population increase of our threatened flora and fauna species, such as the Hooded Plover.</p> <p>Reduction of pest and weed species across Alexandrina.</p> <p>Our community is educated about the value and management of biodiversity on Council and private land.</p> <p>Biodiversity considerations are integrated into project management framework for all Council infrastructure projects and construction maintenance of road network.</p>	<ul style="list-style-type: none"> › Council › NGOs, landcare and bushcare groups › First Nations peoples › Landscape Board › BirdLife Australia › Private landholders

Priorities - Biodiversity	Why	Outcome	Who
1.2 Protect and enhance native and remnant vegetation	The majority of native and remnant vegetation on Council land is being actively managed for conservation to improve the extent, condition and connectivity of native vegetation within our region.	<p>Increase in native and remnant vegetation across the natural areas and parks across Alexandrina.</p> <p>Our fragile coastal vegetation and habitats are protected.</p> <p>No fragmentation of existing remnant vegetation areas that are under the care and control of Council.</p> <p>Encourage rural landholders adjoining Council biodiversity reserves to undertake works on their land to buffer and reduce impacts to remnant vegetation.</p>	<ul style="list-style-type: none"> › Council › Landscape Board › Private landholders › NGOs, landcare and bushcare groups › Community nurseries › One Million Trees Project › First Nations peoples
1.3 Connect and restore degraded habitat	<p>Habitat loss, degradation and loss of connectivity are the most important causes of species decline.</p> <p>Restoration activities will improve habitat quality and connectivity among habitat patches in fragmented landscapes by creating or restoring linkages.</p> <p>Biodiversity corridors allow animals to travel from one patch to another. It provides shelter, food, and protection from predators.</p>	<p>Establishment and enhancement of biodiversity corridors across our landscape, from the hills to the coast.</p> <p>Connect and restore natural areas, parks, private properties, and roadside vegetation.</p> <p>Restored degraded bushlands.</p>	<ul style="list-style-type: none"> › Council › DEW › Private landholders › NGOs, landcare and bushcare groups › One Million Trees Project › First Nations peoples › Community nurseries

Priorities - Biodiversity	Why	Outcome	Who
1.4 Increase township tree canopy	Increased township green spaces help to reduce heat, improve air quality, enhance physical activity, reduce stress, and promote greater social cohesion.	<p>Our townships are greener with urban biodiversity reserves and indigenous plantings in parks, gardens, and streetscapes a key feature of our urban landscapes.</p> <p>Increase of tree canopy cover and verge plantings across our townships (against the baseline of 2022).</p> <p>Increase of native fauna species in townships, including important pollinators (butterflies, bees, beetles, birds).</p> <p>Adoption of green urban designs (green walls, roofs, fences etc.), and the retention of canopy cover on private land as a result of property development.</p>	<ul style="list-style-type: none"> › Council › Cittaslow › Property owners › Community › Residents › Developers › One Million Trees Project › NGOs, landcare and bushcare groups › Community nurseries › Community gardens
1.5 Healing Country Together	Walking and working together with our First Nations peoples will have many benefits, including increased biodiversity and pollination, landscape restoration and revegetation, revitalising traditional foods, supporting local food systems, and improved fire management.	<p>Recognition of First Nations' traditional management of land, waters, sea, and fire.</p> <p>Respectful and effective partnerships with First Nation peoples to regenerate ecosystems.</p> <p>Collaboration with all stakeholders to connect with nature and regenerate biodiversity in urban, rural, and bush landscapes.</p> <p>Revitalised traditional and local food systems.</p> <p>Reduce fire risk through woody weed control; revegetating with fire retardant indigenous plants; and, where possible, introduce, cultural burning practices.</p> <p>Protection of cultural important heritage areas.</p>	<ul style="list-style-type: none"> › Council › First Nations peoples › Cittaslow › Local businesses › Community and visitors › Resilient Hills & Coasts Climate Partnership › Community gardens › CFS



2. Waters



Our natural environment

The diversity of freshwater, estuarine, coastal, and marine ecosystems across our region is extraordinary. We are known nationally and globally for our aquatic environments and the ecological communities they support. This environment is very special to us who live, study, work and play in the region, a place where all major townships are located close to significant bodies of water.

Alexandrina's catchments drain from the eastern side of the Mount Lofty Ranges towards the River Murray. Included in this area are the catchments of the Bremer, Angas, and Finniss Rivers, along with Tookayerta Creek.

The River Murray is Australia's longest and one of its most important river systems. In Alexandrina, it travels through Lake Alexandrina before it flows towards the river mouth from two directions, bounded by Hindmarsh Island. The Murray Mouth is where the fresh water of the River Murray meets the Southern Ocean, or Ruwe – 'meeting of the waters', as it has been known to Ngarrindjeri people for millennia.

The Finniss River, Currency Creek, Goolwa Channel, Hindmarsh Island and Lake Alexandrina are all part of the internationally listed Coorong and Lakes Alexandrina and Albert Ramsar Wetland, recognised as one of Australia's most important ecological assets.

Alexandrina's 25 kilometre coastline is of significant cultural, social, environmental, and economic value to the local community, Ngarrindjeri nation, and visitors to the region. It contains exposed surf beaches, sheltered sandy beaches as well as rocky outcrops.

We are also fortunate to have the Encounter Bay Marine Park and varied coastal wetland ecosystems. The marine park provides plenty of opportunities for visitors and residents alike to enjoy the diverse marine life including leafy sea dragons, Australian sea lions, dolphins, and whales. In winter, Southern Right Whales come to give birth, and whales can be frequently seen from our beaches.

Inland, remnants of the Fleurieu Swamps are distributed across the Currency Creek, Tookayerta Creek and Finniss River catchments. We have many species that rely on these aquatic and diverse ecosystems, including birds, mammals, flora, and vegetation communities. Many of these animals, plants, and ecosystems are critically endangered and listed under the *Environment Protection and Biodiversity Conservation Act 1999*.



