District descriptions

Eyre Peninsula Regional Landscape Plan 2026-2031

LANDSCAPE SOUTH AUSTRALIA EYRE PENINSULA

Contents

1. Introduction

The Eyre Peninsula Landscape Board management area comprises three districts: Western District, Southern District and Eastern District. These have been updated from the previous five subregions in the last iteration of the Eyre Peninsula Landscape Plan to better reflect current management approaches and align with local government boundaries.

These districts are based on areas of similar landscape and land uses. The district descriptions provide an understanding of the natural resources and management approaches across the Eyre Peninsula in each of these districts. The sub-region descriptions are comparative, and described for the purpose of informing and supporting important landscape-related decisions across each regional priority: water, primary production, land and coastal biodiversity, pest plants and animals, and collaboration and partnerships.

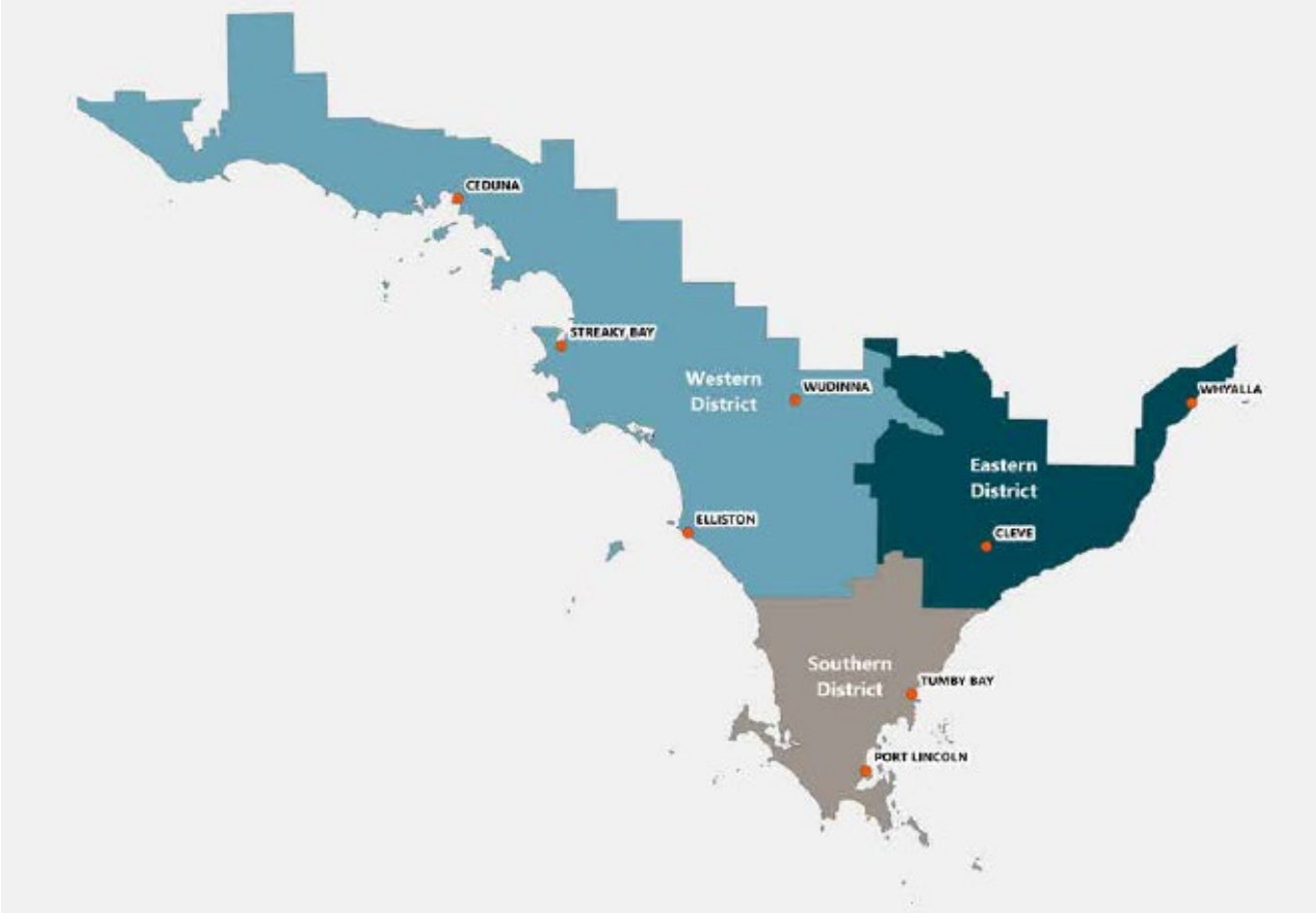

Figure 1 The three districts of the Eyre Peninsula Landscape Region

A summary of some of the key features in the three districts is provided in the table below.

	Western District	Southern District	Eastern District
Landscape & settlement	Very low population density; scattered pastoral and small agricultural settlements; large areas of intact native vegetation	Higher population density around coastal towns; mixed farming landscapes interspersed with conservation areas	Most urbanised and industrialised district; population concentrated in regional centres and along transport corridors
Key geographic features	Gawler Ranges volcanic landscapes; arid and semi-arid plains; offshore island groups	Southern coastline, bays and headlands; productive agricultural land; marine embayments	Upper Spencer Gulf coastline; plains and low ranges; major ports and industrial infrastructure
Climate & rainfall (relative)	Lowest and most variable rainfall; highly climate-sensitive systems	Moderate rainfall by Eyre Peninsula standards; strong coastal influence	Low to moderate rainfall; high evapotranspiration; strong reliance on infrastructure
Water management challenges	Declining groundwater levels; limited recharge; high climate exposure	Balancing groundwater use with declining recharge; managing growing urban and industrial demand; desalination as an alternative potable water supply	High dependence on infrastructure; vulnerability to supply constraints and demand growth
Dominant primary production	Broadacre cropping and grazing adapted to low rainfall	Mixed cropping and grazing; significant aquaculture	Industrial, port-related activity; mixed cropping and grazing
Distinctive industries	Conservation management and ecological restoration	Aquaculture diversification; iconic national parks and tourism	Energy, ports, heavy industry; associated service sectors
Biodiversity values	Large areas of intact terrestrial habitat; island refuges for threatened species	High biodiversity across land and sea; significant coastal and marine ecosystems	Coastal and marine habitats under pressure; remnant terrestrial biodiversity in fragmented landscapes

2.Western District

The Western District extends from the Wahgunyah Conservation Reserve near the edge of the Nullarbor Plains in the west, to Pinkawillinie Conservation Park in the east, and south to encompass the District Council of Elliston. The district includes a large marine area extending along the Great Australian Bight to just south of Sheringa Beach. This includes the Nuyts Archipelago and Investigator Group Islands.

2.1. Quick stats

Population

	2021[1]	2024 estimated population[2]	Change
Western District	9,553	9,943	+4.1%

Major towns (estimated 2024 population)[3]: Ceduna (2,445 people), Streaky Bay (2,165 people)

Traditional Owners: Far West Coast Aboriginal Corporation, Wirangu People, Nauo People, Barngarla People

Land area: 30,486 square kilometres

Local Governments: District Council of Ceduna, District Council of Streaky Bay, Wudinna District Council, District Council of Elliston, District Council of Kimba (Pinkawillinie Conservation Park only)

Out of Council Area: pastoral unincorporated area: approximately 6,750 square kilometres (13% of land area)

Coastline length: 799 kilometres of mainland coast plus 102 islands

Highest elevation: Mount Wedge (249m AHD)

Annual rainfall[4]: 270-430 mm

Native Vegetation Cover (2024)[5]**:** 15,252 square kilometres (50% of land area)

Environment Protection and Biodiversity Conservation (EPBC) Act listings: 11 flora species and 39 fauna species[6] and 2 Threatened Ecological Communities[7]

Heritage Agreements[8]**:** 366, covering a total of 1,918 square kilometres

Main land uses (% of land area)[9]: agriculture (66%), livestock (17%), reserve (16%)

Top 3 industries of employment (2024)[10]: mining (28%), agriculture, forestry and fishing (18%), healthcare and social assistance (11%)

Top 3 industries by output (2024)[11]: mining (40%), agriculture, forestry and fishing (34%), construction (5%)

2.2. What's valued in the Western District?

The beautiful, clean beaches, rocky cliffs, great fishing and remoteness of the Western District are highly valued by the local community and visitors to the area. Many residents particularly value the solitude and scenic beauty of their home. Surfing, camping, diving, fishing and wildlife watching are popular with residents and visitors alike. Offshore, the Nuyts Archipelago and Investigator Group Islands are valued for the wildlife and wilderness, both on the land and in the waters.

The arid landscapes of the far west are integral to the community's identity. The tyranny of distance is felt by many in the community who value the remoteness of the region but sometimes struggle to access services and facilities available in more populated areas. Townships are valued for character, history and amenity as well as the diverse community clubs they are home to and the important gatherings they enable.

Broad scale cropping and grazing is undertaken across large areas of the region. Many farmers have long family connections to their properties and take pride in looking after the land. In a region where environmental pressures on soil health are particularly intense, native vegetation is valued by many in the farming community who recognise its contribution to ecosystem services and habitat for birds and reptiles. Native grasses are recognised for biodiversity value as well as the ability for stock to feed on during drought and prevent topsoil erosion.

The contrasting landscape between coast, plains and scrub are stark and valued in the Western District. Large areas of scrub through the dune country in conservation parks such as Yumbarra and Pureba are valued for the wilderness and deep Aboriginal cultural significance. The conservation parks of Bascombe Well, Kulliparu and Pinkawillinie are valued by locals and visitors who enjoy observing the rich bird life and range of wildflowers including rare orchids. Granite outcrops and inselbergs such as Yarwondutta, Pildappa and Tcharkulda Rocks (near Minnipa), Ucontitchie Hill, Mount Wudinna and Polda Rock are distinctive geological features, cultural sites and tourist attractions. Yellow-footed rock wallabies, waterfalls, the Organ Pipes and Pondanna Outstation are some of the cherished features of the Gawler Ranges National Park. The local community are proud of collaborating to protect some of these areas.

Groundwater and wetlands are valued features of the district's ecological and economic function. Groundwater sources are shared between domestic supplies (town and remote), crop and livestock support, and groundwater dependent ecosystems including red gums. Large wetlands like Lake Newland, Streaky Bay and Baird Bay support abundant bird life, particularly during wet periods.

The landscapes and features of the Western District are the ancestral lands of the Far West Coast Aboriginal Corporation, Wirangu People, Nauo People and Barngarla People. These Traditional Owners have deep spiritual attachment and relationships with Country. Traditional Owners continue to live in the region, maintain connection with the land and protect and enhance culture, cultural sites and natural resources of the lands and waters of the region through practises that have sustained this landscape for thousands of years.

The Western District has an energised and close-knit community. They appreciate that landscape management is about the bigger picture of how humans interact with the natural environment over the longer term including considering the needs of future generations. As a community heavily dependent on a sustainable agricultural industry, there is a deep appreciation and sense of value for the natural environment. There is an understanding that landscape and environmental health will require the combined efforts of all in the district.

2.3. Water

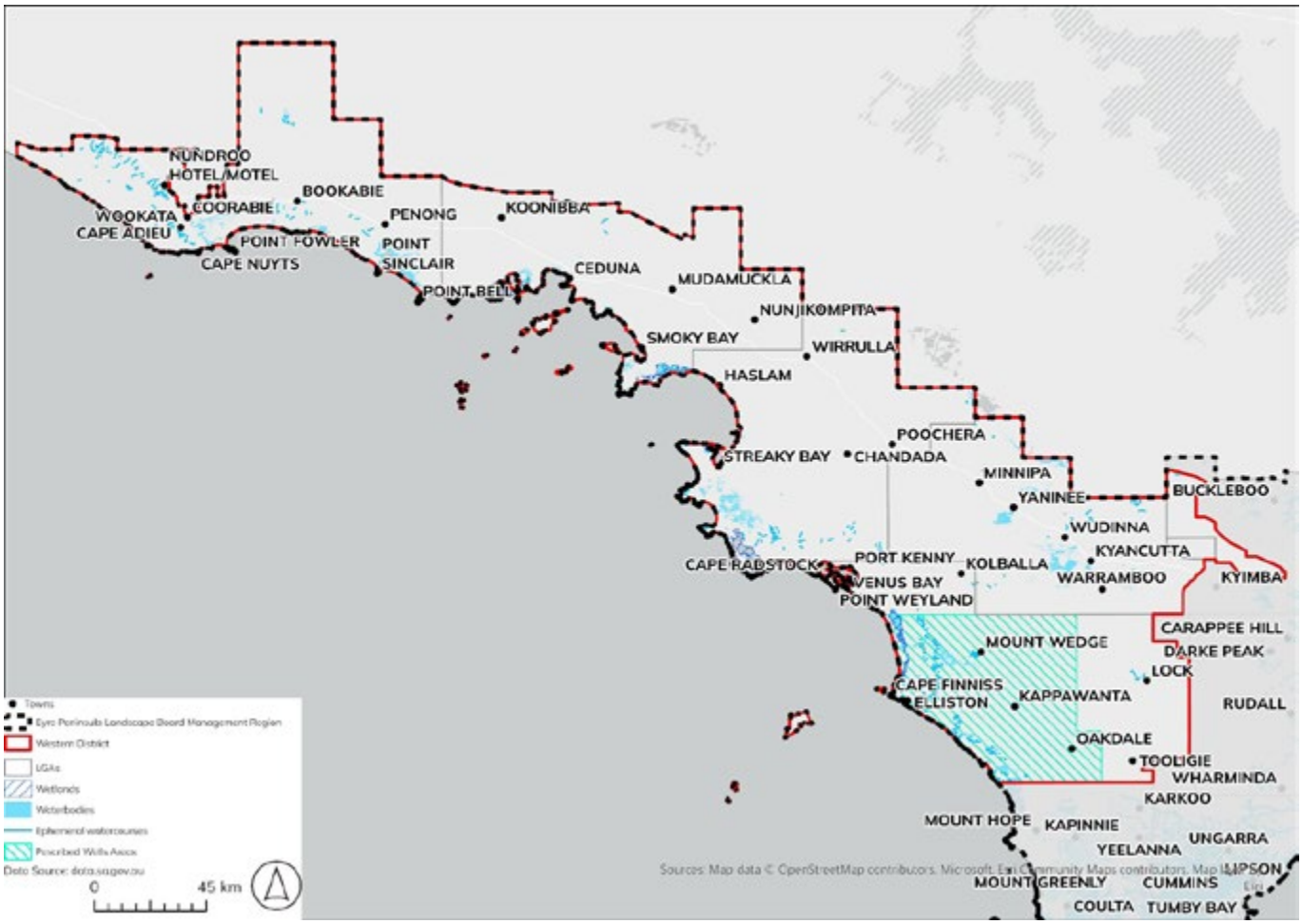

Figure 2 Water features in the Western District

The Western District experiences a warm and dry climate, with significantly less winter rainfall than other parts of the Eyre Peninsula particularly in the north of the district. Climate ranges from arid and semi-arid in the west of the Western District to Mediterranean in the south and east. Rainfall occurs predominantly in winter, and summers are hot and dry.

Rainfall is highest in the southern coastal areas around Elliston where annual rainfall averages approximately 410 mm, decreasing inland toward Wudinna (300 mm per year) and west toward Ceduna (270 mm per year).

