

Rapid Bay- Rapid Head (Yerta Kulangga)¹ to Boat Harbor, Second Valley (Kauweyerlongga)

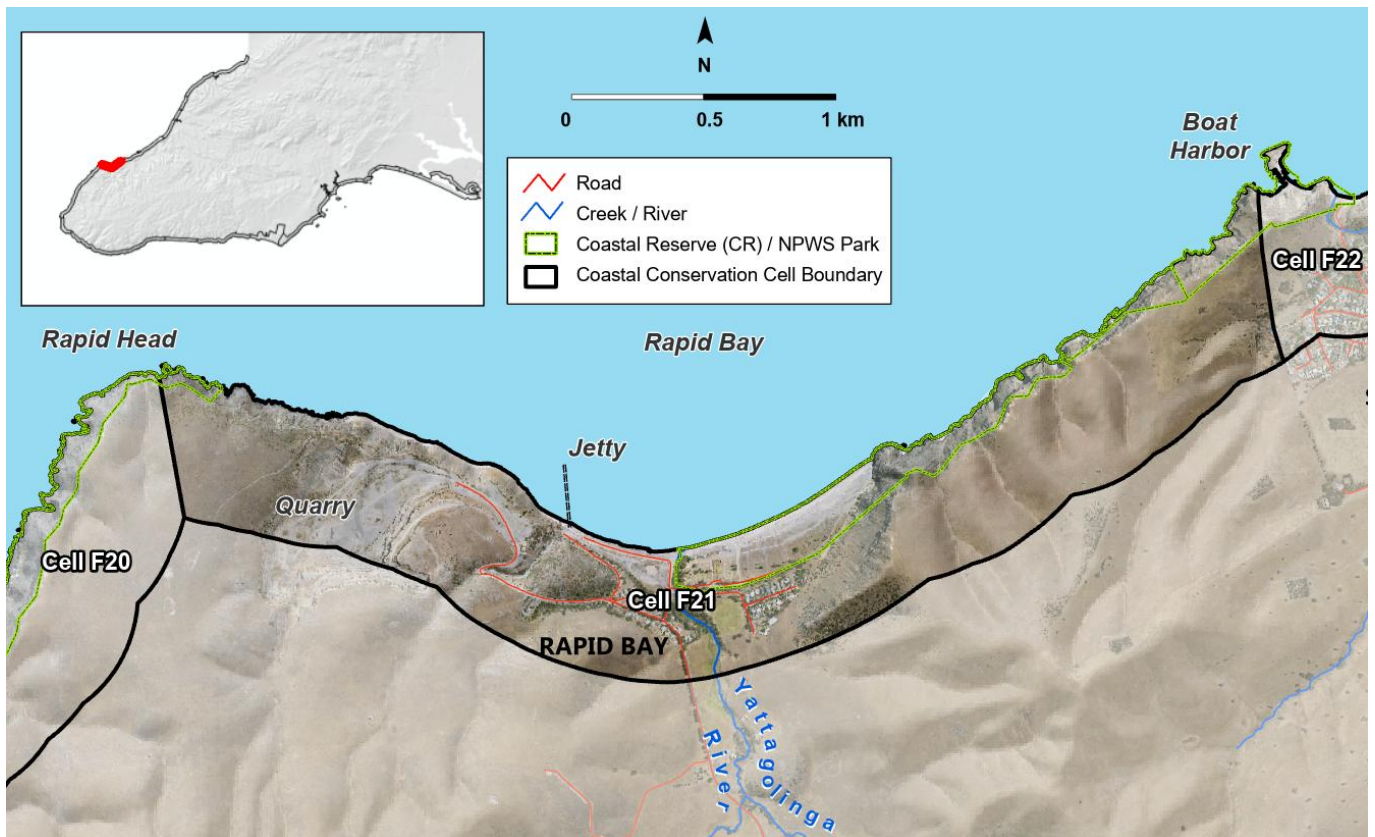
Cell F21

Overview

This small length cell has extensively grazed coastal slopes, limiting biodiversity and conservation values to the narrow cliff line. Outcropping of pockets of remnant vegetation is under pressure from weed threat and isolation. Population pressures through visitation are evident at the estuary and coastal infrastructure is stretched during peak times. Valuable habitats for seabirds

and shorebirds persist along the privately owned cliff lines.