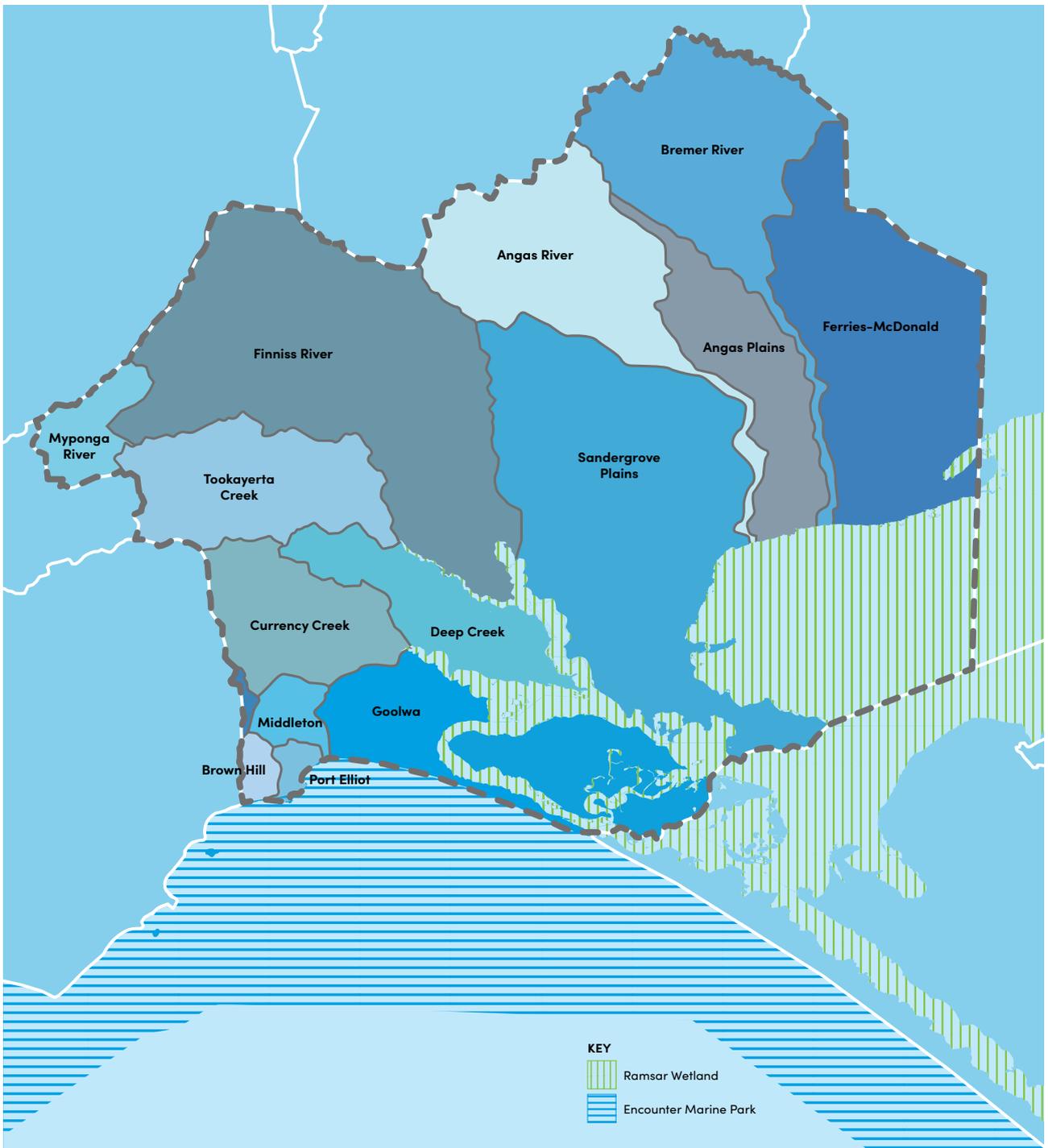


Figure 3. Map showing river and creek catchments, the Ramsar wetland, and the Encounter Marine Park

Challenges

The availability of water underpins the health of our environment, biodiversity, and people. It is central to the prosperity of our communities and economy. Yet, as the driest continent in the world with the most variable rainfall, Australia faces major challenges in ensuring sustainable water supply in the face of a drying climate and rising demand for water, as a result of increasing population and industry.

The flows down the Murray River have significantly decreased. This has caused the water levels of Lake Alexandrina and the river to fall. A series of barrages separate the Lower Lakes from the Coorong, Murray Mouth, and Southern Ocean, preventing sea water incursion into the lakes, which have been a predominantly freshwater system for several thousand years.



Goolwa Barrage

Opportunities

The Murray Darling Basin Plan

It is now more than a decade since the water resources of the Murray-Darling Basin have been managed in a coordinated way under the Basin Plan. The Plan became law in 2012 and limits human water use within the Basin to ensure that sufficient water is allocated to the environment, although political issues reduced the volume of environmental flows to levels insufficient to sustain our environment.

Alexandrina Council's vision is a healthy river which sustains our people, our economy, and our environment. The wellbeing of future generations demands that governments, interest groups and water users all work together to provide effective whole-of-Basin management.

We recognise the Ngarrindjeri Nation as the traditional custodians of the lands and waters of the Coorong, Lower Lakes and Murray Mouth region and support their right to be involved in Murray-Darling Basin decision-making.

Alexandrina Council continues to advocate for the full and timely implementation of the Basin Plan, and we are committed to working for the good of all that rely on a healthy, working river, now and into the future.

The Murray Darling Association

Alexandrina Council is an active member of the Murray Darling Association Region 6. The Murray Darling Association represents local government and communities at state and federal level in the management of Basin resources by providing information, facilitating debate, and informing government policy. As part of Region 6, we advocate for thriving, climate-ready communities and economic development through sustainable productivity.

Stewardship

Sustainable water management requires those who manage and consume water to efficiently balance the needs of the environment with those of households, agriculture, and industry. We also need to ensure that water quality is maintained.

Non urban land use in the Eastern Mount Lofty Ranges is dominated by cropping and grazing. Other land uses include irrigated horticulture and pasture production, plus a small amount of forestry. Wine-grapes and pasture are the most common crops, with substantial areas of lucerne, olives, vegetables and cereals/pulses also grown.

Average rainfall in our region varies from over 800mm per year in Mount Compass to between 400-500mm year in Milang, Clayton, Goolwa, Strathalbyn and Port Elliot. We currently use much more water than is currently provided by our local catchments. This rainfall continues to decrease, in line with climate models.

Becoming a 'water sensitive community'

Alexandrina Council is committed to implementing water sensitive development and enhancement across the region. A water sensitive community:

- creates places that are resilient, liveable, productive, and sustainable;
 - » provides the water security essential for economic prosperity by efficiently using the diversity of available water resources;
 - » enhances and protects the health of urban waterways and wetlands;
 - » mitigates against flood risk and damage;
 - » creates public spaces that harvest, clean and recycle water;
- has water management strategies and systems that contribute to biodiversity, carbon sequestration, and the reduction of urban heat island effects; and
 - » manages water with regard to its rural origins, coastal destinations, and spiritual significance.



Local stories: Flows for the Future

We rely on water and a healthy catchment to sustain businesses, people, and biodiversity. One of the biggest causes of deteriorating catchment health is the absence of critical low flows. This is why the State Government, Council and private landholders are actively re-establishing critical portions of our natural water flow patterns in Alexandrina's catchments. The focus of the partnership is to deliver low flows at critical times for the benefit for our environment, business, and people.

Alexandrina Council and private landholders have installed several release and gravity devices along the Finnis, Angus Rivers and the Rodwell Creek.

The Flows for the Future Team works with Council to release low flows at critical times into the Rodwell Creek, supplying much needed water to the watercourse.

Conservation Partners and volunteers assist Council to maintain these riparian vegetation and remnant bushland as these provide critical habitat for biodiversity.

Through collaboration, Council fulfils Alexandrina's targets of responsible land management; protecting our ecosystems and biodiversity; engaging with the community; and addressing climate change.



Groundwater and surface water

The SA Landscape Boards have principal responsibility for managing all ground and surface water resources within the Alexandrina Council area under the *Landscape South Australia Act 2019*. A water allocation plan (WAP) ensures limited water resources are allocated fairly and secures sustainable water supplies for the community, industry, and the environment for future generations. WAPs also contain policies and permit requirements for water-affecting activities.