Rainfall has been decreasing in recent decades across the region [12]. For example, Wudinna has experienced a decrease of 26mm from the average annual rainfall in 1969-1994 to the average annual rainfall in 1995-2024. The influence of climate change is projected to further reduce rainfall in the region. Elliston is projected to experience a 59 mm decrease in annual average rainfall by the 2050s from the current baseline under a high emissions scenario (Representative Concentration Pathway (RCP) 8.5). Temperatures are also expected to rise across the region.

Table 1 Rainfall data for the Western District

	Penong	Ceduna	Wudinna	Elliston
1969 – 1994 (historic baseline)	320 mm	292 mm	323 mm	432 mm
1995 – 2024 (current baseline)	292 mm (-28 mm from historic baseline)	268 mm (-24 mm from historic baseline)	297 mm (-26 mm from historic baseline)	411 mm (-21 mm from historic baseline)
2050s average (future projection under RCP8.5)	248 mm (-44 mm from current baseline)	241 mm (-27 mm from current baseline)	265 mm (-32 mm from current baseline)	352 mm (-59 mm from current baseline)

There are no permanent surface watercourses and few defined drainage lines in the Western District.

Numerous salt lake systems are found including ones listed in the Directory of Important Wetlands in Australia such as Davenport Creek, Streaky Bay, Baird Bay and Lake Newland wetlands. These provide habitat for numerous water and shore birds including migratory waders protected under national treaties.

Fresh groundwater lenses play a large role in the district. Some of these are protected within the Musgrave Prescribed Wells Areas (PWAs). The associated Water Allocation Plan provides a framework for the protection and sustainable use of these groundwater resources for agriculture, the environment and communities. The larger lenses include Talia, Polda, Bramfield, Kappawanta and Sheringa A and B. Licensed extraction in the Musgrave PWA in 2022–23 was all sourced from the Bramfield consumptive pool since extraction from Polda was restricted as a result of falling water levels[13].

Groundwater levels and salinity fluctuate with periods of low and high rainfall. Long-term assessment of groundwater resources within the Musgrave PWA indicates a persistent decline in groundwater levels, reflecting increasing stress on the region's aquifers[14]. Consequent impacts include rising groundwater salinity and reductions in overall groundwater storage.

In the Musgrave PWA, five-year trends show that water levels are rising in 55% of wells[15]. However, water levels in 90% of wells in the Quaternary Limestone aquifer are classified 'Below average' or lower. Long-term trends show that groundwater salinity is stable (within ±10% tolerance) in the majority (75%) of wells.

Mains water is supplied to the north of the district including Ceduna, Streaky Bay and Wudinna using a mix of groundwater from the Southern Basins PWA and the River Murray via the Morgan water treatment plant[16]. Lock is supplied by mains water using River Murray water via the Morgan water treatment plant. Several local lenses are used to supply potable water to towns not connected to the SA Water distribution network including Penong, Port Kenny and Venus Bay. Elliston is supplied from the Bramfield Lens in the Musgrave PWA. Management of the salinity and water availability of many of these groundwater lenses is an ongoing priority. The SA Water Desalination Plant is currently under construction at Billy Lights Point with first water expected by the end of 2026. This will soon supplement water supply to reduce groundwater extraction requirements and mitigate the risks of inadequate, increasingly saline groundwater supplies.

2.4. Primary production

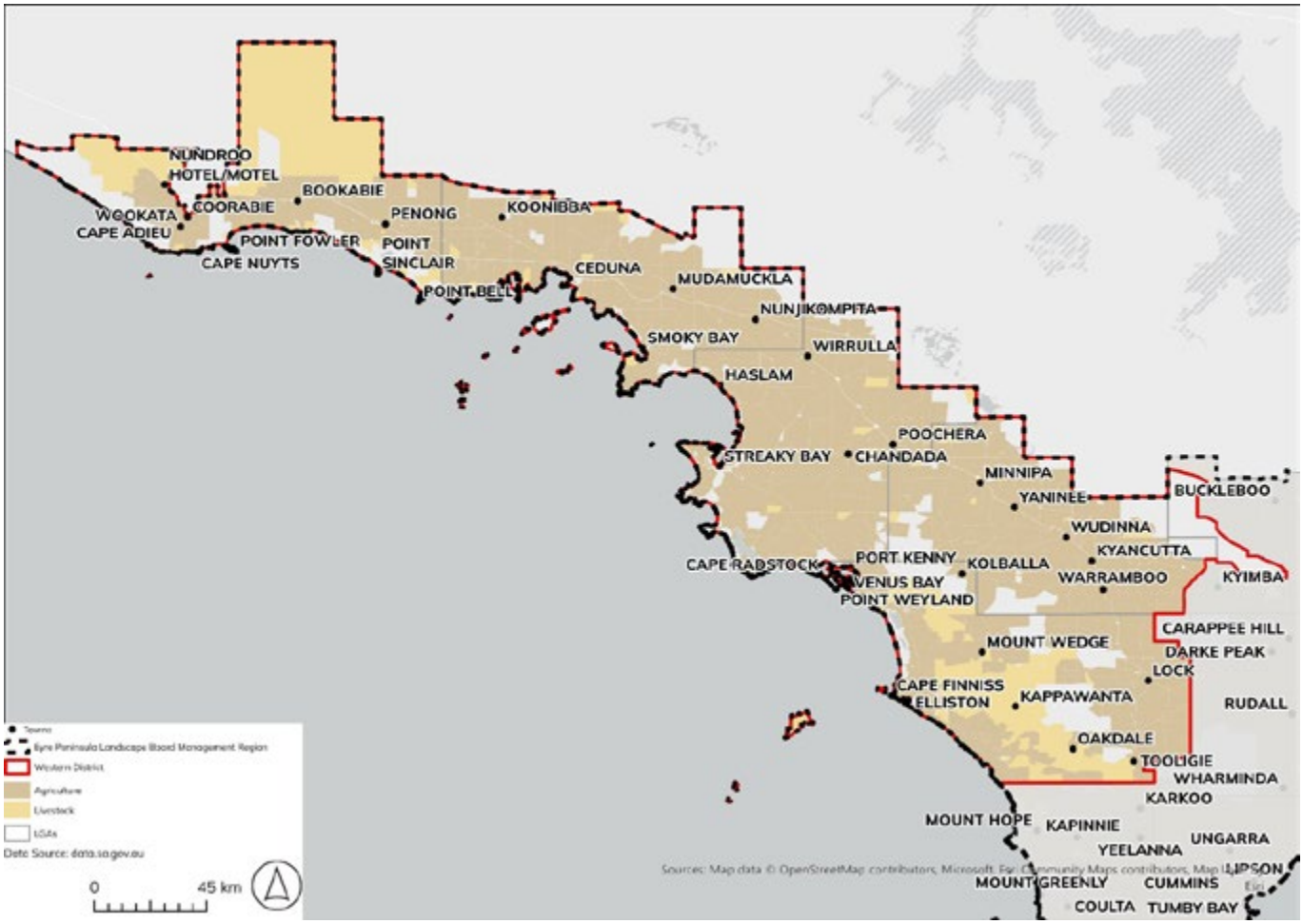

Figure 3 Primary production land use in the Western District

Agriculture comprises 66% of the land area of the Western District. Cropping is the main agricultural land use. Crops including wheat, barley, oats, canola, legumes and pulses are grown. The Western District on average produces about 34% of the Eyre Peninsula wheat crop[17]. Grazing is also widespread, with sheep and cattle feeding on areas of both natural and modified pastures. The proportion of grazing land as a percentage of total land use is higher in the Western District than in the Eastern and Southern Districts [18]. However, this grazing is lower intensity than in the medium and high rainfall zones of the state's agricultural regions.

Soil type and rainfall significantly influence land use in the district. Between Penong and Poochera, calcareous, sandy loam soils support cropping[19]. West of Penong, soils are similar however rainfall limits agricultural production. South of Poochera toward the Venus Bay, soils are similar but shallower and there is less cropping. The majority of soils inland from Elliston are classified as shallow sandy loam on calcrete that predominantly support grazing or conservation. Around Lock, calcareous loams are widespread, and cropping is undertaken. Closer to the coast, carbonate sands and calcareous sandy loams support areas of cropping.

The level of soil erosion risk on agricultural land in the Western District was described by the Department for Environment and Water as 'fair' and 'getting worse' in 2023[20]. This was influenced by below average rainfall in the previous five years (2018–2022), with less plant growth and resulting groundcover to protect the soil from erosion. The three-year average number of days with erosion risk in the region was 55 days as of 2022. This was among the highest in the state and well above the state average of 36 days. Over the past 20 years and through ongoing research and development, farmers have adopted methods of soil and land management that better protect soil from the risk of erosion.

Commercial wild fisheries and aquaculture are key industries in the district. Farming of Pacific oysters has been undertaken for nearly 30 years. Denial and Smoky

Bay are two of the largest producing areas in South Australia significantly contributing to local employment and the economy. Commercial wild catch fisheries export prawns, rock lobster, scalefish and abalone and include the Northern Rock Lobster Fishery and the Marine Scalefish Fishery. Large numbers of fishing vessels use the islands and bays around Elliston for overnight anchorage. Export of fish to interstate and overseas markets occurs from Thevenard (Ceduna). This fresh seafood industry is renowned around Australia and overseas and brings significant numbers of tourists to the region.

Carbon and biodiversity plantings are being trialled across the Western District. These present opportunities for farmers to generate income through selling carbon credits and achieve a range of long-term co-benefits for farming productivity and the environment.

The impacts of climate change projected for the region will adversely impact on agriculture and aquaculture in the district. This includes increased heat stress, reduced water availability, heightened drought frequency and increased frost events as well as warmer ocean temperatures and increased ocean acidity. Agricultural production system research in the region, being led by the region's farming groups and government funding partners, is heavily focused on developing improved, more resilient cropping approaches in marginal soils, designed to contend with the challenges of drought, frost and other environmental pressures.

2.5. Land and coastal biodiversity

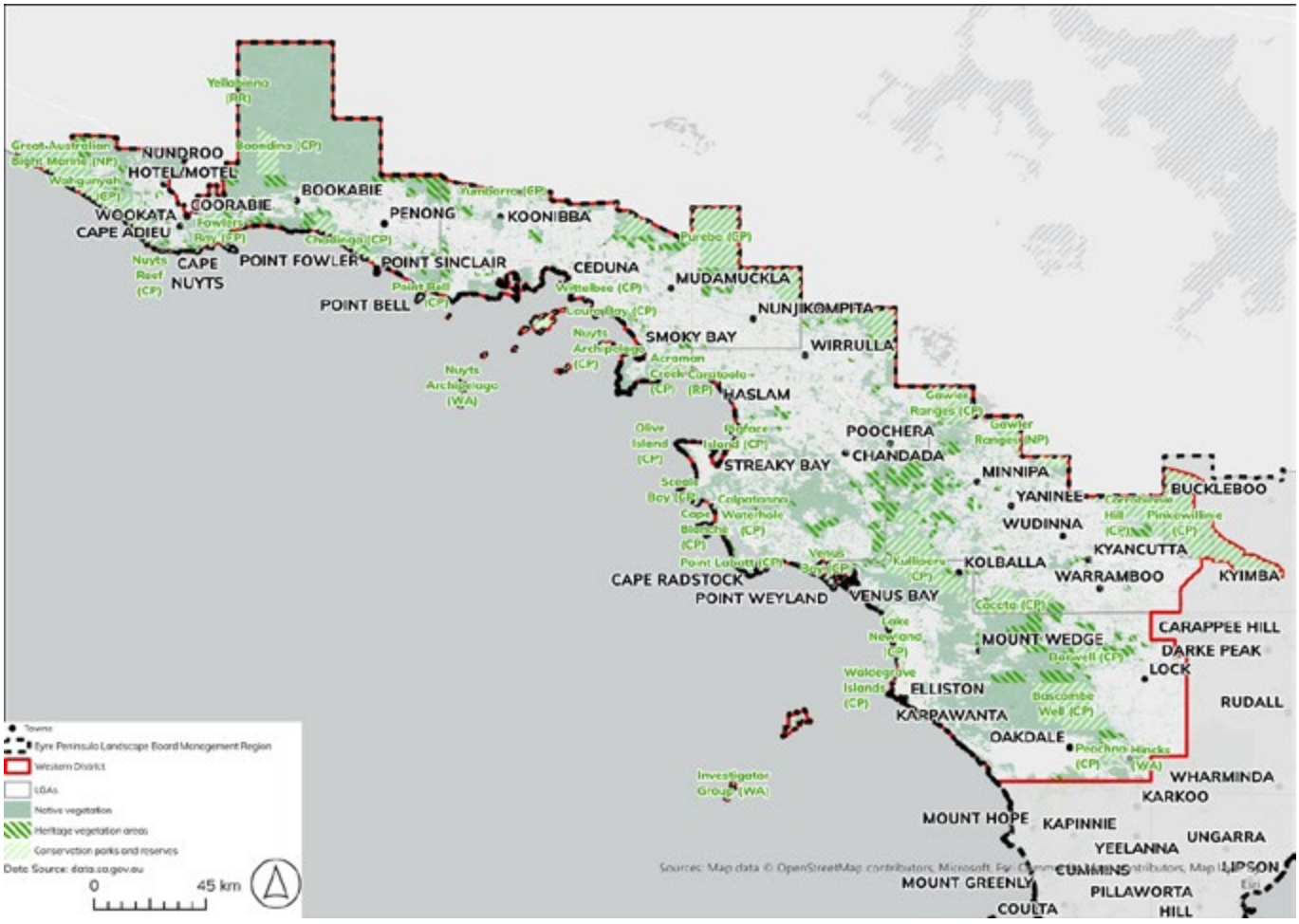

Figure 4 Biodiversity features in the Western District

Vegetation

Just over 50% (15,252 square kilometres) of the district's land area contains remnant native vegetation. This is a very high proportion compared to other agricultural areas of South Australia and can be attributed to the shallow soils and low rainfall that limit agricultural productivity in much of the region. The northern border and south of the district contain some of the largest intact areas of bushland in South Australia. The WildEyre conservation project (a previous collaborative project involving the Eyre Peninsula Landscape Board) which covered much of the district, has linked many of these habitats.

The landscape in the far west of the district comprises low limestone dune ridges that support mallee woodland dominated by Yorrell (*Eucalyptus gracilis*) and Red Mallee (*Eucalyptus oleosa*). Close to the coast, the sandy beaches are backed by low shrublands of Nitre bush (*Nitraria billardierei*) and Bladder Saltbush (*Atriplex vesicaria*) that grow on deep sands. The semi-arid climate in this area is too dry to support field crops.

From Bookabie to Minnipa, the undulating plains have been cleared for cropping. Prior to clearance, mallee dominated by Red Mallee (*Eucalyptus oleosa*) and Gilga (*Eucalyptus brachycalyx*) were the dominant vegetation type. Dune fields run north-west to south-east in the north and the east.

North of Bookabie, there has been minimal clearance of native vegetation. East to the Eyre Peninsula Landscape Board's regional boundary, mallee woodland dominated by Red Mallee (*Eucalyptus oleosa*) is found across the low dunes. Moving north, the landscape is undulating with some sand dunes vegetated by low woodland of Western Myall (*Acacia papyrcarpa*) under threat of fragmentation. Further north toward the Yellabinna Regional Reserve, low shrubland dominated by Bladder Saltbush (*Atriplex vesicaria*) is found on the generally flat landscape, scattered with small shallow depressions.