Nearshore biodiversity values are high, with extensive seagrass population and regionally iconic marine species, including Leafy (*Phycodurus eques*) and Weedy Sea Dragons (*Phyllopteryx taeniolatus*) known at this site in a global context.



¹“Yerta Kulangga is the earliest recorded traditional language word (Kaurna Meyunna) for Rapid Head / Bay which was recorded around 1837. Kauweyerlongga, place of fresh water and sea, was recorded in 1838” (Karl Winda Telfer, personal communications, November 2025).

Traditional Owner and First Nations cultural heritage and connection to land and sea Country

This cell is of high cultural value and significance to the Kurna Patpangga Meyunna people. The Country is part of several Dreaming stories, including Tjilbruke/Tjirbuki, which is a coast and sea songline story. The area features places, artefacts, plants and animals of high cultural and human value, including caves, fish traps and fishing grounds, seasonal campgrounds, sleeping places, and places of creation story and spiritual practices. This cell includes registered and un-registered Aboriginal heritage sites; more broadly, all the lands and waters are of importance to the Kurna Patpangga and Mullawirra Meyunna. Native title has not been established for this cell.

Please respect that cultural concepts and content included in this plan are the Aboriginal Cultural and Intellectual property (ACIP) of Karl Winda Telfer of the Mullawirra Meyunna (Kurna Meyunna) (cells 20-27). They may not be used or adapted by any other parties without consent.

Cell detail

This cell extends from Rapid Head approximately 4.5km to the western side of Boat Harbour, Second Valley. The Yattagolonga (Yerta Kulangga) River flows through this cell and forms the Yattagolonga River estuary mouth at Rapid Bay Beach. The cell is in the District Council of Yankalilla local government area.

Tenure, Land Use and Values

Approximately 50% of this cell is privately owned to the low water mark, including the limestone quarry and the cliff areas to the far east of the cell. Much of the private land is in grazing or quarrying and associated infrastructure. Coastal Reserve Crown land managed by Council occupies most of the beach and dunes, stretching up over the coastal slopes from Yattagolonga River estuary to near eastern cell boundary. A popular caravan park at Rapid Bay provides beachfront access to caravan and camping sites, with increasing visitation from tourists and snorkelling and diving communities to Rapid Bay Jetty dive sites. Since 2012, the waters surrounding this cell are within the boundaries of the Encounter Marine Park.

Native title has not been established for this cell. The Federal Court did not determine native title for Kurna Yerta Aboriginal Corporation over the lands south of Myponga to the edge of the Ngarrindjeri determination (3.5km northeast of Cape Jervis). Kurna Patpangga Meyunna maintain cultural and historical connections to this region, the formal determination was limited to areas from Lower Light in the north to Myponga in the south.

Bryars (2013) observes that the cell is utilised for commercial, charter and recreational fishing (by boat and from the jetty), as well as recreational swimming and diving. Recreational diving at Rapid Bay Jetty and at the Ex-HMAS *Hobart* (which lies further offshore) is regionally important and internationally known. Recreational fishing: Southern Calamari (*Sepioteuthis australis*), King George Whiting (*Sillaginodes punctatus*), Tommy Ruff/ Australian Herring (*Arripis georgianus*), Leatherjacket (*Meuschenia hippocrepis*). Diving from jetty to observe multiple temperate marine species, particularly Leafy (*Phycodurus eques*) and Weedy Sea Dragons (*Phyllopteryx taeniolatus*). The beach at Rapid Bay is utilised for launching boats, beach walking. Valued coastal views from the headlands.