There are three WAPs prescribed for Alexandrina:

- the River Murray Prescribed Water Course WAP covers the River Murray from the Victorian border, encompassing Lakes Alexandrina and Albert plus portions of Currency Creek, the Finniss, Angas, and Bremer rivers;
- the Eastern Mount Lofty Ranges WAP falls within the catchment area of the Murray-Darling Basin, and forms much of our Council area, the eastern boundary of which meets the River Murray Prescribed Watercourse; and
- the Western Mount Lofty Ranges WAP extends from Gawler in the north, to Middleton and across to Cape Jervis on the south coast, and includes four watercourses across the Adelaide Plains (the Gawler, Little Para, Torrens and Onkaparinga rivers). Hence only a small coastal strip from Middleton to Port Elliot and a small area to the west of Mount Compass are located within our Council area.

Mains water

The River Murray is still the principal source of mains water for our area and South Australia alike, though this varies significantly based on local inflows and storage, including reservoirs that supply potable (drinking standard) water to many communities across the state.

Strathalbyn, Clayton, Milang, and Langhorne Creek are supplied with potable water via SA Water's mains network. In an average year, 60% of this water supply is sourced from catchments within the Western Mount Lofty Ranges watershed, with the balance being sourced from the River Murray. In dry years, as much as 90% can be sourced from the River Murray.

Goolwa, Middleton, and Port Elliot are provided with potable water by the same network, typically harvested within the local Myponga reservoir catchment. The Mount Compass township is supplied groundwater by SA Water and a private water supply scheme. The Finniss water supply is managed by Council; however, the supply is still sourced from SA Water infrastructure.

Irrigation supply around the Milang / Langhorne Creek area draws water from Lake Alexandrina.



Stormwater

Stormwater is rainwater that runs off in an urban environment. Urbanisation tends to increase runoff rates due to large areas of paved or sealed (impermeable) surfaces where water cannot infiltrate into the underlying soil. While runoff rates in urban areas are higher, stormwater quality is affected by pollutants such as litter, fuel, oil, fertilisers, herbicides, pesticides, fallen leaves, grass clippings, animal faeces, and sediment.

Historically, stormwater in urban areas was managed as a drainage issue, with water being moved through the urban landscape as quickly as possible to minimise the risk of flooding. It was not cleaned or treated in any way. The importance of managing stormwater to protect water quality and reduce excess runoff and pollution has been recognised as 'water sensitive design'. This design approach mimics the natural water cycle as closely as possible in the way that urban stormwater is managed, increasing the volume of stormwater infiltration, thereby reducing the amount of runoff to be managed which would otherwise wash pollutants into waterways and coastal ecosystems. In addition, stormwater is a valuable resource that, subject to appropriate treatment, is re-used to reduce dependency on mains water supply and return water to the environment.

Community wastewater management

Council owns and operates Community Wastewater Management Schemes (CWMSs) in Goolwa, Hindmarsh Island, Strathalbyn, Port Elliot, Milang and Mount Compass. This provides a service to approximately 8000 households. Generally, wastewater is collected via a series of gravity drains before being pumped to a wastewater treatment plant (or a lagoon in the case of Milang) for treatment. Treated water is predominantly stored in lined storage lagoons during the winter months to be reused during summer.

Alexandrina Council does not discharge any treated wastewater into waterways. Instead, >90% of domestic wastewater collected by Council's schemes is recycled. This equates to approximately 800ML of wastewater being re-used each year.

A large number of areas within the Council are still serviced by stand-alone on-site septic tanks, including parts of Goolwa, Hindmarsh Island, Milang, Strathalbyn, Port Elliot, Middleton, and Mount Compass.

Coastal, marine, and estuarine environments

Alexandrina has 25 kilometres of stunning coastline, stretching from the Murray Mouth to Chiton. Vegetation communities are diverse and include dune systems, wetlands, marine and estuarine environments, including remnants of low grassy woodlands of the coastal strip. Much of this environment has been modified, but Alexandrina is still home to a wide variety of flora and fauna species that rely on the protection of our aquatic ecosystems and waterways.

Council actively manages its coastline through revegetation, species protection, weed and pest animal control, and coastal adaptation strategies. Our conservation partners also contribute to the ongoing management, revegetation, and species protection of our coastal, marine and estuarine environments. More information is found in the Biodiversity chapter of this report.

Our coastline is subject to erosion and seawater inundation that will be worsened by rising sea levels. In our region, sea levels have been rising on average at 4–5mm per year. The rate of change is projected to increase over coming decades, exacerbating the extent and frequency of coastal erosion and flooding. Coastal impacts from climate change are managed through Council's Coastal Adaptation Plan but mitigating impacts of climate change on our aquatic ecology is part of this Plan's priority actions.

Local stories: The Great Cockle Challenge

This project, carried out by Aquasave-Nature Glenelg Trust, engages and educates recreational fishers and the wider community, whilst promoting the iconic Goolwa Cockle and our coastal environment. People are actively engaged as citizen scientists to find tagged cockles at Goolwa Beach. They learn about the ecology and management of this species, how Cockles fit in with the wider coastal ecology, and that they are an important food source for animals, such as oystercatchers, shorebirds, and stingrays.

In the successful 2018 Great Goolwa Cockle Challenge more than 450 registered recreational fishers and the wider community engaged as citizen scientists to recapture the uniquely tagged cockles along Goolwa Beach. During the 2018 field day, participants found 160 of the 2500 uniquely tagged cockles that were released prior to the event.

Due to Covid-19 restrictions, the 2020/21 event had no field day but instead a video was developed and information on the Great Goolwa Cockle Challenge was promoted through websites, blogs and newsletters, a local radio interview, and a presentation to Investigator College students. Students also assisted in tagging, measuring, and weighing cockles. Cockles were further tagged and released in 2020/21.

Of all the cockles released from 2018 to present, 161 have been found and reported in. Some cockles have been caught almost two years after tagging.

This project was carried out by Aquasave, Glenelg Nature Trust, funded by the Coast Protection Board and supported by Alexandrina Council.



Images: S. Zukowski

Strategic actions – Waters

Climate priority

Alexandrina continues to experience the effects of climate change. Rainfall has decreased and seasonal patterns have been disrupted, with longer periods of drought, with intense weather becoming more frequent, resulting in flooding, erosion, wildfires, and loss of soil due to winds. This has had significant impact on our community, including hotter townships and recreational spaces, damage to community assets, and overall influence on mental and physical wellbeing.

Our climate priority is to support climate adaptation and mitigation through reducing Council and community carbon emissions, the retention and enhancement of coastal, riparian and wetland vegetation, bolder action on stormwater and wastewater management with benefits to local ecosystems and species. We also manage our coastline in line with our Coastal Adaptation Plan that monitors, mitigates, and adapts to climate change impacts along our coastline.