In the east of the district, much of the mallee that dominated the area has been cleared for agriculture, with remnant vegetation located in the Pinkawillinie Conservation Park. In this park, Ridge-fruited Mallee (*Eucalyptus incrassata*) is the dominant vegetation community providing important habitat for the nationally vulnerable Malleefowl (*Leipoa ocellata*).

The south of the district comprises undulating to hilly plains on calcrete with Mount Wedge (249m) the highest point in the district. Through most of the southern inland areas, the large areas of remnant mallee woodlands are dominated by Mallee Box (*Eucalyptus porosa*) and Coastal White Mallee (*Eucalyptus diversifolia*). To the north and east of Lock, sand ridges run north-west to south-east. In the south-west there are also significant areas of Red Gum (*Eucalyptus camaldulensis*) Woodlands. Most native vegetation has been cleared around Lock for cropping.

There are also large areas of native grassland dominated by Spear-grass (*Austrostipa sp.*) replaced by introduced pasture species in the south of the district, providing habitat for a diversity of invertebrates and birds. These grasslands are more commonly found on shallow sandy loams on calcrete.

Along the southern coast, in dune areas and around Lake Newland and the coastal lakes, the most common vegetation communities include Samphire (*Tecticornia* spp. and *Sarcocornia* spp) and shrublands dominated by Coast Daisy (*Olearia axillaris*) and Grey Saltbush (*Atriplex cinerea*). The EPBC listed Drooping Sheoak Grassy Woodland vegetation community can also be found around the southern coast and further inland.

Protected areas

Approximately 14% of the district's land area and 29% (4,463 km^2) of its native vegetation is protected within National Parks and Wildlife Reserves. This includes Bascombe Well, Kulliparu, Barwell, Gawler Ranges, Cocata, Lake Newland, Boondina and Wahgunyah Conservation Parks. Parts of Pinkawillinie Conservation Park, Gawler Ranges National Park, Pureba Conservation Park and Yumbarra Conservation Park are also included in the Western District.

Conservation areas extend off the coast including the Nuyts Archipelago Wilderness Area and Conservation Park, Waldegrave Islands Conservation Park, Investigator Group Wilderness Area and Olive Island Conservation Park. Through restoration activities, Flinders Island is being transformed into a future safe haven for nationally threatened species. Marine parks include Nuyts Archipelago, West Coast Bays and Investigator Marine Park and the eastern end of the Great Australian Bight Marine National Park.

Approximately 11% (1,650 km^2) of native vegetation is protected through Heritage Agreements in the district.

Coastal landscapes

The Western District's coastal landscapes are diverse, featuring sandy beaches, rocky cliffs and headlands and protected bays.

Sandy beaches are predominant along the bays, with many backed by dune systems. Cliffs reach up to 80m high south of Elliston. Areas of mangroves (*Avicennia marina)* provide fish nursery habitat in the protected bays at Tourville Bay as well as near Smoky Bay and Streaky Bay.

Offshore habitats include seagrass meadows, sandy seafloors and rocky reefs, where nutrient-rich marine waters support fish, sharks, whales, sea lions and seals.

A large area of the marine environment from offshore of Cape Adieu to Smoky Bay is protected within the Nuyts Archipelago Marine Park. This Marine Park is the largest in the South Australian marine park network and protects a range of habitats from coastal estuaries, cliffs and reefs to mangroves. Seagrass, sandy seafloors and reefs support commercial fish species, sharks, whales and sea lions. The West Coast Bays Marine Park includes Sceale, Venus and Baird Bays and protects mainland and island breeding colonies of the conservation rated Australian Sea-lion (*Neophoca cinerea*).

The islands in the south feature cliff along much of the coast, with steep rocky cliffs around most of East Island and along the east coast of Flinders Island. The granite islands of the Investigator Group and Cap Island have steep cliffs along most of the coastline.

Surface water environments

There are no permanent surface watercourses and few defined drainage lines in the Western District. Minor watercourses, coastal and inland salt lake systems and wetlands provide important habitat. Lake Newland, Point Labatt, Davenport Creek, Streaky Bay and Baird Bay are listed in the Directory of Important Wetlands in Australia and provide habitat for numerous water and shorebirds including migratory waders protected under national treaties.

Freshwater underground basins also support valued groundwater dependent ecosystems including red gums.

Flora and fauna

The Western District has a moderate diversity of flora and fauna compared to other districts on Eyre Peninsula. A selection of species and communities of conservation significance in the region are shown in the table below.

Table 2 Selected fauna, flora and vegetation communities of conservation significance

Species	National conservation rating
Fauna	
Eastern Curlew *(Numenius madagascariensis)*	Critically endangered
Sandhill Dunnart (*Sminthopsis psammophila*)	Endangered
Brush-tailed Bettong *(Bettongia penicillata ogilbyi)*	Endangered
Hooded Plover *(Thinornis cucullatus cucullatus)*	Vulnerable
Malleefowl *(Leipoa ocellata)*	Vulnerable
Greater Bilby *(Macrotis lagotis)*	Vulnerable
Flora	
West Coast Mint Bush (*Prostanthera calycina*)	Vulnerable
Bead Glasswort (*Tecticornia Flabelliformis*)	Vulnerable
West Coast Leek Orchid (*Paraprasophyllum catenemum*)	No national listing Rare and endemic in South Australia
Vegetation communities	
Temperate coastal saltmarsh	Vulnerable
Drooping Sheoak Grassy Woodland on calcrete of the Eyre Yorke Block Bioregion	Critically endangered

More information about these species can be seen below[21]:

Fauna

- The Eastern Curlew (*Numenius madagascariensis)* is Australia's largest shorebird and a long-haul flyer. It is easily recognisable, with its long, down-curved bill. The Eastern Curlew takes an annual migratory flight to Russia and north-eastern China to breed, arriving back home to Australia in August to feed on crabs and molluscs in intertidal mudflats. It is extremely shy and will take flight at the first sign of danger. Further information about this species can be found at: Eastern Curlew (Bird). On Eyre Peninsula the Eastern Curlew is found in coastal areas between Whyalla and Ceduna with the appropriate habitat. It is likely the population is in decline.
- The Sandhill Dunnart (*Sminthopsis psammophila*) is a small carnivorous marsupial found in isolated sandy arid and semi-arid areas on the Eyre Peninsula and in the Great Victoria Desert. It occurs in vegetation dominated by hummock (*Triodia*) grassland. The species shelters during the day in burrows, emerging at night to hunt insects and small reptiles. Threats to the species include cat and fox predation, inappropriate fire regimes and habitat loss and fragmentation. Further information about this species can be found at: Sandhill Dunnart (Mammal).
- The Woylie or Brush-tailed Bettong *(Bettongia penicillata)* is a small marsupial. The fur is grey to greyish brown on the back and flanks, and pale greyish on the undersides. The tail is dark and has a distinctive black brush at the end. Woylies carry nesting material in the curled tip of their tail which is prehensile (adapted for grasping). Formerly very widespread, Woylies once occupied most of the Australian mainland south of the tropics. Their diet is primarily underground fungi, but also includes tubers, bulbs and seeds. Woylies rest during the day in a well-concealed nest built over a shallow depression. The nest is most commonly built using long strands of grass. Further information about this species can be found at: Brush-tailed Bettong (Mammal). On Eyre Peninsula the Woylie is only found on a number of offshore islands and behind a predator proof fence in Venus Bay Conservation Park (VBCP). The island populations are currently stable but the VBCP is reliant on ongoing feral cat control.
- The Hooded Plover (*Thinornis cucullatus*) is a small resident beach nesting bird. It mainly occurs on wide beaches backed by dunes with large amounts of seaweed and jetsam, creek mouths and inlet entrances. Nests are found above the high water mark on flat beaches, on stony terraces, or on sparsely vegetated dunes. As the Hooded Plover resides and breeds on beaches, it is easily disturbed by human activities, particularly off-leash domestic dogs. Further information about this species can be found at: Hooded Plover (eastern) (Bird). On Eyre Peninsula the Hooded Plover is found mainly in coastal areas between Cowell and Fowlers Bay where the appropriate habitat exists.
- The Malleefowl *(Leipoa ocellata)* gets its name from the habitat it occurs in (scrubland and woodland dominated by mallee and wattle species). This ground-dwelling bird is famous for its ability to build enormous mounds. The male and female may take months working together to build their nest. The eggs are incubated in sand or soil by the sun or mounds of rotting leaves. While the male continues to maintain the nest during the incubation, the parents take no part in chick rearing, with chicks emerging from the mound completely self-sufficient. Further information about this species can be found at: Malleefowl (Bird). On Eyre Peninsula, the Malleefowl is found across the whole region in appropriate habitat. The population is likely in decline.
- The Greater Bilby *(Macrotis lagotis)* is a medium-sized burrowing marsupial that lives in the desert. It occurs in a number of disjunct locations between south-west Queensland and the Pilbara. It has a long tail, very big ears and silky soft fur. It is a solitary species that shelters during the day in a burrow. Burrows are an extensive system of tunnels and a bilby may use up to a dozen within its home range. During the night it digs for food and, using its very long tongue, eats insects and their larvae, seeds, spiders, bulbs, fruit, fungi, and very small animals. Gestation is 12-14 days, one of the shortest among mammals. Further information about this species can be found at: Greater Bilby (Mammal). On Eyre Peninsula, the Greater Bilby is only found on Thistle Island and behind a predator proof fence in Venus Bay Conservation Park (VBCP). The Thistle Island population is currently stable but the VBCP is reliant on ongoing feral cat control.

Flora

- The West Coast Mint Bush (*Prostanthera calycina*) is a small shrub about 50 cm high with hairy branches and leaves. Its two-lipped red flowers appear between September and December. West Coast Mintbush is known only from Eyre Peninsula in South Australia, with one outlier population west of the peninsula

at Coorabie. Populations are mostly on the western half of the peninsula, scattered from Buckleboo to Port Lincoln. Further information about this species can be found at: West Coast Mint Bush (Plant).

- The Bead Glasswort (*Tecticornia Flabelliformis*) is a small, compact, succulent shrub growing to 30 cm in height and 40 cm in diameter. Its flowers are minute, whitish or pale brown. Bead Glasswort plants generally occur on the margins of salt lakes, saline flats, evaporation pans and coastal salt marshes over gypsum deposits. The Bead Glasswort is widespread but scattered in saltmarsh vegetation across southern mainland Australia. Further information about this species can be found at: Bead Glasswort (Plant).
- The West Coast Leek Orchid (*Paraprasophyllum catenemum*) is a rare species endemic to the western Eyre Peninsula coastline. It inhabits coastal dune shrublands and sedgelands, often found in areas with unstable sand. It features white, green, and purplish flowers.
- **Threatened Ecological Communities**
- The Subtropical and Temperate Coastal Saltmarsh ecological community consists of organisms including and associated with saltmarsh in coastal regions of sub-tropical and temperate Australia. Further information about this species can be found at: Subtropical and Temperate Coastal Saltmarsh. The health of the vegetation community is in decline.
- The Drooping Sheoak (*Allocasuarina verticillata*) Grassy Woodland on calcrete is a critically endangered ecological community in South Australia[22]. This community generally occurs on shallow, calcareous soils where the annual rainfall exceeds 350mm. The Drooping Sheoak dominates the overstorey, with a variety of shrubs including wattles in the midstorey and a mixture of small shrubs and grasses in the understorey. A healthy Drooping Sheoak Grassy Woodland system can support an array of wildlife. Further information about this species can be found at: Drooping Sheaok (*Allocasuarina verticillata*) Grassy Woodland. Historically, Drooping Sheoak Grassy Woodlands were once the most common vegetation type after mallee, covering vast areas of Eyre Peninsula and Yorke Peninsula. Approximately 3% of the original distribution remains which is now highly fragmented and is found on the Eyre Peninsula between Streaky Bay and Coffin Bay.

2.6. Pest plants and animals

Pest plants and animals can pose significant threats to agriculture, the natural environment and public health and safety in the Western District. Reducing the impacts of pest plants and animals and preventing new invasive species from establishing is critical for the district's environmental and economic resilience. Biosecurity incursions impact local and global market perceptions of the quality and safety of food produced in the region, and in turn the sector's value and returns to the producers and local communities. Vehicle, machinery, and freight movement across and within the district is a major pathway for weed spread. The Western District's geographic isolation means that the majority of cropping and livestock produce are moved in and out of the district via trucks and ships, carrying with them inherent cross-border and cross-regional biosecurity risks. Climate change is amplifying existing threats by enabling pests to expand in range and survive in greater numbers. Extreme weather events including droughts and storms can accelerate the spread of invasive species. Mice plagues, rabbit plagues and a rise in wild dog numbers around farms that often occur during drought raise potential for disease outbreaks and a decimation of the landscape and endemic species.

The Eyre Peninsula Landscape Board is guided by its Pest Plant and Animal Control Policy when working with land managers to manage pest plants and animals. A focus is placed on identified priority pests. Pest management plans have been developed for priority pest species found within the region. Priority pest plants and animals in the Western District that are to be eradicated include Buffel Grass (*Cenchrus ciliaris*), pigs, deer (particularly Fallow Deer (*dama dama*)) and Gorse (*Ulex europaeus).*

Weed control trials are currently being undertaken across the Western and Southern Districts of the Eyre Peninsula, looking at effective management strategies for Brome Grass, with new herbicide-tolerant cereal crops enabling selective targeting of this pest species without impacting the production crop[23].

One project being undertaken in the Western District is the restoration of Flinders Island west of Elliston to include the island into Australia's network of havens for

vulnerable species[24]. The project aims to protect and restore the island's unique ecosystem by eradicating cats, rats and mice. Upon successful eradication of these pests, threatened plant and animal species can be introduced to the island. The last stock were removed from the island in May 2025. Ongoing biosecurity measures will be undertaken.

2.7. Collaboration and partnerships

Successful landscape management in the Western District relies on effective collaboration. Strong partnerships between agencies, landholders, councils, Traditional Owners, industries and communities mean that natural resources can be protected and sustainably managed region-wide for the long term.

The Western District has small, connected communities that are aware of their role in sustainably managing the land and the importance of working together. Continuing to build landholder knowledge and capacity is essential to empower the community to contribute to sustaining and safeguarding unique landscapes.

The Traditional Owners of the Western District have a deep ongoing connection to their land. This includes the Far West Coast Aboriginal Corporation, Wirangu People, Nauo People and Barngarla People. North and west of Ceduna, a number of Aboriginal Homeland communities have been established, maintaining Aboriginal communities' connection with country. These groups and their wider communities play an active role in caring for their country to maintain their culture and a healthy environment for their people and land[25]. Since December 2013, the Yumbarra Co-management Board has been responsible for the control and management of the Yumbarra Conservation Park and provided advice on the management of a number of other parks. The Gawler Ranges Parks Co-management Board was established in 2021 with the Gawler Ranges Aboriginal Corporation. Co-management enables the Department for Environment and Water to work in partnership with Aboriginal groups to cooperatively manage parks, recognising the connection between people, place and country.

The councils of the Western District include District Council of Ceduna, District Council of Streaky Bay, Wudinna District Council, District Council of Elliston and a small part of the District Council of Kimba captured within the Pinkawillinie Conservation Park. There are also out-of-council areas managed by the Outback Communities Authority. These councils have responsibility for managing local green spaces, waste, water and natural resources and taking action on climate change.