Priorities - Waters	Why	Outcomes	Who
2.1 Protect and enhance our aquatic ecosystems and waterways	<p>Aquatic ecosystems perform numerous valuable environmental functions. They recycle nutrients, purify water, attenuate floods, augment and maintain streamflow, recharge ground water, provide habitat for flora and fauna, and provide recreation for our residents and visitors.</p> <p>We acknowledge that many factors are outside of Council’s control, but by working together we can make a difference by managing our waterways and protecting and restoring the health of our diverse freshwater, estuarine, coastal and marine ecosystems.</p>	<p>Our aquatic ecosystems, waterways, and native flora and fauna are valued by the community, visitors, and businesses.</p> <p>We work together to improve our knowledge, to preserve, protect, and enhance our aquatic ecosystems and waterways.</p> <p>Increase of species diversity and native aquatic habitats.</p>	<ul style="list-style-type: none"> › Council › First Nations peoples › DEW › Hills and Fleurieu Landscape Board › Community and visitors › NGOs, landcare and bushcare groups

Priorities - Waters	Why	Outcomes	Who
2.2 Healthy and thriving Coorong, Lower Lakes, and Murray Mouth	<p>Delivering healthy and resilient systems will support local communities and industries, the region's First Nations peoples, and visitors.</p> <p>To improve the ecological health and productivity of the Coorong, Lower Lakes, and Murray Mouth region.</p> <p>To maintain the cultural and international significance of the Coorong and Lakes Alexandrina and Albert Ramsar Wetland.</p>	<p>We remain actively engaged in the development and implementation of the Murray Darling Basin Plan and advocate on behalf of our community.</p> <p>We continue to promote a healthier Coorong, Lower Lakes, and Murray Mouth region, including ecological monitoring and the delivery of environmental water.</p> <p>We will seek funding opportunities to invest in protection and enhancement of our iconic area.</p> <p>We work with all stakeholders to ensure the cultural and international significance of this area is recognised and protected.</p>	<ul style="list-style-type: none"> › Council › First Nations peoples › Murray Darling Association Region 6 › Federal Government (e.g. Murray Darling Basin Authority) › State Government (Department for Environment and Water; Project Coorong; Healthy Coorong, Healthy Basin Action Plan) › Landscape Board › Research Collaborators
2.3 Creatively manage and conserve our water resources	<p>Better water conservation and management has economic benefits and protects the environment.</p> <p>The less water we all use, the less we pay for water and sewer services.</p>	<p>Reduce our consumption of mains water and ensure any water used is done so efficiently, with an emphasis on environmental benefits. This will require responsible irrigation and water use in open spaces, parks and gardens, Council buildings and public amenities.</p> <p>We look for innovative ways to reuse stormwater and wastewater, such as stormwater harvesting schemes and rainwater capture. This includes seeking funding opportunities.</p> <p>We continue to improve water efficiency of new and existing buildings such as grey water recycling for Council land and buildings where appropriate.</p>	<ul style="list-style-type: none"> › Council › Community and visitors

Priorities - Waters	Why	Outcomes	Who
2.4 Promote water sensitive design and development	<p>Incorporating water sensitive designs reduce run-off, filter out pollutants, and deliver social and environmental benefits for local flora, fauna, and our community.</p> <p>We see stormwater management as a valuable resource and not as a burden.</p> <p>We create a smart, adaptable, beautiful urban community where people and the environment can thrive.</p>	<p>We use the opportunity of planned population growth to drive the development of water sensitive urban designs.</p> <p>We work with all stakeholders to implement best practice sustainable design that promotes integrated water management and green infrastructure.</p> <p>We reduce impervious surfaces, water pollution, and reliance on water resources.</p> <p>Instead, where possible, we use permeable surfaces, capture run-off through swales or buffer strips, and use indigenous plants to filter pollutants.</p>	<ul style="list-style-type: none"> › Council › All levels of government › Developers › Industry › Residents › Homeowners
2.5 Provide leadership and education to community and stakeholders	<p>Having a water sensitive community is important.</p> <p>Water education empowers positive behavior change, makes people healthier, and raises awareness of the importance of conserving and protecting our water resources.</p> <p>Leadership will influence and manage change in the complex, cross-boundary and multi-stakeholder context of the water sector.</p>	<p>We support and educate our community to minimise water consumption, and protect and conserve our waterways that we all rely on.</p> <p>We promote the cultural significance of our water resources and environments.</p> <p>We connect with partners who are also working in this area, and continue to support the great work they do (such as watercourse restoration or environmental water projects).</p>	<ul style="list-style-type: none"> › Council › NGOs, landcare and bushcare groups › First Nations peoples › Landscape Board › All levels of government › Developers › Industry › Residents › Homeowners



3. Community



Everything is connected

There is a wide diversity of villages across Alexandrina. Our major townships, Goolwa, Strathalbyn and Mount Compass, as well as their surrounding townships, are significant coastal, riverine, and inland hubs for our community and attract many people to our region, especially during holiday periods. Residents, business, people, community groups and visitors alike enjoy our diverse natural environments, and their relationships with our cultural and economic heritage. Healthy soils, waterways and landscapes are vital for functioning ecosystems. They also underpin thriving social and economic systems.

Agriculture is our largest industry, with livestock, cereal crops, vegetables, and grapes (viticulture) generating the greatest output in value terms. Wool, dairy and broad-acre crops also make a significant contribution to our agricultural productivity.

Tourism is another key driver of our regional economy with food, wine, coastal and river-based experiences linking Adelaide with the Limestone Coast, and the Murray Mouth and Lower Lakes with upstream regions via the Mighty Murray Way.

The Coorong and Lakes Alexandrina and Albert Ramsar wetlands are one of the top international migratory waterbird wetlands in the world. They provide important high-value habitat to an amazing number of threatened wildlife and rare plants, and ecosystems. A healthy system provides our local fishing industry with fish that come from both the sea and river through the mouth to spawn.

This century has seen some environmental progress for Council and our community. Often working in concert with local leaders and neighbouring councils, we have built on our work in waste reduction and recycling; nurtured more sustainable local food systems; and improved the operation of our Council. This supports and is reflected in more sustainable behaviours across our region. Landmark agreements with First Nations communities and other regional councils saw the formation of the Fleurieu Regional Waste Authority; the Resilient Hills & Coasts climate change partnership; and the membership of the Murray Darling Association Region 6.

First Nations leaders are among a chorus of people demanding we change the way we live to ensure the survival of all species, including our own. The release of the 2022 Australia State of the Environment report provides a sobering assessment of our efforts and, for many of us, a wake-up call on the status of our natural world and its many vulnerabilities.

The chapters on Biodiversity and Waters highlight challenges for these vital elements of Alexandrina's natural environment. This chapter on Communities focuses on how we, as Council, can demonstrate leadership in the way we manage our operations, and facilitate action with all our community partners to de-escalate damaging activity, and replace it with regenerative approaches to the way we live.

It is important that Council's work with community is informed by best available science and First Nations' cultural and ecological knowledge. Our priorities and actions align with relevant global, state, and national strategies and targets.



Walking together

Alexandrina Council operates within the traditional lands of the Ngarrindjeri, Kurna, and Peramangk Nations. In the spirit of Reconciliation, Alexandrina Council and its communities acknowledge the Traditional Owners of this region and acknowledge their connections to the land, waters, and community. We respect their rights, interests, and obligations to speak and care for their traditional lands and waters in accordance with their lore (belief system), customs and traditions.

Twenty years ago, Alexandrina Council and the Ngarrindjeri entered into a Kungun Ngarrindjeri Yunnan (Listen to Ngarrindjeri People Talking) Agreement. The KNY Agreement was the first of its type entered into by the Ngarrindjeri Nation at any level of government.

First Nations collaboration initiatives include:

- the protection and maintenance of Aboriginal culture and cultural sites within the Alexandrina Council area;
- natural resource management activities through the engagement and participation of the region's Aboriginal people and their representatives;
- review and maintenance of cultural awareness competencies of key project staff across all divisions of the Council and cultural awareness training to fill any knowledge gaps;
- Welcome to Country and appropriate Acknowledgment of Country statements at all Council-hosted meetings and events; and
- co-naming of places, including implementation of signage in Council-managed areas.

Alexandrina Council acknowledges that the First Nations peoples cared for Country for over 60,000 years and have tradition-based knowledge that will help us to manage our environment more holistically.

Connecting with A2040

Alexandrina Council's A2040 Strategic Plan sets out our vision for thriving communities. We are all part of nature, and this Plan acknowledges the value the community has in protecting our biodiversity, our waters, regenerating our land, and becoming climate resilient.

We can work together with a common goal to enjoy a Liveable, Green and Connected Alexandrina.



Challenges

The world is grappling with the urgent need to reduce our dependence on fossil fuels and population growth. Alexandrina's population continues to grow and our most important economic contributors – agriculture, housing, and tourism – have historically proven to have significant environmental challenges, including land use changes and waste generation.

Council's Carbon Neutral Plan identified that 99 per cent of greenhouse gas emissions are emitted by us all through transport, electricity use, and agriculture (as our largest employer). Although Alexandrina Council accounts for one per cent of emissions in our area, Council has a major role in responding to climate change and leading by example. Working together means that we as a community can achieve common goals to protect the unique environment we all enjoy.

The Climate Emergency Action Plan outlines how Alexandrina Council will play its part in supporting the community to reduce emissions and work towards a stated target of net zero community-based emissions by 2040. Alexandrina Council will act as a role model for the community by adopting corporate commitments and driving change in our community. The Climate Emergency Action Plan will guide the community to act now to tackle the challenges of a changing climate, protect and enhance our natural assets, and create a better built environment and a brighter future.

The management of waste, energy, and water are areas where Council can have significant influence. We will continue to improve our performance in moving to a circular economy that will benefit our community and environment, while keeping the income, wealth, and jobs in our area.

Opportunities

Each of our many challenges create opportunities to shift from activities that harm our environment to initiatives that make a positive difference. What we do as a community is enormously influential.

Opportunities include:

- integrating First Nations' knowledge and practice into initiatives that nourish our community;
- further reducing our waste generation, moving from a wasteful linear system of making, using and disposal, to circular systems that support the recycling of materials and energy;
- building on our achievements as a 'food-wise community' to actively support local producers, reduce food miles, eliminate food waste, and connect people with local projects that celebrate the sharing economy;
- being recognised by our community and partners as leading by example in our own operations as a Council; and
- sharing and facilitating the knowledge, skills, and motivation in our community as people more sustainably manage their properties, households, businesses, and lifestyles.

Stewardship

Council recognises that collaborative stewardship is required for the careful and responsible management of our waters, biodiversity and land that is entrusted to us. By working and walking together, we can improve Alexandrina’s environment, increase community sustainability, and govern our natural resources at the local level.

Effective actions require that:

- project initiation and ongoing management activities are properly resourced;
- threatening activities are identified, prevented, and reduced; and
- collaboration across all stakeholders, including all level of government, community members, First Nations peoples, commercial enterprises, and non-profit organisations.

Shifting to a circular economy

In the last two decades there have been significant waste policy advances in South Australia. These build on landmark reforms such as container deposit legislation that continues to define our state’s leadership role in resource recovery.

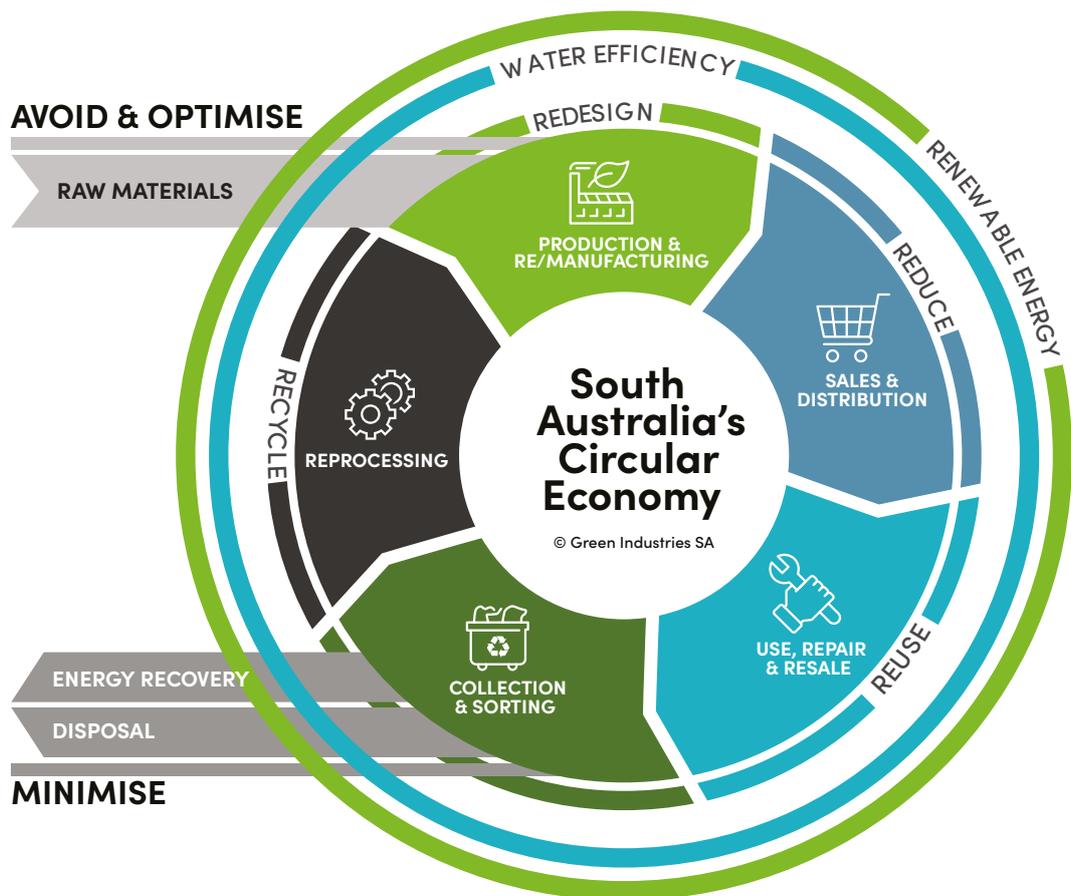


Figure 4: South Australia’s Circular Economy (Source: Government of South Australia; adopted from Green Industries SA)

Waste and recycling management initiatives include:

- Green Industries SA's leadership role in the circular economy, innovative resource recovery, food waste, household waste, and the reform of packaging and single-use plastics;
- passage of the *Single-use and Other Plastic Products (Waste Avoidance) Act 2020* with compliance enforced by the Environment Protection Authority;
- the region's Fleurieu Regional Waste Authority and its operation of depots, general waste, household recycling, and household food and garden organics collection, public litter and event bins, and community engagement activity;
- Alexandrina Council provides all residents with a 50% subsidy on the purchase of compost bins, kitchen caddies, and rolls of compostable liner bags;
- Council collection of illegally dumped waste and fining of persons responsible where possible; and
- the management and maintenance of public parks, streetscapes, and roadsides.