There are a number of parks and reserves in the Western District. These areas are managed by the National Parks and Wildlife Service South Australia, part of the Department for Environment and Water. Other government and non-government organisations, community groups and research institutes also support the management of landscapes in the region.

3. Southern District

The Southern District encompasses the Lower Eyre Council, City of Port Lincoln and District Council of Tumby Bay as well as the Lincoln National Park, Coffin Bay National Park and Hincks Wilderness Protection Area. The district's marine extent includes Thistle Island, Wedge Island, the Neptune Islands and the Investigator Group of Islands.

3.1. Quick stats

Population

	2021[26]	2024 estimated population[27]	Change
Southern District	23,131	24,222	+4.7%

Major towns (estimated 2024 population)[28]: Port Lincoln (15,040 people), Tumby Bay (1,580 people)

Traditional Owners: Nauo People, Barngarla People

Land area: 8,113 square kilometres

Local Governments: Lower Eyre Council, City of Port Lincoln, District Council of Tumby Bay, District Council of Cleve (Hincks Wilderness Protection Area only)

Coastline length: 543 kilometres of mainland coast plus 104 islands

Highest elevation: Marble Range (436 metres AHD)

Annual rainfall[29]: 340-560 mm

Native Vegetation Cover (2024) [30]: 3,085 square kilometres (38% of land area)

Environment Protection and Biodiversity Conservation (EPBC) Act listings: 22 flora species, 44 fauna species[31] and 4 Threatened Ecological Communities[32]

Heritage Agreements[33]**:** 177, covering a total of 353 square kilometres

Main land uses (% of land area)[34]**:** agriculture (70%), reserve (22%), livestock (4%)

Top 3 industries of employment (2024)[35]: healthcare and social assistance (17%), agriculture, forestry and fishing (13%), construction (12%)

Top 3 industries by output (2024)[36]: agriculture, forestry and fishing (36%), construction (23%), healthcare and social assistance (6%)

3.2. What's valued in the Southern District?

The community of the Southern District is intrinsically linked to the natural environment with its identity ingrained in the "great outdoors". Many people have a favourite spot where they go to unwind and feel a sense of place. For some it is their own patch, for others it is a secluded beach or an adventure in the bush.

The coast is incredibly important to the community. Many people remember playing and exploring around the scenic shores and bays during their childhood. The coast is also valued for its Aboriginal heritage and there are numerous sites of Aboriginal cultural heritage including fish traps and middens.

Coffin Bay and Lincoln National Parks are important and accessible destinations for locals and tourists to enjoy camping, walking and wildlife watching. The pristine environment at Memory Cove and Coffin Bay's remoteness and wildness provide a sense of adventure and place.

The sea is where people both work and play. Tuna, prawns, abalone, oysters, rock lobster and mussels are exported around the world from the waters of the Southern District. Recreational fishing is a way of life for many locals. Surfing, diving and sailing are other popular recreational activities. The sea entices many to explore, and the nearby islands are particular attractions. Images of the district are prominently featured in state and national tourism campaigns, a truly unique and desirable holiday destination rich with accessible, gourmet produce.

While geographically distanced from the state's capital, the Southern District is accessible by land, air and sea. Port Lincoln is serviced by a busy regional airport.

Water is an extremely precious yet scarce resource in the Southern District. The Uley South groundwater basin is valued for its ability to sustain land use and productivity for the region's towns and industries as well as for the ability of groundwater to support freshwater soaks and wetlands.

Farming provides a strong connection to the land, and some landholders of the Southern District are now third, fourth or fifth generation farmers. Many farmers identify with being a caretaker of the land and while the productive side of farming is vital, farmers also recognise the value of the bush.

The landscapes and features of the Southern District are the ancestral lands of the Nauo peoples and Barngarla peoples. These Traditional Owners have deep spiritual attachment and relationships with Country. Traditional Owners continue to live in the region, maintain connection with the land and protect and enhance culture, cultural sites and natural resources of the lands and waters of the region through practises that have sustained this landscape for thousands of years.

Integral to all these values are the people, with connections and the friendliness of small country towns particularly cherished. These communities have a long history of working together and they believe "community is the key". Many are aware that natural resources underpin their existence and that it is a collective responsibility to manage them.

3.3. Water

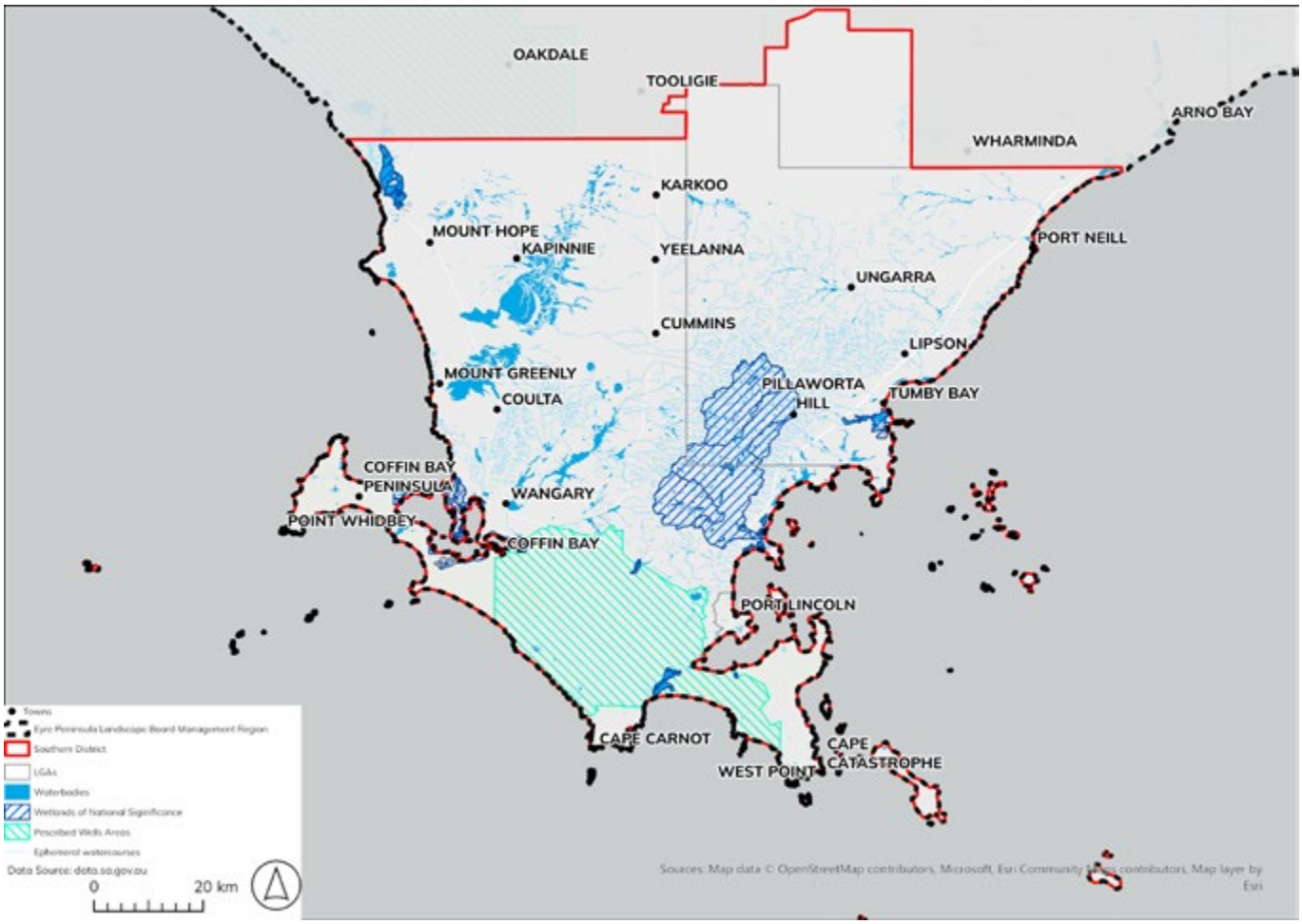

Figure 5 Water features in the Southern District

The Southern District experiences a Mediterranean climate with cool moist winters and warm to hot dry summers. Summer rainfall is similar across the district, while winter rainfall is almost double in southern inland areas such as Big Swamp and Wanilla Forest Reserve, compared to the coast.

Rainfall has been decreasing in recent decades across the region[37]. The inland town of Cummins has experienced only a small decrease of 5 mm from the average annual rainfall in 1969-1994 to the average annual rainfall in 1995-2024. Port Lincoln has experienced a much larger decrease of 39 mm in the same period. The influence of climate change is projected to further reduce rainfall in the region. Cummins is projected to experience a 45 mm decrease in annual average rainfall by the 2050s from the current baseline under a high emissions scenario. Port Lincoln is projected to experience only a 4 mm decrease by the 2050s. Temperatures are also expected to rise across the region.

Table 3 Rainfall data for the Southern District

	Port Lincoln	Wanilla	Cummins	Tumby Bay
1969 – 1994 (historic baseline)	520 mm	556 mm	431 mm	341 mm
1995 – 2024 (recent baseline)	481 mm (-39 mm from historic baseline)	525 mm (-31 mm from historic baseline)	426 mm (-5 mm from historic baseline)	333 mm (-8 mm from historic baseline)
2050s average (future projection under RCP8.5)	477 mm (-4 mm from current baseline)	484 mm (-41 mm from current baseline)	381 mm (-45 mm from current baseline)	316 mm (-17 mm from current baseline)

The Tod River is the Eyre Peninsula's only permanent watercourse, discharging to Spencer Gulf near Poonindie. Smaller creeks traverse the district, primarily north of the Flinders Highway. These creeks generally do not flow in warmer months due to low summer rainfall, high evaporation rates, and the small and steep nature of creek catchments. The Tod River and a number of creeks in the district support a number of native freshwater fish species and were sampled by the EPA during 2015 and considered in fair, poor or very poor condition[38].

Potable water is supplied to the Southern District from the groundwater lenses within the Southern Basins Prescribed Wells Area (PWA)[39]. These lenses are predominantly recharged via rainfall, and some recharge from surface water run-off from the Little Swamp and Big Swamp catchments. The majority (89%) of licensed extraction in the Southern Basins PWA in 2022–23 was sourced from the Uley South Public Water Supply (PWS) consumptive pool[40]. The remaining 11% of licensed extractions was from the Lincoln South PWS, Uley Wanilla PWS, Coffin Bay and Lincoln North consumptive pools. The associated Water Allocation Plan provides a framework for the protection and sustainable use of these groundwater resources.

Groundwater levels and salinity fluctuate with periods of low and high rainfall. Long-term assessment of groundwater resources within the Southern Basins PWA indicates a persistent decline in groundwater levels, reflecting increasing stress on the region's aquifers[41]. Consequent impacts include rising groundwater salinity and reductions in overall groundwater storage.

In the Southern Basins PWA, 5-year trends show that water levels are rising in 55% of wells[42]. Water levels in 52% of wells in the Quaternary Limestone aquifer are classified 'Below average' or lower. In the Uley Wanilla Public Water Supply (PWS) and Lincoln South PWS consumptive pools, water levels in the majority of wells (86% and 77%, respectively) are classified 'Below average' or lower. Water levels in 100% of wells in the Coffin Bay consumptive pool and 65% of wells in the Uley South PWS consumptive pool are classified 'Average' or higher. Long-term trends show that groundwater salinity is stable (within ±10% tolerance) in the majority (75%) of wells.

To secure long-term water supply and reduce reliance on stressed aquifers and the River Murray, the South Australian Government is investing $470 million in a desalination plant at Billy Lights Point. This infrastructure will supplement existing sources, including the Iron Knob–Kimba pipeline and local groundwater basins[43]. The desalination plant is expected to come into operation in late 2026.

Wetlands located across the district provide important habitats for resident and migratory birds. Major wetlands include Lake Hamilton, Lake Malata, Lake Greenly, Big Swamp, Coffin Bay Coastal Wetlands, Pillie Lake, Sleaford Mere, Tumby Bay coastal wetlands and the Tod River Wetlands.

3.4. Primary production

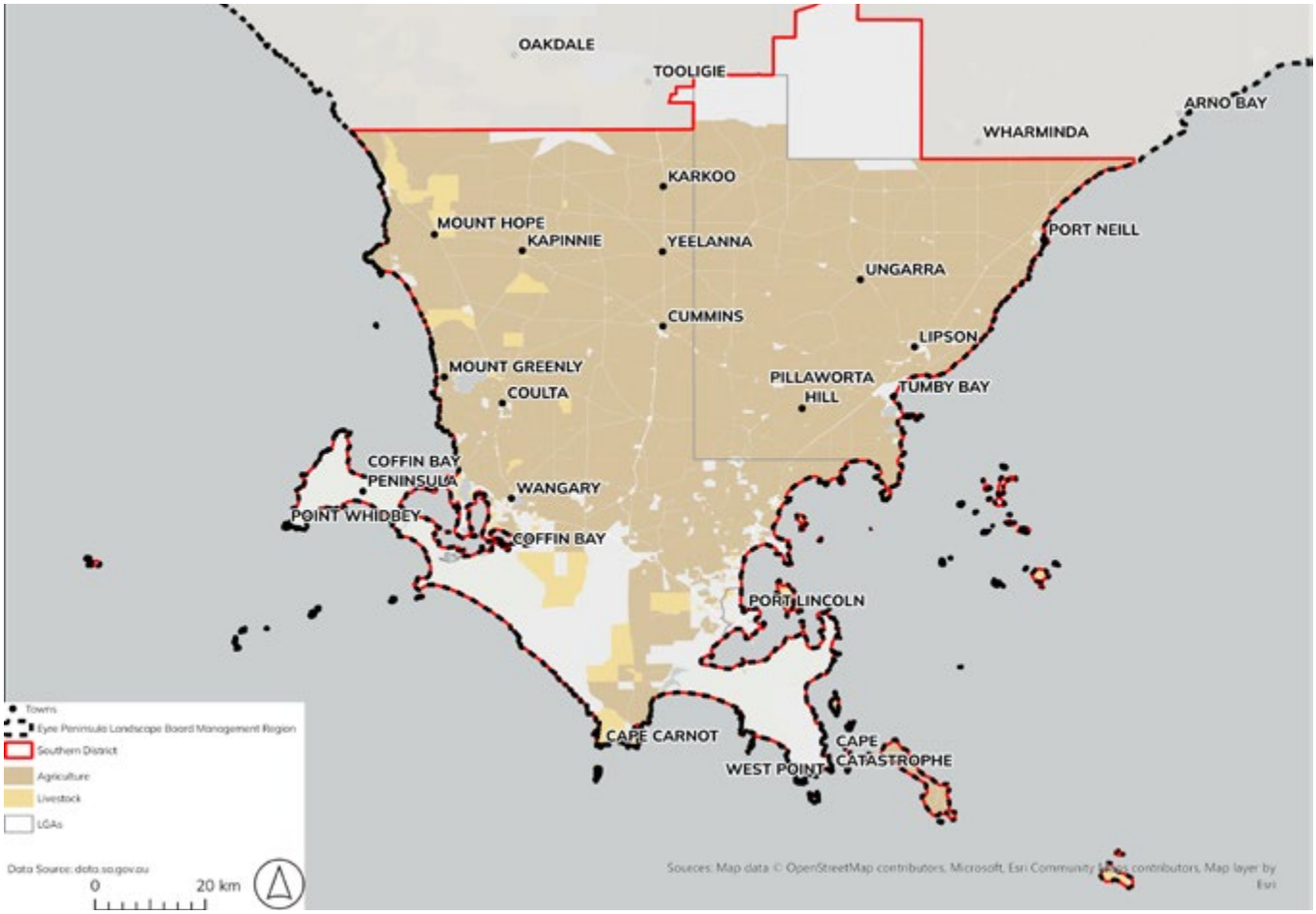

Figure 6 Primary production land use in the Southern District

Agriculture covers 70% of the land area of the Southern District. Cropping is the major agricultural land use, with crops including wheat, barley, oats, canola and pulses grown in rotation. The Southern District enjoys a higher average annual rainfall than the Western and Eastern District. The Southern District produces about 28% of the Eyre Peninsula's wheat crop, 46% of the barley crop and is estimated to be the highest producing region of canola in South Australia in 2025[44,45]. Grain storage and bulk handling facilities support exports from the Port Lincoln deep water port. Approximately 4% of the district is used for livestock. Viticulture is an emerging sector in the south.

Soil type largely influences land use in the Southern District, where shallow soils over calcrete and deep sands between Coffin Bay and Port Lincoln are predominately reserved for conservation or part of a SA Water reserve[46]. Cropping is primarily undertaken on ironstone soils and hard red-brown loam over clay (duplex) soils, which are present throughout the centre of the district. Ironstone soils have a higher risk of soil acidification as they are inherently acidic, while deeper soils over clay have a lower risk of acidification yet are at risk of soil structure decline[47]. Dryland salinity is associated with watercourses and floodplains of the district.

The level of soil erosion risk on agricultural land in the Southern District as a whole was described by the Department for Environment and Water as 'very good' and 'stable' in 2023[48]. This contrasts to the Western and Eastern District ratings of 'fair' and 'getting worse'. This is influenced by the district's higher and more reliable rainfall.

The Southern District's seafood industries are major employers, and their produce is recognised internationally for its quality. Wild catches from the Spencer Gulf and the Southern Ocean include prawns, abalone, rock lobster, sardines, and other marine finfish. Spencer Gulf also supports a range of aquaculture productions including southern bluefin tuna, kingfish,

abalone and mussels. Oyster aquaculture is a key industry for Coffin Bay and land-based abalone are farmed at Point Boston. Asparagopsis, a red seaweed variant native to South Australia that can reduce methane emissions in livestock, is grown and processed in Louth Bay[49].

The impacts of climate change projected for the district will impact on agriculture and aquaculture. This includes increased heat stress, reduced water availability, heightened drought frequency and increased fire risk as well as warmer ocean temperatures, increased ocean acidity and rising sea levels.

3.5. Land and coastal biodiversity

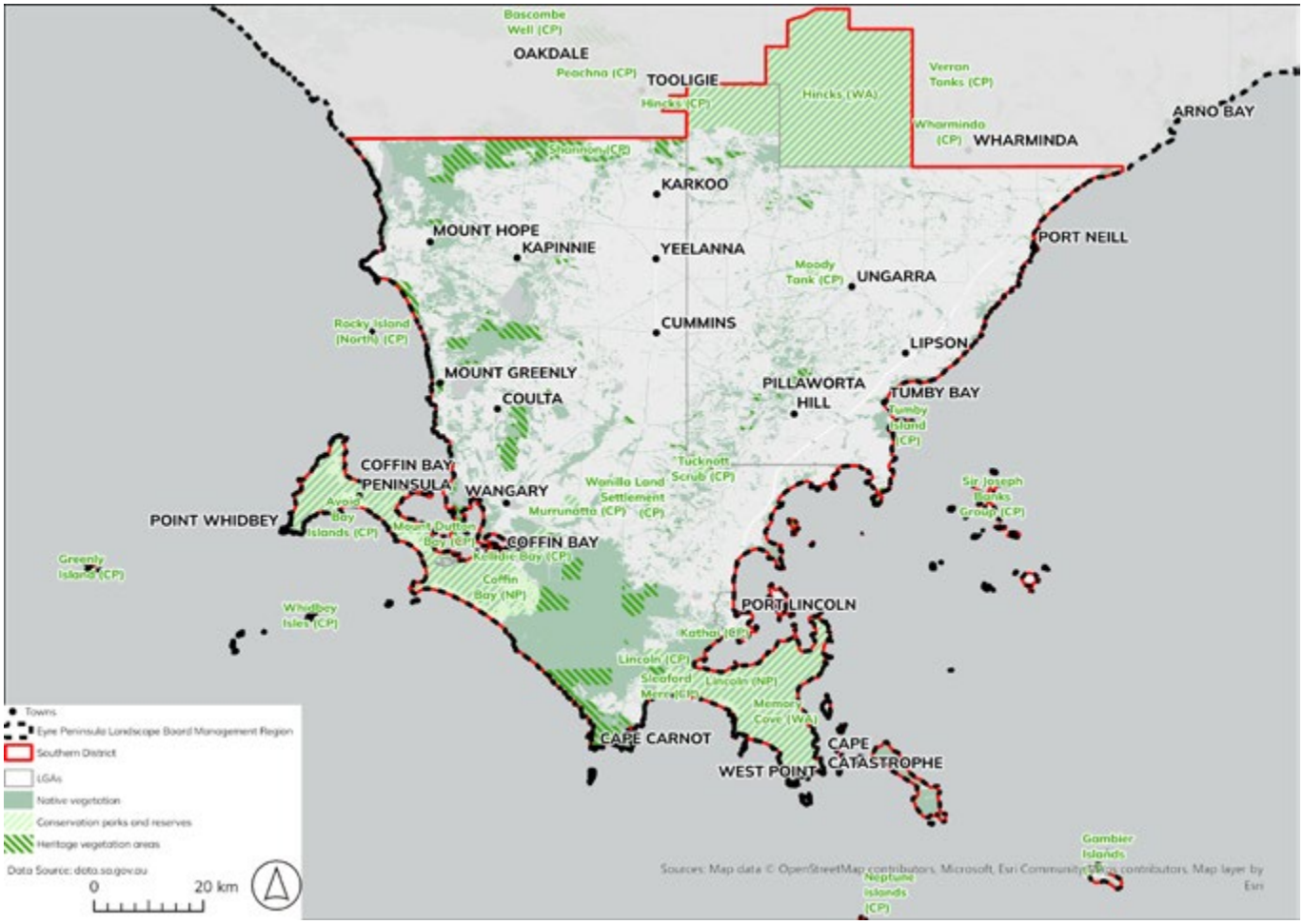

Figure 7 Biodiversity features in the Southern District

Vegetation

Just over 38% (3,085 square kilometres) of the district's land area contains remnant native vegetation.

The south-eastern landscape of the Southern District is dominated by the Koppio Hills which extend between Port Lincoln and Tumby Bay. A large proportion of native vegetation in this area has been cleared for cropping however there are numerous patches of low open woodland dominated by Sugar Gum (*Eucalyptus cladocalyx*). Along the numerous watercourses and swamp areas, sedges and rushes are common.

On the Jussieu Peninsula south of Port Lincoln, mallee woodland is dominated by Coastal White Mallee (*Eucalyptus diversifolia*) or Port Lincoln Mallee (*Eucalyptus conglobata*). This area, although subject to disturbances since European settlement including fire and grazing, is now protected within the Lincoln National Park.

Across the southern part of Eyre Peninsula between Port Lincoln and Coffin Bay, extensive dune systems, wetlands and lagoons are vegetated with low mixed shrubland dominated by Coast Beard-heath (*Leucopogon parviflorus*). Inland, Coastal White Mallee (*Eucalyptus*

diversifolia) is widespread, growing across undulating landscapes where sandy soils cover limestone.

The Marble Range extends along the west coast encompassing the district's highest point of 436m. North of the Range and between Lake Malata and Lake Greenly, native vegetation includes mallee woodland dominated by Coastal White Mallee (*Eucalyptus diversifolia*) or Mallee box (*Eucalyptus porosa*). Across the inland part of the Southern District, extensive clearing for cropping has occurred. Mallee woodland within Hincks Wilderness Protection Area supports the only relatively unmodified native vegetation across much of this area, with small pockets of remnant vegetation also found in road reserves.

Protected areas

Approximately 11% (268km^2) of native vegetation in the district is protected through Heritage Agreements. Another 40% (1,239km^2) of the district's native vegetation and 17% of its land area is within National Parks and Wildlife Reserves, including the Lincoln and Coffin Bay National Parks, Hincks and Memory Cove Wilderness Protection Area and Sleaford Mere and Kellidie Conservation Park. Hincks Wilderness Protection Area provides important habitat for the nationally vulnerable Malleefowl (*Leipoa ocellata*).

The Southern District contains a number of Marine Parks protecting marine biodiversity including Sir Joseph Banks Group, Thorny Passage, Neptune Islands Group, Gambier Islands Group and Investigator Marine Parks. Significant aquatic species protected in these parks include Common Bottlenose Dolphins (*Tursiops truncatus*) and Weedy and Leafy Sea Dragons (*Phyllopteryx taeniolatus* and *Phycodurus eques*), and is an internationally significant site for White Sharks (*Carcharodon carcharias*).

Coastal landscape

The Southern District's coastal landscapes are diverse, featuring sandy beaches, limestone cliffs up to 100 metres high, rocky headlands and undulating sand dunes particularly around Coffin Bay and Sleaford Bay. Sandy beaches are present around Port Neill further south the coast is rockier with small pockets of sandy beaches. There are 104 offshore islands in the district including Thistle Island, Wedge Island, the Sir Joseph Banks Group and Greenly Island. Offshore habitats include seagrass meadows, sandy seafloors and reefs, where upwellings of nutrient-rich marine waters support commercial fish species and marine biodiversity. Marine Parks protect many areas of marine biological importance. Estuaries include Dutton River.

Increased erosion of coastal systems as a result of rising sea levels has an impact habitat availability for native species such as beach-nesting birds.

Surface water environments

The Tod River captured within the district is the Eyre Peninsula's only permanent watercourse. It has a brackish to freshwater flow. The Tod River and a number of creeks in the district were sampled by the EPA during 2015[50]. From this sampling, 40%, 40% and 20% of sites were assessed in fair, poor and very poor condition respectively. Macroinvertebrate communities comprised a low to moderate diversity of saline tolerant species, with no rare or sensitive species recorded. All streams were saline. Riparian zones were often reduced and degraded; lacking in trees and shrubs and dominated by introduced grasses and weeds that were frequently grazed by cattle or sheep.

There are more than 700 wetlands identified in the district, providing important habitats for resident and migratory birds. Several of these are Wetlands of National Importance including the Tod River Wetland System, Coffin Bay Coastal Wetlands, Tumby Bay Wetlands, Lake Hamilton and Sleaford Mere.

Flora and Fauna

The Southern District has a high diversity of flora and fauna. The district contains a high variety of habitats, high species richness and high number of endemic plants. A selection of species and communities of conservation significance are shown in the table below.

Table 4 Selected fauna, flora and vegetation communities of conservation significance

Species	National conservation rating
Fauna	
Eastern Curlew *(Numenius madagascariensis)*	Critically endangered
Australian Sea-lion (*Neophoca cinerea*)	Endangered
Southern Emu-wren (*Stipiturus malachurus parimeda*)	Endangered
Hooded Plover *(Thinornis cucullatus)*	Vulnerable
Australian Fairy Tern (*Sternula nereis nereis*)	Vulnerable
Malleefowl *(Leipoa ocellata)*	Vulnerable
Greater Bilby *(Macrotis lagotis)*	Vulnerable
Flora	
Lax Leek Orchid (*Prasophyllum laxum*)	Critically Endangered
Metallic Sun-orchid (*Thelymitra epipactoides*)	Endangered
Whibley Wattle (*Acacia whibleyana*)	Endangered
Jumping-jack Wattle (*Acacia enterocarpa*)	Endangered
Prickly Raspwort (*Haloragis eyreana*)	Endangered
Silver Daisy-bush (*Olearia pannosa ssp. Pannosa*)	Vulnerable
Vegetation communities	
Peppermint Box (*Eucalyptus odorata*) Grassy Woodland	Critically endangered
Drooping Sheoak (*Allocasuarina verticillata*) Grassy Woodland on calcrete of the Eyre Yorke Block Bioregion	Critically endangered
Eyre Peninsula Blue Gum (*Eucalyptus Petiolaris)* Woodland	Endangered
Temperate coastal saltmarsh	Vulnerable

Please find below further information about each of these species[51].

Fauna

- The Eastern Curlew (*Numenius madagascariensis*) is Australia's largest shorebird and a long-haul flyer. It is easily recognisable, with its long, down-curved bill. The Eastern Curlew takes an annual migratory flight to Russia and north-eastern China to breed, arriving back home to Australia in August to feed on crabs and molluscs in intertidal mudflats. It is extremely shy and will take flight at the first sign of danger. Further information about this species can be found at: Eastern Curlew (Bird). On Eyre Peninsula, the Eastern Curlew is found in coastal areas between Whyalla and Ceduna within the appropriate habitat. It is likely the population is in decline.
- The Australian Sea-lion (*Neophoca cinerea*) is a species of sea lion that is the only endemic pinniped in Australia. Breeding colonies occur on islands or remote sections of coastline. Lone or small numbers of animals will regularly visit known haul-out sites and occasionally visit other locations. Further information about this species can be found at: Australian Sea Lion (Mammal).
- The Southern Emu-wren (*Stipiturus malachurus parimeda*) is a small bird with a long, stick-like tail comprised of only six emu-like feathers. It only occurs in South Australia where it is confined to the extreme south of the Eyre Peninsula. The largest populations occur in the Kellidie Bay, Whalers Way, MacLaren

Point-Point Haselgrove and West Point areas. The range of the Southern Emu-wren has almost certainly contracted since the arrival of Europeans due to the clearance and degradation of suitable habitat and (probably) the impact of fire. The distribution of the Southern Emu-wren is severely fragmented which is a result of past clearing and degradation. Further information about this species can be found at: Southern Emu-wren (Bird).

- The Hooded Plover (*Thinornis cucullatus*) is a small resident beach nesting bird. It mainly occurs on wide beaches backed by dunes with large amounts of seaweed and jetsam, creek mouths and inlet entrances. Nests are found above the high water mark on flat beaches, on stony terraces, or on sparsely vegetated dunes. As the Hooded Plover resides and breeds on beaches, it is easily disturbed by human activities, particularly off-leash domestic dogs. Further information about this species can be found at: Hooded Plover (eastern) (Bird). On Eyre Peninsula the Hooded Plover is found mainly in coastal areas between Cowell and Fowlers Bay where the appropriate habitat exists.
- The Malleefowl (*Leipoa ocellata*) gets its name from the habitat it occurs in (scrubland and woodland dominated by mallee and wattle species). This ground-dwelling bird is famous for its ability to build enormous mounds. The male and female may take months working together to build their nest. The eggs are incubated in sand or soil by the sun or mounds of rotting leaves. While the male maintains the nest during the incubation, the parents take no part in chick rearing, with chicks emerging from the mound completely self-sufficient. Further information about this species can be found at: Malleefowl (Bird). On Eyre Peninsula, the Malleefowl is found across the whole region in appropriate habitat. The population is likely in decline.
- The Australian Fairy Tern (*Sternula nereis nereis)* is a small fish-eating bird. Nests are found on sheltered sandy beaches, spits and banks above the high tide line and below vegetation. The Australian Fairy Tern is believed to be declining due to habitat disturbance and predation. There is only estimated to be a few hundred pairs in South Australia. Given the exposed nature of its nesting and roosting sites, the species is vulnerable to extreme weather events such as storms, floods, high tides and windblown sand which can put an entire breeding season at risk. Further information about this species can be found at: Australian Fairy Tern (Bird).