Supporting sustainable food systems

Food is one of the biggest contributors to our ecological footprint. The growing, processing, packaging, and transporting of food all have an ecological impact. Aside from growing our own food, one of the best ways to minimise the negative environmental impacts of the food and drink we consume is to support local food production. By eating seasonal food that is locally and sustainably produced and sold with minimal packaging, we can benefit the environment, the local economy, and our health.

There is already a strong sustainable food culture on the Fleurieu Peninsula, with farmers' markets, food and wine trails, and farm-gate producers providing memorable experiences for residents and visitors alike. Agribusiness is Council's largest industry, featuring dairy, beef, and sheep farming, broadacre cropping, fruit growing, fishing and viticulture; with opportunity to further add value, from farmyard to table. Farming also remains an important employer, with many families holding generational connections to agricultural production.

By partnering with our community and other government organisations, we are exploring how Council and community can work together to enable resilient food systems, such as:

- recognition of Goolwa as the first Cittaslow (Slow Town) in Australia, reflecting the community's growing commitment to sustainable and healthy lifestyles, active participation and growing, and enjoying locally produced food and wine;
- establishment of Visit Alexandrina, an online directory to experiences with local businesses, with an emphasis on food and wine;
- the formation of the Alexandrina Sustainable Agriculture Round Table;
- the Economic Development Strategy's priority initiative to increase local procurement;
- supporting local food systems and regenerative farming;
- reducing food waste through the collection of household food and garden organics in urban areas; and
- learning from First Nations approaches.

Local Stories: Fruit Loopers Program

Through supporting food literacy programs, such as The Food Embassy's Food Matters program and mentoring, Council is enabling community members to learn about local, sustainable food, connect with local producers and their community, and support community to bring to life community-led initiatives that help build our resilient food system.

The Fruit Loopers Program was developed by the Strathalbyn Neighbourhood Centre, a volunteer-run program, supporting residents to maintain their backyard fruit trees and increase their harvest. The Fruit Loopers Program is a Fruit Tree Recovery project which will help local tree owners manage the pruning, pest and disease control and soil health of their fruit trees to improve the harvest. The harvest is then shared with the resident and local community via the Grow Free carts.

Council supported the Strathalbyn Neighbourhood Centre to grow their idea into a program with mentoring support provided by The Food Embassy.



Image: S. Abernethy



Image: C. Scown

Sharing knowledge

Raising awareness and building the capacity of households and businesses to take positive action are essential steps toward creating a more sustainable future for our community. Moving from aspirations to implementation requires everyone to contribute.

Alexandrina Council recognises the importance of working together with our community and First Nations peoples to achieve an environmentally sustainable future. Knowledge sharing initiatives include:

- learning from First Nations peoples who have lived in this area for over 60,000 years and have local knowledge in environmental stewardship;
- places of environmental learning, including Cittaslow, the Strathalbyn Natural Resource Centre, community gardens, the Alexandrina, Clayton Bay and Hindmarsh Island Community Nurseries;
- support for and collaboration with more than 40 active conservation partners;
- Council's annual Environmental Community Grants Program, which supports the Alexandrina community in achieving local environmental and sustainable outcomes that benefit the Alexandrina region; and
- Council-led community events, including library, sustainability, and biodiversity programs often in collaboration with our partners (e.g. Food Matters, Aussie Backyard Bird Count).



Leading by example

In all our engagement with members of the community it is clear we are expected to lead by example. ‘Sustainability’ isn’t just one person’s job, or the work of a single team: environmental considerations must be part of all decisions we make, including the way we operate and deliver services.

Therefore, this Plan does not operate in isolation but has strong links to other plans, such as Council’s Climate Emergency Action Plan and Community Wellbeing Action Plan.

The Climate Emergency Action Plan

Council identified that one of our key threats to Biodiversity, Waters and Community is climate change. We recognise that tackling climate change, while maintaining thriving and liveable places for people, is a big challenge – one that can only be successful if we work together. This is why Council has developed a Climate Emergency Action Plan.

The Climate Emergency Action Plan outlines how Alexandrina Council will play its part in supporting the community to reduce emissions and work towards our stated target of net zero community-based emissions by 2040.

Alexandrina Council will act as a role model for our community by providing leadership and information to help bring about change in our community. This strategy can guide our community to act now to tackle the challenges of a changing climate, protect and enhance our natural assets, and create a better built environment and a sustainable future.

By supporting residents, business, and industry to act more sustainably, Alexandrina Council can continue to build a prosperous, healthy, thriving, and sustainable community, while transitioning towards a net zero emissions future.

For more information, go to Council’s website or contact Council’s Climate Change Officer.

The Community Wellbeing Action Plan

Council understands that the wellbeing of our community is linked to a healthy environment and a more sustainable lifestyle. The Council’s Community Wellbeing Action Plan is framed by objectives which outline a holistic approach to improving the health and wellbeing of our community.

By collaborating with others, we can all reduce climate change impacts and encourage sustainability. Council can lead by encouraging more people to actively engage in climate actions, and live more sustainable lifestyles through community education and behaviour change programs that benefit us all.

Further information on the Community Wellbeing Action Plan go to Council’s website or by contacting Council’s Community Wellbeing Team.

Strategic actions – Community

Climate priority

Alexandrina continues to experience the effects of climate change. Rainfall has decreased and seasonal patterns have been disrupted, with longer periods of drought, with intense weather becoming more frequent, resulting in flooding, erosion, wildfires, and loss of soil due to winds. This has had significant impacts on our community, including hotter townships and recreational spaces, damage to community assets, and overall influence on mental and physical wellbeing.

Our climate priority for Community is to support climate actions through reducing Council and community carbon emissions. Council’s Climate Emergency Action Plan outlines how Alexandrina Council will play its part in supporting the community to reduce emissions and work towards our stated target of net zero community-based emissions by 2040.

Priorities – Community	Why	Outcomes	Who
3.1 Walking together	<p>Alexandrina Council operates within the traditional lands of the Ngarrindjeri, Kurna, and Peramangk Nations. We acknowledge and respect their Traditional Ownership, and associated rights, interests and obligations to speak, and care for their traditional lands and waters in accordance with their laws, customs, beliefs, and traditions.</p> <p>Alexandrina Council acknowledges that the First Nations peoples cared for Country for over 60,000 years and have tradition-based knowledge that will help us to manage our environment holistically.</p>	<p>Celebrating and sharing the rich culture, history, stories, and achievements of Australia’s First Peoples.</p> <p>Collaborate to build stronger relationships with First Nations organisations and individuals to increase cultural knowledge and understanding within Council.</p> <p>Recognition of First Nations’ traditional management of land, waters, sea, and fire.</p> <p>Protection of cultural important heritage areas.</p> <p>Encourage opportunities to educate the community about First Nations culture, heritage, and sustainable environment practices.</p>	<ul style="list-style-type: none"> › First Nations peoples › Council › Community › Visitors › Businesses

Priorities – Community	Why	Outcomes	Who
3.2 Shift to a circular economy	The generation and management of waste is an area where Council can have significant influence and we will continue to improve our performance in moving to a circular approach to materials and energy that will benefit local community, including the creation of new industries and employment.	<p>Engage with our community and businesses to establish a circular economy.</p> <p>Reduce landfill by diverting green waste from landfill through increased household recycling and household food and garden organics kerbside collection.</p> <p>Provide 50% subsidy on the purchase of compost bins, kitchen caddies, and rolls of compostable liner bags for Alexandrina’s residents.</p> <p>Increase low-waste procurement and contracts that support the circular economy.</p> <p>Support nature based and Indigenous owned tourism opportunities.</p>	<ul style="list-style-type: none"> › Fleurieu Regional Waste Authority › Council › Businesses › Community
3.3 Support sustainable food systems	Food is one of the biggest contributors to our ecological footprint. The growing, processing, packaging, and transporting of food all have an ecological impact. Aside from growing our own food, one of the best ways to lead a more sustainable lifestyle is by supporting local food production.	<p>Support the establishment of community gardens.</p> <p>Continue to support Resilient Food Systems in South Australia and the role of local government in supporting a resilient local food system.</p> <p>Explore opportunities for learning from First Nations peoples about native foods and plants and caring for country.</p>	<ul style="list-style-type: none"> › Council › Community gardens › Cittaslow › Fruit Loopers Program › First Nations peoples › Businesses › Community › Visitors › ASART

Priorities – Community	Why	Outcomes	Who
3.4 Share knowledge	<p>Raising awareness and building the capacity of households and businesses to take positive action are essential steps toward creating a more sustainable future for our community.</p> <p>To achieve this goal we to engage with our community to learn and protect what they love about our environment.</p>	<p>Learn from First Nations peoples and share their local knowledge in environmental stewardship with the community.</p> <p>Continue to support places of environmental learning, and seek community support for protecting what ‘we love’.</p> <p>Continue and build new partnerships with Alexandrina’s conservation groups.</p> <p>Support the community in achieving local environmental and sustainable outcomes through annual grants.</p> <p>Undertake Council led community events regarding environmental programs in collaboration with our partners.</p>	<ul style="list-style-type: none"> › Council › First Nations peoples › Cittaslow › NGOs, landcare and bushcare groups › Community › Businesses
3.5 Connect with what we love about our environment	<p>We cannot protect our environment if we don’t care for it.</p> <p>Development of positive long-term change requires community empowerment and education.</p> <p>The change needs both individual behaviour change and Council initiatives.</p> <p>By collaborating with others, we can all Care for Country, reduce climate change impacts, and encourage sustainable lifestyles.</p>	<p>Empowering change through collaboration, upskilling, and education.</p> <p>Council can lead by encouraging more people to actively engage in environmental stewardship, climate actions, and live sustainable lifestyles through community education and behaviour change programs that benefit all of us.</p>	<ul style="list-style-type: none"> › Council › First Nations peoples › NGOs, landcare and bushcare groups › Cittaslow › Community › Visitors



Appendix I



Ongoing actions

A review of the former Environmental Action Plan 2014–2018 identified that 71% of the listed actions are ongoing (62% are implemented but require ongoing tasks). These ongoing actions are listed below.

Chapter	Task
Biodiversity	Continue to ensure that remnant vegetation on land parcels under Council’s care and control are identified, surveyed, and prioritised for on-ground works (including reserves, unmade road reserves and roadside marker sites). Surveys are staged over time in accordance with available resources
Biodiversity	Continually improve the capacity of Council’s GIS system to record and map data about the presence, condition and management of biodiversity on Council land
Biodiversity	Continue to work in accordance with the Biodiversity Assets Management Plan
Biodiversity	Implementation of site specific management plans and/or annual work plans for Council roadsides and reserves of high conservation priority
Biodiversity	Ongoing support of the Bush for Life program within the Alexandrina Council area
Biodiversity	Collaboration with Landscape Board in the implementation of a strategic pest and weed management
Biodiversity	Connecting high priority biodiversity areas within the region by undertaking works on Council land and roadside corridors
Biodiversity	Work in partnership with our conservation partners to encourage rural landholders adjoining Council biodiversity reserves to undertake works to increase biodiversity corridors and remnant vegetation in the Council area
Biodiversity	Use of species list with recommended plant species for Council infrastructure projects
Biodiversity	Decommission Swamp Road lagoon at Strathalbyn and restore the 19ha site to more natural state
Biodiversity	Ongoing regeneration of the capped landfill site at Goolwa Waste and recycling depot to buffer Tokuremoar Reserve
Biodiversity	Advocate for the restoration of wetland systems
Biodiversity	Work with our conservation partners to increase urban biodiversity connectivity
Biodiversity	Ongoing support of the nature conservation program that includes urban biodiversity reserves in Goolwa, Strathalbyn, Middleton, Port Elliot, Clayton Bay and Milang with our conservation partners
Biodiversity	Ongoing advocacy and seeking funding opportunities for existing sites and potential new urban biodiversity reserves

Chapter	Task
Biodiversity	Continue to increase plantings of local native species in streetscapes, parks and gardens
Biodiversity	Ongoing collaboration with Landscape Boards, Resilient Hills & Coasts partners, First Nations peoples, CFS, government agencies, and community groups to reduce fire risk by removing woody weed, to revegetate with indigenous plants and to increase biodiversity
Biodiversity	Continue to develop and maintain infrastructure which protects important coastal vegetation and habitats, such as dune fencing, board walks, and beach access tracks
Biodiversity	Continue collaboration to continue environmental, visitor and cultural heritage management of Sir Richard Peninsula
Biodiversity	Continue to work in partnership with Landscape Board to implement the Southern Fleurieu Coastal Action Plan
Biodiversity	Continued protection and management of Councils conservation reserves, Native Vegetation Heritage Agreement and Significant Environmental Benefit (SEB) sites
Biodiversity	Investigate opportunities for collaborative management with Landcape Board and conservation partners
Biodiversity	Investigate areas of high conservation significance to be protected under the Native Vegetation Heritage Agreements
Biodiversity	Continue conservation efforts and listed threatened species protection in accordance with federal and state legislative requirements (Environment Protection and Biodiversity Conservation Act, Native Vegetation Act, National Parks and Wildlife Act)
Biodiversity	Ongoing collaboration with Landcape Board, landholders and neighbouring councils ('good neighbour' principle) in addressing strategic weed and pet management across Hills & Fleurieu region
Biodiversity	Ensure the Roadside Vegetation Management Plan reflects current best practice, is supported by appropriate operational policies and procedures and contractual terms, and that all relevant staff and contractors are trained in its use.
Biodiversity	Maintain the existing Roadside Marker System and ensure that it is supported by appropriate operational policies and procedures and that all relevant field staff and contractors are trained in its use.
Biodiversity	Staff and contractors are appropriately trained and skilled in addressing phytosphthora risk
Biodiversity	Collaboration with Basham Beach Trust in the funding of a Coastal Trainee position
Biodiversity	Ongoing cat management according to Council's Cat-by-law
Biodiversity	Ensure that biodiversity considerations are integrated into project management framework for all Council infrastructure projects