Flora

- The Lax Leek Orchid (*Prasophyllum laxum*)is a very slender orchid with pale green and pink-brown flowers. The Lax Leek Orchid is only found on private land on the southern Eyre Peninsula inland between Port Lincoln, Cummins and Tumby Bay. It grows under Drooping She-oaks (*Allocasuarina verticillate*) and it is thought the condition of the ground layer, including the fungi and mosses, may be important for Lax Leek Orchids to grow. The clearing of land and impact of grazing on the ground layer has reduced available habitat. Further information about this species can be found at: Lax Leek Orchid (Plant).
- The Metallic Sun-orchid (*Thelymitra epipactoides*) is a rare orchid growing 21-52 cm tall with a single long, narrow leaf. The flowers are highly variable in size and colour and the way the colours infuse gives a bronzy or metallic appearance. This species responds well to disturbance by fire, as fire promotes seedling recruitment and reduces competition from other plants. Therefore, removal of fire frequency and intensity, poorly timed and too frequent fires are all threats to the metallic sun-orchid. Further information about this species can be found at: Metallic Sun-orchid (Plant). On the Eyre Peninsula, the Metallic Sun-orchid is only found in the Southern District.
- The Whibley's Wattle (*Acacia whibleyana*) is endemic to Eyre Peninsula and is found near Tumby Bay. There are less than 2,000 plants, growing on roadsides and on private property. The seeds of this wattle are dispersed by ants, and the species is associated with the Peppermint Box Grassy Woodland Threatened Ecological Community. Further information about this species can be found at: Whibley Wattle (Plant). The population is in decline.
- The Jumping-jack Wattle (*Acacia enterocarpa*) is listed as Endangered due to its limited area of occupancy, small number of locations and ongoing decline in the number of subpopulations and quality of habitat. In South Australia, the Jumping-jack Wattle is recorded as occurring in woodland to open forests. As most of the remaining sites are on narrow road reserves, lack of effective reservation appears to be the most serious threat to the Jumping-jack Wattle. A number of agricultural weeds have been noted as posing a threat, most significantly, Bridal Creeper (*Asparagus asparagoides*) and Horehound (*Marrubium vulgare*). Given that this species is nationally endangered, it is considered that all known, currently occupied and potential habitat is

critical to its survival. Further information about this species can be found at: Jumping-jack Wattle (Plant).

- Commonly known as Prickly Raspwort (*Haloragis eyreana*), this small perennial herb or subshrub is endemic to southern Eyre Peninsula. It is confined to low-lying and often disturbed areas that are subject to winter inundation or water run-off, such as roadside gutters, rail corridors and native 'crabholes' depression areas. Threats to this endangered species include changes to water runoff pattern that impacts its required winter inundation, physical roadside management disturbance and weed invasion. Further information about this species can be found at: Prickly Raspwort (Plant).
- The Silver Daisy-bush (O*learia pannosa subsp. pannosa*) is endemic to South Australia where it is scattered throughout agricultural areas. Its tuberous roots provided First Nations people with water and food resources during summer. Further information about this species can be found at: Silver Daisy-bush (Plant). On Eyre Peninsula, the Silver Daisy-bush is found in the Koppio and Cleve Hills in appropriate habitat. The population trend is unknown but is likely in decline.

Threatened Ecological Communities

- The Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia ecological community is dominated by Peppermint Box in the tree canopy. In this ecological community, Peppermint Box occurs in its woodland tree form of a single main trunk at the base with low branches, rather than the whipstick mallee form. Further information about this species can be found at: Peppermint Box *(Eucalyptus odorata)* Grassy Woodland of South Australia. On Eyre Peninsula this community is found mainly in the Koppio and Cleve Hills. The health of the vegetation community is in decline.
- The Drooping Sheaok (*Allocasuarina verticillata*) Grassy Woodland on calcrete is a critically endangered ecological community in South Australia[52]. This community generally occurs on shallow, calcareous soils where the annual rainfall exceeds 350mm. The Drooping Sheoak dominates the overstorey, with a variety of shrubs including wattles in the midstorey and a mixture of small shrubs and grasses in the understorey. A healthy Drooping Sheoak Grassy Woodland system can support an array of wildlife. Further information about this species can be found at: Drooping Sheaok (*Allocasuarina verticillata)* Grassy Woodland. Historically, Drooping Sheoak Grassy Woodlands were once the most common vegetation type after mallee, covering vast areas of Eyre Peninsula and Yorke Peninsula. Approximately 3% of the original distribution remains which is now highly fragmented. Remnant vegetation on the Eyre Peninsula is mostly found between Streaky Bay and Coffin Bay.
- The Eyre Peninsula Blue Gum (*Eucalyptus petiolaris*) Woodland has a canopy dominated by *Eucalyptus petiolaris* and is associated with sheltered valleys and lower hill slopes and along watercourses on the Eyre Peninsula particularly in the Koppio and Cleve Hills. Further information about this species can be found at: Eyre Peninsula Blue Gum *(Eucalyptus petiolaris)* Woodland. The health of the vegetation community is in decline. A management plan was completed in 2019 to direct further conservation works in the future.
- The Subtropical and Temperate Coastal Saltmarsh ecological community consists of organisms including and associated with saltmarsh in coastal regions of sub-tropical and temperate Australia. Further information about this species can be found at: Subtropical and Temperate Coastal Saltmarsh. The health of the vegetation community is in decline.

3.6. Pest plants and animals

Pest plants and animals can pose significant threats to agriculture, the natural environment and public health and safety in the Southern District. Reducing the impacts of pest plants and animals and preventing new invasive species from establishing is critical for the district's environmental and economic resilience. Vehicle, machinery, and freight movement across and within the district is a major pathway for weed spread. Climate change is amplifying existing threats by enabling pests to expand their range and survive in greater numbers. Extreme weather events including droughts and storms can accelerate the spread of invasive species.

The Eyre Peninsula Landscape Board is guided by its Pest Plant and Animal Control Policy when working with land managers to manage pest plants and animals. A focus is placed on identified priority pests. Pest management plans have been developed for priority pest species found within the region. Priority pest plants and animals in the Southern District that are to be eradicated include Buffel Grass (*Cenchrus ciliaris)*, Gorse (*Ulex europaeus)* pigs and feral deer. Other priority pest plants and animals include foxes, rabbits, cats, Fountain Grass (*Pennisetum setaceum)*, African Lovegrass (*Eragrostis curvula)*, Boneseed (*Chrysanthemoides monilifera)*, White Weeping Broom (*Retama raetam)* and Bridal Veil (*Asparagus declinatus).*

3.7. Collaboration and partnerships

Successful landscape management in the Southern District relies on effective collaboration. Strong partnerships with agencies, landholders, councils, Traditional Owners, industries and communities mean that natural resources can be protected region wide for the long term.

Those who live in the Southern District have a long history of working together. Many are aware that natural resources underpin their existence and that it is a collective responsibility to manage them. Continuing to build landholder knowledge and capacity is essential to empower the community to take action.

The Traditional Owners of the Southern District have a deep ongoing connection to their land. A number of registered Aboriginal Heritage sites exist along the Southern Eyre coast including near Coffin Bay, Port Lincoln and Louth Bay, as well as inland at Wanilla. The Barngarla people are the Traditional Owners of the eastern half of the Southern District including the offshore islands of the Sir Joseph Banks Group. The Nauo people are the Traditional Owners of the western half of the district and beyond. These Traditional Owner communities and groups play an active role in caring for their country to maintain their culture and a healthy environment for their people and land.

The councils of the Southern District include Lower Eyre Council, City of Port Lincoln and District Council of Tumby Bay, as well as a small part of the District Council of Cleve incorporated in Hincks Wilderness Protection Area. These councils have responsibility for managing local green spaces, waste, water and natural resources and taking action on climate change.

The role of representative groups of primary producers, such as Ag Innovation and Research Eyre Peninsula's (AIR EP) Medium Rainfall RD&E Committee - alongside government-led agricultural and aquaculture research institutions, such as South Australian Research and Development Institute (SARDI), Department of Primary Industries and Regions (PIRSA) - are vital partners in landscape management, investing in, proving and extending research that seeks to maximise the future health and viability of the region's environment and production sustainability. Sector support bodies such as Grain Producers SA and Grains Research & Development Corporation invest in R&D activities, as well as biosecurity measures, road and infrastructure upgrades, and general best practices to support sustainable production systems.

There are a number of parks and reserves in the Southern District. These areas are managed by the National Parks and Wildlife Service South Australia, part of the Department for Environment and Water. Other government and non-government organisations and community groups also support the management of landscapes in the region.

4. Eastern District

The Eastern District includes the District Councils of Kimba, Cleve and Franklin Harbour and the City of Whyalla. It excludes the cross-council parks of Pinkawillinie Conservation Park and Hincks Conservation Park but includes the entirety of Hambridge Wilderness Protection Area. Its marine area extends to approximately halfway across the Spencer Gulf.

4.1. Quick stats

Population

	2021[53]	2024 estimated population[54]	Change
Eastern District	25,316	26,044	+2.9%

Major towns (estimated 2024 population)[55]: Whyalla (21,485 people), Cowell (1,055 people)

Traditional Owners: Barngarla, Gawler Ranges People

Land area: 12,082 square kilometres

Local Governments: City of Whyalla, District Council of Franklin Harbour, District Council of Cleve, District Council of Kimba, District Council of Elliston (Hambidge Wilderness Protection Area only)

Coastline length: 298 kilometres of mainland coast plus 20 islands

Highest elevation: Carrapee Hill (495m AHD)

Annual rainfall[56]: 260-330 mm

Native Vegetation Cover (2024) [57]: 4,095 square kilometres (34% of land area)

Environment Protection and Biodiversity Conservation (EPBC) Act listings: 22 fauna species, 13 flora species[58] and 2 Threatened Ecological Communities[59]

Heritage Agreements: 168, covering a total of 527 square kilometres

Main land uses (% of land area) [60]: agriculture (80%), reserve (8%), livestock (7%)

Top 3 industries of employment (2024)[61]: healthcare and social assistance (20%), retail trade (12%), education and training (11%)

Top 3 industries by output (2024)[62]: construction (25%), mining (17%), agriculture, forestry and fishing (16%)

4.2. What's valued in the Eastern District?

The Eastern District is about work, play and home to the community. Natural resources and local landscapes are fundamental to livelihoods and lifestyles. Agriculture is a major employer and many farmers take great pride in growing food and looking after the land. The strong community spirit among the farming community creates optimism and people believe they can overcome most challenges they are faced. The family farm is the most cherished landscape for many of the farming community as it provides them with their livelihood, lifestyle and identity. Many farmers enjoy the beauty of their farms with rolling hills and outcropping rocks valued as well as the space and sense of freedom.

The coast is another important contributor to the identity of the region. The beaches are valued for scenic beauty, tranquillity, fishing and recreation opportunities. Fitzgerald Bay, Redbanks, Lucky Bay, Franklin Harbour and Arno Bay are some of the most popular coastal areas. The community at Arno Bay is particularly proud of the boardwalk they built, that allows access to the estuary for people to enjoy the environment without damaging it. The shingle stranded beach ridges that run along Fitzgerald Bay is also unique and valued for its cultural and geological significance.

Locals and visitors enjoy the waters of Spencer Gulf to fish, sail or swim. The rich marine biodiversity is particularly valued as many enjoy diving with the giant cuttlefish or spotting dolphins. The community is increasingly aware of the critical importance of local temperate samphire and mangrove habitats to sustain the area's unique marine biodiversity. Whyalla's circular jetty, the only one of its kind in the Southern Hemisphere, is a truly unique interface between terrestrial and marine landscapes, offering visitors the chance to view or catch the region's abundant marine species.

The Eastern District's wide-open landscapes, parks, scrub and geology are highly valued for their wilderness, wildlife and picturesque views. The community appreciate both the local environments on farms and in towns, as well as Conservation Parks and Wilderness areas including Hambidge, Yeldulknie, Carappee Hill and Munyaroo. The solitude and recreation opportunities in these areas are particularly valued. The Middleback Ranges have ecological and cultural importance, as well as historical significance because of the development of the mining industry at Iron Knob, which drove the development of Whyalla's steelworks and former ship building. Wild Dog Hill has cultural significance and is valued as an accessible and protected area with important western Myall plant communities. The scenery and peacefulness are other cherished parts of the arid landscape.

The landscapes and features of the Eastern District are the ancestral lands of the Barngarla and Gawler Ranges peoples. These Traditional Owners have deep spiritual attachment and relationships with Country. Traditional Owners continue to live in the region, maintain connection with the land and protect and enhance culture, cultural sites and natural resources of the lands and waters of the region through practises that have sustained this landscape for thousands of years.

The community of the Eastern District recognise the need for and value of natural resource management. They recognise their role as custodians of the land and the sea and the need to protect them for future generations. They acknowledge the need to find a balance between economic, social and environment values and specifically recognise the reliance of urban communities on natural resources for food and water. The community values the diversity of Eyre Peninsula and particularly respects and understands the Eastern District's unique environment.

4.3. Water

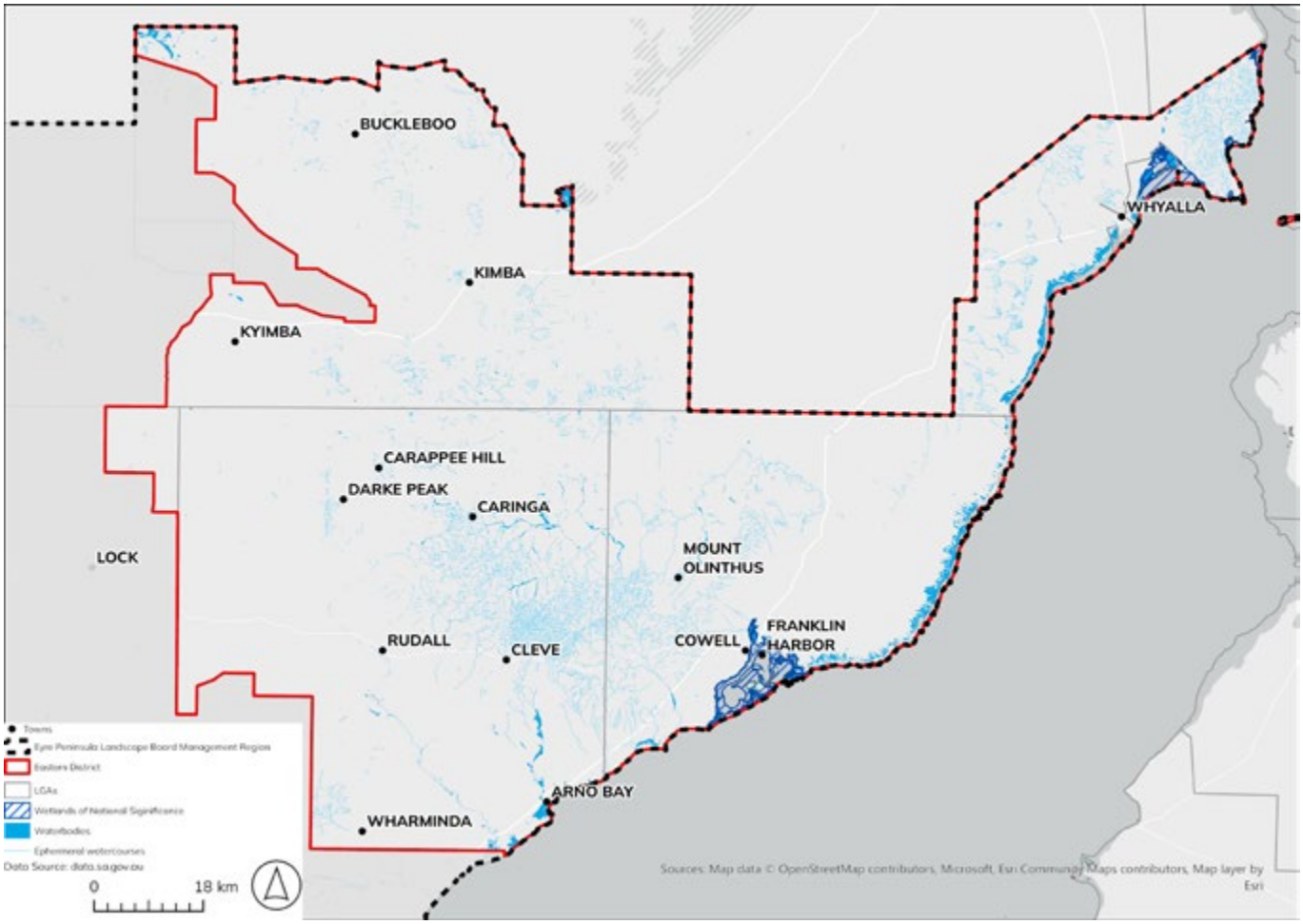

Figure 8 Water features in the Eastern District

The Eastern District experiences a Mediterranean climate in the west with cooler wet winters and warm to hot dry summers, ranging to a semi-arid climate in the east with low average monthly rainfall that is similar across the year. Average rainfall ranges from around 260 mm per year in Cowell to 325 mm per year in Kimba. The wet winters in the west provide ideal conditions for cropping in most years, while high evaporation rates combined with poor quality soils in the east make it only suitable for grazing. Evaporation rates near Whyalla are over 2,500 mm per year, which far exceeds annual rainfall[63].

Rainfall has been decreasing in recent decades across the region[64]. Buckleboo has experienced a large decrease of 35 mm from the average annual rainfall in 1969-1994 to the average annual rainfall in 1995-2024. Whyalla has experienced a smaller decrease of 14 mm in the same period. The influence of climate change is projected to further reduce rainfall in the region. Kimba is projected to experience a 35 mm decrease in annual average rainfall by the 2050s from the current baseline under a high emissions scenario. Buckleboo is projected to experience only a 9 mm decrease by the 2050s. Temperatures are also expected to rise across the region.

Table 5 Rainfall data for the Eastern District

	Whyalla	Kimba	Cowell	Arno Bay	Buckleboo
1969 – 1994 (historic baseline)	298 mm	349 mm	274 mm	313 mm	309 mm
1995 – 2024 (recent baseline)	284 mm (-14 mm from historic baseline)	325 mm (-24 mm from historic baseline)	260 mm	295 mm (-18 mm from historic baseline)	274 mm (-35 mm from historic baseline)
2050s average (future projection under RCP8.5)	266 mm (-18 mm from current baseline)	290 mm (-35 mm from current baseline)	Unavailable	261 mm (-34 mm from current baseline)	265 mm (-9 mm from current baseline)

Whilst there are few watercourses in the region, there are a number of ephemeral creeks. This includes creeks which drain from the Cleve Hills toward Franklin Harbour and the coast. Salt Creek has the largest catchment area of all watercourses on Eyre Peninsula (about 2,000km^2). Driver River was assessed by the EPA in 2015 and assigned a very poor condition rating[65].

There are also several ephemeral creeks that drain the hills areas to the north of Port Bonython and west of Whyalla. Runoff from the Middleback Ranges west of Whyalla drains toward Whyalla. A drain was constructed around the Whyalla township to prevent overland flow toward the town, discharging to the samphire flats south of the town. Ephemeral creeks run off the Douglas Hills north of Port Bonython.

The Eastern District is generally characterised by porous sandy soils, low rainfall and saline groundwater which make it a naturally water scarce area. Groundwater is generally too saline for stock water and of too low yields for extraction for other purposes[66]. Potable water supply comes via long-distance water pipelines from either the River Murray or the Southern Basins Prescribed Wells Area[67]. The Eastern District's major populated centre Whyalla, along with the Whyalla Steelworks and surrounding mining operations in the Eastern District, primarily source domestic and industrial water from the River Murray via the Morgan-Whyalla pipeline, as well as deep saline groundwater sources[68].

The SA Water Desalination Plant under construction at Billy Lights Point will soon supplement some water supply in the southern part of the district to reduce groundwater extraction requirements. The Northern Water Desalination Plant will be constructed at Mullaquana Station, located approximately 20km south of Whyalla[69]. However, this water will be piped further north, with use for Eyre Peninsula not anticipated.

4.4. Primary production

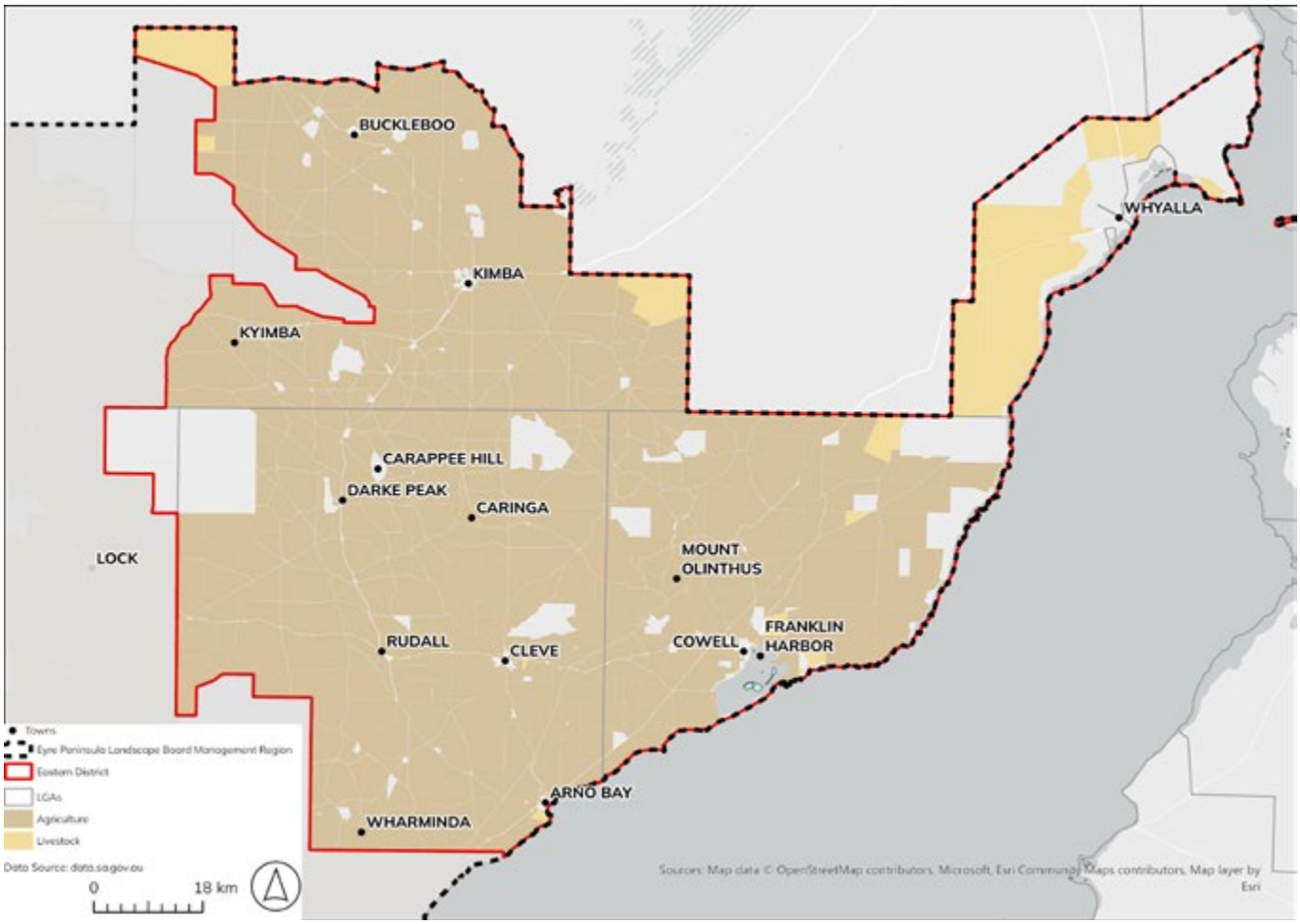

Figure 9 Primary production land use in the Eastern District

Just under 80% of the Eastern District is used for agriculture. Cropping including wheat, barley, oats, canola and legumes are grown. The Eastern District on average produces about 37% of the Eyre Peninsula's wheat crop, the most of any Eyre Peninsula district[70]. Approximately 7% of the district is used for livestock.

Commercial wild fisheries are an important industry in the district. Wild catch including prawns, blue crab, sardines, abalone and scale fish from Spencer Gulf contribute to the regional economy and are important contributors to the State's commercial fishing industry. The Spencer Gulf Prawn Fishery that relies on the district's mangroves and tidal flats for nursery habitat, is one of the more valuable fisheries in Australia. Aquaculture industries in the district include Pacific oyster farms in Franklin Harbour and a Kingfish hatchery at Arno Bay.

The soils of the region are diverse and in the Cleve Hills area, shallow loams over rock are common[71]. Between Cleve and Arno Bay, the soils are sandier with areas of calcareous loam. Inland, calcareous soils and siliceous sands are widespread. Around Kimba and Buckleboo, large areas of loams over clay support cereal crops. In the Eastern Cleve Hills area, dryland groundwater-driven salinity is a major issue[72]. Calcareous and siliceous sandy dunes occur along most of the coast south of Whyalla. Further inland of Whyalla, calcareous loams are also found. Calcareous soils generally have low water holding capacity and poor nutrient levels, making them only suitable for grazing.

The level of soil erosion risk on agricultural land in the Eastern District was described by the Department for Environment and Water as 'fair' and 'getting worse' in 2023[73]. This was influenced by below average rainfall in the previous 5 years (2018–2022), with less plant growth and resulting groundcover to protect the soil from erosion (top figure). The three-year average number of days with erosion risk in the region was 45 days as of 2022. Over the past 20 years, farmers have adopted methods of soil and land management that better protect soil from the risk of erosion.

Carbon and biodiversity plantings are being trialled across the Eastern District. These present opportunities for farmers to generate income through selling carbon credits and achieve a range of long-term co-benefits for farming productivity and the environment.

The impacts of climate change projected for the district will impact on agriculture and aquaculture. Includes increased heat stress, reduced water availability, and heightened drought frequency as well as warmer ocean temperatures and increased ocean acidity. The recent installation of a marine "bubble curtain" around the breeding grounds of the giant cuttlefish, just off the coast of the upper Spencer Gulf, is symbolic of initiatives being employed to protect vulnerable species from the impacts of changing ocean conditions and threats such as algal blooms.

4.5. Land and coastal biodiversity

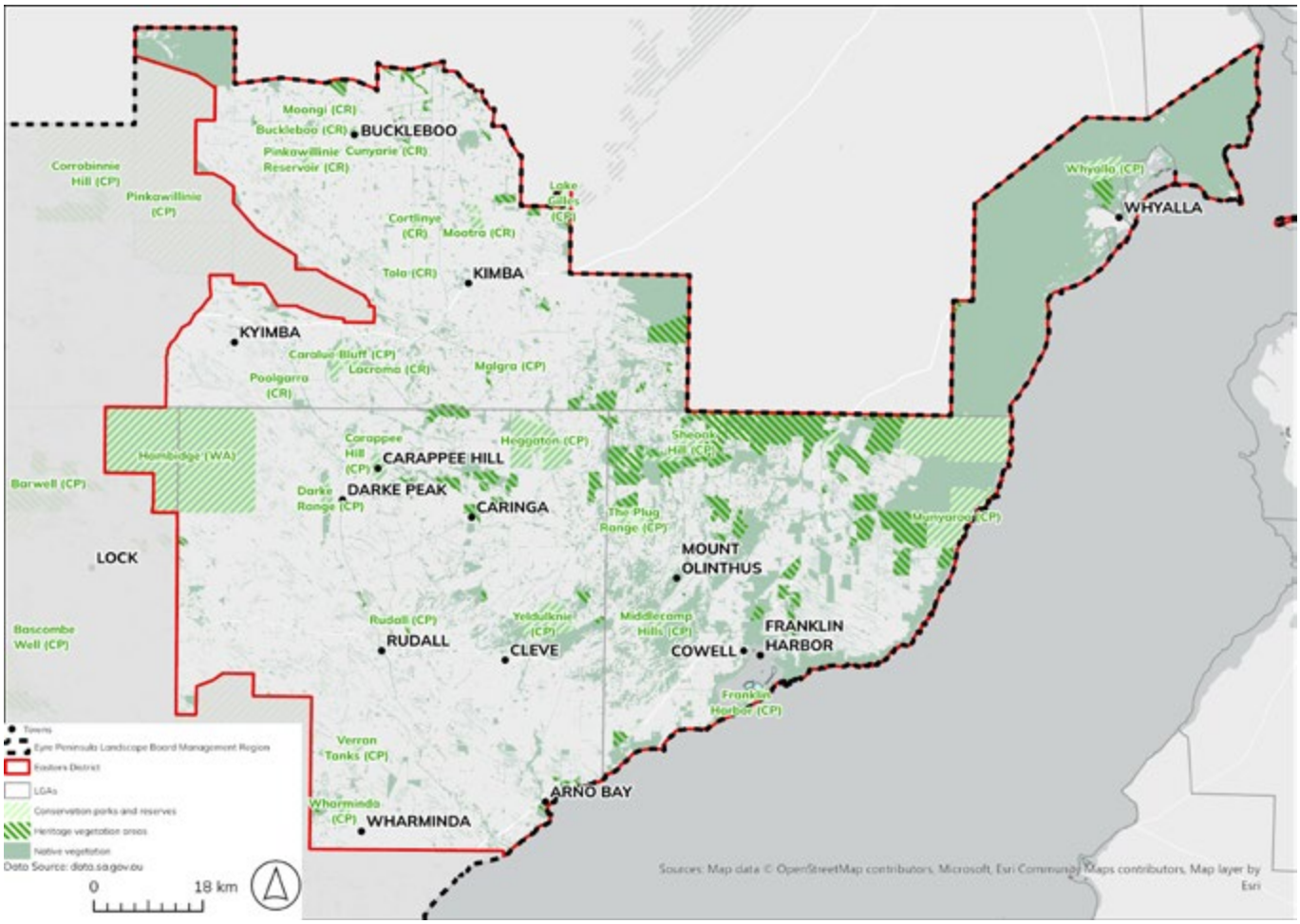

Figure 10 Biodiversity features in the Eastern District

Vegetation

Nearly 34% (4,095 square kilometres) of the district's land area is covered by native vegetation.