Chapter	Task
Biodiversity	Ongoing collaboration with the Community Nurseries Network by ordering plants for Council infrastructure and revegetation projects via the nurseries
Biodiversity	Provide in-situ information to the community about the value and management of biodiversity on Council land through the installation of interpretive signage
Biodiversity	Annual seed collection on Council roadsides whilst also ensuring that Council's annual roadside slashing program can proceed in a timely manner. Annual collaboration with Community Safety Team. Seed collection sites identified in Council GIS
Biodiversity	Implementation of the Tree Management Policy and Procedures
Waters	Maintain an annual inventory of Council water use
Waters	Continue to incorporate water efficiency, harvesting and reuse measures into Council buildings and facilities.
Waters	Ensure Council is compliant with the SA Water Industry Act 2012 and in line with industry best practice
Waters	Work with developers to ensure that new public open spaces are independent of potable water supplies, WSUD features are incorporated, construction of green corridors with vegetated swales for improved infiltration, and stormwater bio-infiltration basins to reduce discharge volume to waterways
Waters	As part of the Planning & Design Code 2020, undertake infrastructure agreements with developers to introduce construction and maintenance of regional stormwater management infrastructure
Waters	Ensure that consideration of potential WSUD options are incorporated into the project management framework for Council infrastructure projects
Waters	Ongoing conservation and management of Council reserves along waterways
Waters	Conservation and management of Council's constructed urban wetlands
Waters	Collaboration with stakeholders on watercourse restoration and environmental watering projects
Waters	Ongoing monitoring groundwater quality at Goolwa Waste and Recycling Depot
Waters	Community education about the importance of properly maintaining on-site wastewater systems via Development Applications and website
Waters	Ongoing advocacy for the health of the River Murray, Murray Mouth, Lower Lakes & Coorong
Waters	Continue advocacy for implementation of the Murray Darling Basin Plan, e.g. through membership of the Murray Darling Association (MDA) Region 6

Chapter	Task
Climate Change	Continue annual carbon reporting on Council's greenhouse gas emissions and provide annual update on Council's website
Climate Change	Council and community pathway to carbon neutrality by 2040 through initiatives identified in the Carbon Neutral Plan (2022) and the Climate Emergency Action Plan (2023)
Climate Change	Work with Resilient Hills & Coasts, LGA & other councils to develop tools for translating management of climate change impacts into Council's long term financial plan, asset management plan. Ensure that climate change risks and opportunities relevant to Council's assets, operations and services are assessed, and that priority actions to minimise these risks, and take advantage of opportunities are identified
Climate Change	Actively manage coastal areas that are vulnerable to climate change hazards in accordance with Council's Coastal Adaptation Study (2021) and Coastal Adaptation Plan (2022)
Climate Change	Ongoing advocacy with the State and Federal Government to strengthen mandatory development controls with respect to green building design and construction
Climate Change	Council's emissions reduction target is incorporated into project management framework for Council infrastructure & retrofit projects as per Council's Climate Change Policy
Climate Change	As per Council's Carbon Neutral Plan (2022) and Climate Emergency Action Plan (2023), investigate opportunities with the Local Government Association, Resilient Hills & Coasts and other councils to generate carbon credits on Council or local private land
Climate Change	Investigate options for transition to LED streetlighting as per the Carbon Neutral Plan (2022)
Climate Change	Implementation of actions identified in the Regional Public Health Plan that actively manage public health and social impacts of climate change
Climate Change	Collaborate with a wide range of stakeholders (First Nations peoples, CFS, Nature Vegetation Council, NPWS, RH&C) to ensure adequate consideration is given to adequate management of increase in the frequency and intensity of bushfires while protecting our biodiversity
Climate Change	Work with developers to design and market future urban growth areas as 'green developments' with a focus on energy efficient and water sensitive design, sustainable transport options, biodiversity protection and natural open space
Climate Change	As per A2040 priority, Council continues to advocate that our region is well serviced with a safe, accessible, efficient and sustainable transport network
Climate Change	Ongoing expansion of the region's walking and cycle networks whilst also providing adequate protection for the natural environment
Climate Change	Continued advocacy with State and Federal Governments to provide financial incentives and support for the uptake of renewable energy at the household and community level as per actions identified in the Climate Emergency Action Plan (2023)

Chapter	Task
Communities	Collaborate with FRWA in the education of the community about waste reduction and the real cost of waste management
Communities	Ongoing initiatives and education of staff to avoid waste, reduce waste to landfill and improve waste recovery from Council operations
Communities	Strengthen local food by continued support and collaboration regarding Food matters workshops, Building A Local Food Community, the Food Embassy, the Strathalbyn Neighbourhood Centre, and community gardens, and other initiatives
Communities	Development of Council's Sustainable Events Guideline
Communities	Staff's Climate Champions play a crucial role in educating, inspiring and empowering colleagues to take increased action on climate change to help Alexandrina move towards a carbon neutral future through ongoing advocacy, events and lunchtime forums
Communities	Implementation of the Climate Change Policy and training of staff in regard to environmental stewardship and climate change adaptation and mitigation measures
Communities	Ongoing collaboration with Landscape Boards and other community organisations to promote and encourage sustainable farming practices
Communities	Ongoing collaboration with stakeholders with respect to the Mount Lofty Ranges Agrarian Landscape World Heritage Listing bid.
Communities	Develop & deliver an environmental and climate change induction package for all Council employees
Communities	Ongoing communication to staff and Elected Members on environmental and climate change projects, initiatives, progress and successes
Communities	Ongoing collaboration with scientific research institutions on projects that will support the objectives of this Plan (such as the Water Research Institute)
Communities	Provision of report and information sheets on Council's website regarding climate resilient buildings that were developed in collaboration with the Resilient Hills & Coasts (e.g. Where We Build What We Build Project).
Communities	Council's annual Community Environment Grant program supports Alexandrina's community in achieving local environmental and sustainable outcomes that benefit the Alexandrina region. The Grant program aligns with actions and outcomes identified in this Plan, A2040, and the Climate Emergency Action Plan
Communities	Ongoing update of Council's website to provide our community with a source of Council's involvement in environmental and climate change actions
Communities	Ongoing collaboration with the arts and culture sector to raise awareness of environmental and climate change matters in our region



Appendix II



Connection to other Council plans and policies

To effect real change Council action cannot be limited to one department or a small number of dedicated roles. Partnerships with many stakeholders across government, industry and the community are vital to success.

Supporting plans and policies include, but are not limited to:

- A2040 strategic plan, including 10-year strategies for assets and finance, the 4-year plan
- Village Innovation Plans for each locality
- Kungun Ngarrindjeri Yunnan (Listen to Ngarrindjeri People Talking) Agreement
- Biodiversity Assets Environmental Management Plan
- Roadside Vegetation Management Plan
- Tree Management Policy and Tree Management Procedure
- Tree Canopy Baseline Study
- Alexandrina Township Verges Planting Guide
- Native Vegetation Heritage Agreements
- Carbon Neutral Plan
- Climate Emergency Action Plan
- Coastal Adaptation Study and Coastal Adaptation Plan
- Resilient Hills & Coasts Regional Climate Change Adaptation Plan and Action Plans
- Community Wellbeing Action Plan
- Economic Development Strategy
- Alexandrina Council Development Plan
- Operational policies, procedures, and management plans, such as Significant Environmental Benefit sites, etc.
- Water Allocation Plans



How to contact us

11 Cadell Street, Goolwa
PO Box 21, Goolwa SA 5214
alexandrina.sa.gov.au
08 8555 7000
alex@alexandrina.sa.gov.au