The landscape north-west of Whyalla is dominated by the stony tablelands of the Arcoona Plateau. The Douglas Hills (Douglas Uplands) run along the coast near the northern boundary within the Defence Cultana Training Area. The stony hills and plains in this area are covered with a sparse shrubland of Bluebush (*Maireana sedifolia*) with scattered areas of Western Myall (*Acacia papyrocarpa*) and Black Oak (*Casuarina pauper*) woodland.

Further south toward Whyalla and inland of False Bay, a large area of Yorrell (*Eucalptus gracilis*) forms a transition zone between the hills and plains. South of Whyalla, the land is flatter, rising gradually from the coast with predominantly red clay soils. Across this area, shrubland dominated by Bluebush (*Maireana sedifolia*) and Bladder

Saltbush (*Atriplex vesicaria*) and Western Myall (*Acacia papyrocarpa*) woodland are widespread. The land is predominantly used for grazing on the saltbush plains.

To the west of the region, much of the mallee that dominated the area has been cleared for agriculture. Hambidge Wilderness Protected Area protects the last relatively unmodified patch of vegetation in this region with Ridge-fruited Mallee (*Eucalyptus incrassata*) as the dominant vegetation community. The granite outcrops of Caralue Bluff (486m) and Carapee Hill (490m) south-west of Kimba are prominent in the otherwise flat agricultural landscape.

Close to Cowell and Spencer Gulf, the Minbrie Range with its highest point at Mount Olinthus (447m) rises from the coastal plain inland of Franklin Harbour. Woodland of Broombush (*Melaleuca uncinata*), Southern Cypress Pine (*Callitris gracilis*) and Drooping Sheoak (*Allocasuarina verticillata*) are found on shallow soils on the ranges. In the east, large areas of Yorrell (*Eucalyptus gracilis*) are found on the undulating parallel dune systems that run north-west to south-east.

Protected areas

About 7% of the region's land area and 26% (1,062km^2) of its native vegetation is protected within the Conservation Parks, Reserves and Wilderness Protection Areas. Just under 10% (398km^2) of the region's native vegetation is protected through Heritage Agreements. There is also a large area of native vegetation contained within the Defence Cultana Training Area.

The district contains the Hambridge Wilderness Protection Area as well as a number of Conservation Parks including Munyaroo, Heggaton, Franklin Harbour, Whyalla and several smaller parks. Hambridge Wilderness Protection Area and Munyaroo Conservation Park contain large areas of mallee woodland that provide important habitat for the nationally vulnerable Malleefowl (*Leipoa ocellata*).

The district also contains the Upper Spencer Gulf and Franklin Harbour Marine Parks. The Franklin Harbour Marine Park covers about 635km^2 extending from Munyaroo Conservation Park south to Point Gibbon. The Upper Spencer Gulf Marine Park extends from Cowleds Landing north to the top of the Gulf. This park also includes the Cuttlefish Coast Sanctuary Zone.

Coastal landscapes

A significant feature of the Upper Spencer coast is the large extent of mangroves. The mangroves (*Avicennia marina*) and seagrass meadows provide important nursery areas for commercial and recreational fish and crustaceans. Coastal wetlands exist along most of the coast south of Whyalla, vegetated with sparse samphire (*Tecticornia* sp.). The Upper Spencer Gulf Marine Park is recognised as a Wetland of National Importance, containing mangroves, samphire, tidal flats and marine habitats that provide nesting and feeding sites for local and migratory shorebirds[74]. A significant feature of the Marine Park is the subtidal reef area off the coast of Point Lowly. This is the location of the annual spawning of Giant Australian Cuttlefish (*Sepia apama*), the only known dense spawning aggregation of cuttlefish in the world[75]. This area is protected by the Cuttlefish Coast Sanctuary Zone.

Along the northern coast and particularly near Fitzgerald Bay, Douglas Point, Stony Point and Black Point, shingle beach deposits of pebbles and cobbles have formed flat topped ridges about 3 to 5m above current sea level. This State heritage listed shingle stranded beach dune is an important and rare geological feature.

Further south in the district between Munyaroo Conservation Park and Lucky Bay, most of the coast has sand-shellgrit beaches with shelly beach ridges and coastal wetlands and shrublands inland. Sandy beaches comprise most of the coast between Franklin Harbour and Arno Bay.

The Franklin Harbour Marine Park protects areas of mangroves (*Avicennia marina)*, saltmarsh and tidal flats. These habitats provide habitat and nursery areas for many recreational and commercial fish species such as King George whiting (*Sillaginodes punctatus*), southern sea garfish (*Hyporhamphus melanochir*), blue crabs (*Callinectes sapidus*) and western king prawns (*Penaeus (Melicertus) latisulcatus*)[76]. On the mudflats at the entrance to Franklin Harbour, rare stromatolites (mineral formations made by blue-green algae) are found. Offshore are dense seagrass meadows and unique, large colonies of stony coral (*Scleractinia*).

Franklin Harbour is classified as a tide-dominated estuary and is also listed as a coastal wetland of national significance in the Directory of Important Wetlands in Australia. Other estuaries include Driver River, Arno Bay and Yabmana Creek.

Surface water environments

Whilst there are few watercourses in the region, a number of ephemeral creeks drain from the Cleve Hills toward Franklin Harbour and the coast including Salt Creek. Driver River was assessed by the EPA in 2015 and assigned a very poor condition[77]. The river was

given a very poor rating because the site sampled showed evidence of major changes in ecosystem structure and a significant breakdown to the way the ecosystem functions. There was considerable evidence of human disturbance, including salinisation, nutrient enrichment, fine sediment deposition and poor riparian habitat. High salinity and acidic water clearly contribute to the degraded condition of this stream, which lacks plants, despite the presence of nutrients in the water, and only supports a few highly tolerant and mobile macroinvertebrates.

Flora and fauna

The Eastern District has a high diversity of flora and fauna. In particular, the Eyre Hills contains a wide variety of habitats, high species richness and high number of endemic plants. A selection of species and communities of conservation significance in the region are shown in the table below.

Table 6 Selected fauna, flora and vegetation communities of conservation significance

Species	National conservation rating
Fauna	
Eastern Curlew *(Numenius madagascariensis)*	Critically endangered
Plains-wanderer *(Pedionomus torquatus)*	Critically endangered
Sandhill Dunnart (*Sminthopsis psammophila*)	Endangered
Malleefowl *(Leipoa ocellata)*	Vulnerable
Hooded Plover *(Thinornis cucullatus)*	Vulnerable
Flora	
Chalky Wattle (*Acacia cretacea*)	Critically endangered
Silver Daisy-bush (*Olearia pannosa ssp. Pannosa*)	Vulnerable
Australian Broomrape (*Orobanche cernua var. Australiana*)	Rare
Vegetation communities	
Eyre Peninsula Blue Gum (*Eucalyptus Petiolaris)* Woodland	Endangered
Temperate coastal saltmarsh	Vulnerable

More information about these species can be seen below[78]:

Fauna

- The Eastern Curlew (*Numenius madagascariensis*) is Australia's largest shorebird and a long-haul flyer. It is easily recognisable, with its long, down-curved bill. The Eastern Curlew takes an annual migratory flight to Russia and north-eastern China to breed, arriving back home to Australia in August to feed on crabs and molluscs in intertidal mudflats. It is extremely shy and will take flight at the first sign of danger. Further information about this species can be found at: Eastern Curlew (Bird). On Eyre Peninsula, the Eastern Curlew is found in coastal areas between Whyalla and Ceduna within the appropriate habitat. It is likely the population is in decline.
- The Plains Wanderer *(Pedionomus torquatus)* is a highly unique, ground-dwelling bird that lives in the grasslands of Queensland, New South Wales, Victoria and South Australia. It is a very ancient member of Australia's avifauna, with its origins tracing back more than 60 million years. Plains Wanderers inhabit sparse native grasslands and are often absent from areas where grass becomes too dense or too sparse. They nest amongst native grasses and herbs, or sometimes amongst crops, feeding on a mixture of seeds, invertebrates and leaves. Further information about this species can be found at: Plains-wanderer (Bird). On Eyre Peninsula the Plains Wanderer has been rarely seen with only five records in the biological database of SA. The population trend is unknown.

- The Sandhill Dunnart (*Sminthopsis psammophila*) is a small carnivorous marsupial found in isolated sandy arid and semi-arid areas on the Eyre Peninsula and in the Great Victoria Desert. It occurs in vegetation dominated by hummock (*Triodia*) grassland. The species shelters during the day in burrows, emerging at night to hunt insects and small reptiles. Threats to the species include cat and fox predation, inappropriate fire regimes and habitat loss and fragmentation. Further information about this species can be found at: Sandhill Dunnart (Mammal). They are known to live in the Middleback Ranges on the Eyre Peninsula.
- The Malleefowl (*Leipoa ocellata*) gets its name from the habitat it occurs in (scrubland and woodland dominated by mallee and wattle species). This ground-dwelling bird is famous for its ability to build enormous mounds. The male and female may take months working together to build their nest. The eggs are incubated in sand or soil by the sun or mounds of rotting leaves. While the male maintains the nest during the incubation, the parents take no part in chick rearing, with chicks emerging from the mound completely self-sufficient. Further information about this species can be found at: Malleefowl (Bird). On Eyre Peninsula, the Malleefowl is found across the whole region in appropriate habitat. The population is likely in decline.
- The Hooded Plover (Thinornis cucullatus) is a small Australian beach nesting bird. It mainly occurs on wide beaches backed by dunes with large amounts of seaweed and jetsam, creek mouths and inlet entrances. Nests are found above the high-water mark on flat beaches, on stony terraces, or on sparsely vegetated dunes. As the Hooded Plover occurs on beaches, it is easily disturbed by human activities, particularly off-leash domestic dogs. Further information about this species can be found at: Hooded Plover (eastern) (Bird). On Eyre Peninsula the Hooded Plover is found mainly in coastal areas between Cowell and Fowlers Bay with the appropriate habitat.

Flora

- The Chalky Wattle (*Acacia cretacea*) is a spindly, single-stemmed shrub or tree, growing 4-5 m high with yellow, fragrant flower heads. The species occurs in an extremely restricted area about 30 km north to north-west of Cowell and north-east of Coolanie on the north-eastern Eyre Peninsula. The total population consists of between a few hundred plants. The species is found along roadsides and in adjacent leasehold farming land. Further information about this species can be found at: Chalky Wattle (Plant).
- The Silver Daisy-bush *(Olearia pannosa subsp. pannosa)* is endemic to South Australia where it is scattered throughout agricultural areas. Its tuberous roots provided First Nations people with water and food resources during summer. Further information about this species can be found at: Silver Daisy-bush (Plant). On Eyre Peninsula, the Silver Daisy-bush is found in the Koppio and Cleve Hills in appropriate habitat. The population trend is unknown but is likely in decline.
- Australian Broomrape (*Orobanche cernua var. Australiana*) is a rare herb parasitic on native *Senecio* daisy species. They contain no chlorophyll of their own and only the flowering stem can be seen above ground for a few months each year. It is found scattered across the eastern half of South Australia, growing in sand dunes and sandy creek beds. Further information about this species can be found at: Australian Broomrape.

Threatened Ecological Communities

- The Eyre Peninsula Blue Gum (*Eucalyptus petiolaris*) Woodland has a canopy dominated by *Eucalyptus petiolaris* and is associated with sheltered valleys and lower hill slopes and along watercourses on the Eyre Peninsula particularly in the Koppio and Cleve Hills. Further information about this species can be found at: Eyre Peninsula Blue Gum (*Eucalyptus petiolaris) Woodland*. The health of the vegetation community is in decline. A management plan was completed in 2019 to direct further conservation works in the future.
- The Subtropical and Temperate Coastal Saltmarsh ecological community consists of organisms including and associated with saltmarsh in coastal regions of sub-tropical and temperate Australia. Further information about this species can be found at: Subtropical and Temperate Coastal Saltmarsh. The health of the vegetation community is in decline.

4.6. Pest plants and animals

Pest plants and animals can pose significant threats to agriculture, the natural environment and public health and safety in the Eastern District. Reducing the impacts of pest plants and animals and preventing new invasive species from establishing is critical for the district's environmental and economic resilience. Vehicle, machinery, and freight movement across and within the district is a major pathway for weed spread. Climate change is amplifying existing threats by enabling pests to expand their range and survive in greater numbers. Extreme weather events including droughts and storms can accelerate the spread of invasive species.

The Eyre Peninsula Landscape Board is guided by its Pest Plant and Animal Control Policy when working with land managers to manage pest plants and animals. A focus is placed on identified priority pests. Pest management plans have been developed for priority pest species found within the region. Priority pest plants and animals in the Eastern District that are to be eradicated include Buffel Grass (*Cenchrus ciliaris*), pigs and deer. African Lovegrass (*Eragrostis curvula*) is another priority pest in the region. Ongoing goat control is undertaken, with aerial goat control programs planned for 2026.

As part of the Eyre Peninsula's Saltmarsh Threat Abatement and Recovery Project, significant pest plant control activities were undertaken in the Franklin Harbor Conservation Park prior to June 2023. Large tracts of pest species African boxthorn (*Lycium ferrocissimum*) were removed to protect native vegetation, a recognised valuable store of blue Carbon in the coastal ecosystem[79].

The 2025 algal bloom containing phytoplankton (*Kareni sp.*) is having an ongoing deleterious impact on fish and plant species along the coast of the Eastern District. Longer term implications and remedies are as yet unclear.

4.7. Collaboration and partnerships

Successful landscape management in the Eastern District relies on effective collaboration. Strong partnerships between agencies, landholders, councils, Traditional Owners, industries and communities mean that natural resources can be protected region wide for the long term.

The communities of the Eastern District recognise their role as custodians of the land and the sea and the need to protect them for future generations. They acknowledge the need to find a balance between economic, social and environment values. Continuing to build local knowledge and capacity is essential to empower the community to take action.

The Traditional Owners of the Eastern District have a deep ongoing connection to their land. The majority of the district is the traditional land of the Barngarla people. Numerous sites of cultural significance exist along the coast, including fish traps and campsites. Inland, many of the hills and major topographic features notable on the flat landscape have significance. A small part of the land of the Gawler Rangers people is captured also in the Eastern District north of Pinkawillinie Conservation Park. These Traditional Owner communities and groups play an active role in caring for their country to maintain their culture and a healthy environment for their people and land.

The councils of the Eastern District include the City of Whyalla, District Council of Franklin Harbour, District Council of Cleve and District Council of Kimba. The part of Hambidge Wilderness Protection Area captured within the District Council of Elliston is also part of the region. These councils have responsibility for managing local green spaces, waste, water and natural resources and taking action on climate change.

The role of representative groups of primary producers, such as Ag Innovation and Research Eyre Peninsula's (AIR EP) Medium Rainfall RD&E Committee - alongside government-led agricultural and aquaculture research institutions, such as South Australian Research and Development Institute (SARDI), Department of Primary Industries and Regions (PIRSA) - are vital partners in landscape management, investing in, proving and extending research that seeks to maximise the future health and viability of the region's environment and production sustainability. Sector support bodies such as Grain Producers SA and Grains Research and Development Corporation invest in R&D activities, as well as biosecurity measures, road and infrastructure upgrades, and general best practices to support sustainable production systems.

There are a number of parks and reserves in the Eastern District. These areas are managed by the National Parks and Wildlife Service South Australia, part of the Department for Environment and Water. Other government and non-government organisations and community groups also support the management of landscapes in the region.

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