The local community is very passionate about this coastal environment. Local community volunteers including landowners and students from the Rapid Bay Primary School have undertaken restoration activities along the coastal areas and dunes for a number of years. This beach is not monitored by the Friends of the Hooded Plover Fleurieu Peninsula (other than the biennial survey) as the birds have not been recorded as nesting on this beach.



Rapid Bay township, jetties and coastal cliffs. Mining site at Rapid Head (right) to township and erosion of slopes resulting in gravel train into nearshore waters towards Second Valley (Coast Protection Board, March 2024)

Landforms

High cliffs and cleared coastal slopes grades down to sandy Rapid Bay Beach. At the eastern end of this cell the Second Valley Harbour geological monument (reference 1120) supports Brighton Limestone, Tapley Hill Formation, Sturt Tillite. The Second Valley Coastal Cliffs Geological Site is also listed as a State Heritage place (reference 14171), as the coastal cliffs of Second Valley, both in the harbour area and to the north and south, contain excellent exposures, which supply a wealth of geological information important to the interpretation of the complex tectonic evolution of the Adelaide Fold Belt.

The bulk of the foreshore at Rapid Bay is spilled limestone pebble wastes from the quarry cliffs to the SW and from the former loading gear on the jetty. Bourman, 1990 (in Caton et al 2007) reports that between 1942 and 1982, 1.8 million tonnes were spilled, resulting in a progradation of the shore of 250 metres. Older cadastral maps show the caravan park as under the tide line. After mining ceased in 1982, rapid recession of the shoreline of Rapid Bay occurred until 1984. By 1988 the bay appears to have stabilised. Limestone gravel was also transported NE in the nearshore zone: aerial photos indicate these wastes have now covered the sea floor to 300m offshore, and from Rapid Bay to near Second Valley. Transported gravel has buried parts of the sea floor and covered pocket beaches. Some intertidal and sub-tidal reefs have been destroyed (Caton et al 2007).

Terrestrial biodiversity

Whole cell

This cell has extensively cleared coastal slopes and includes small, isolated remnant vegetation pockets along the cliff line at Rapid Head and the headland East of Rapid Bay to Second Valley, and within some creek lines, gullies and paddocks. Other conservation values for this cell lie within vegetation associations (threatened status rating, rarity of the community within South Australia, numbers of species endemic to this region, and priority of sites with threatened flora; habitat for significant bird species and geological heritage (Caton et al. 2007).

The dune system at Rapid Bay is heavily degraded, with isolated plants from the Coast Daisy-bush (*Olearia axillaris*) and Coast Beard-heath (*Leucopogon parviflorus*) Shrubland vegetation community still present in limited numbers. Rapid Head cliff line within private property has a small pocket of remnant vegetation community Rock Wattle (*Acacia rupicola*), Twiggy Daisy-bush (*Olearia ramulosa*) Open Shrubland over Common Fringe-myrtle (*Calytrix tetragona*). The isolated cliff line vegetation pockets support species found within a Twiggy Daisy-bush (*Olearia ramulosa*) mid open shrubland community.



Rapid Bay beach and township. Caravan Park on the coastal dunes (left) and jetties (right). Grazing lands have small pockets of vegetation as paddock trees or along creek lines and gullies (Coast Protection Board, March 2024)

Flora species of conservation significance for this cell include Twining Purslane (*Calandrinia volubilis*), Caustic Bush (*Cynanchum viminale ssp. australe*), Leafless Cherry (*Exocarpos aphyllus*), Red-flower Lotus (*Lotus cruentus*), Scarlet Mintbush (*Prostanthera aspalathoides*), and Leafy Wallaby-grass (*Rytidosperma fulvum*).

Conservation rated fauna species recorded in the cell include Yellow-tailed Black Cockatoo (*Zanda funerea whiteae*), Peregrine Falcon (*Falco peregrinus macropus*), Common Sandpiper (*Actitis hypoleucos*), and Greater Crested Tern (*Thalasseus bergii cristatus*).



Yellow-tailed Black Cockatoo (Zanda funerea whiteae) (M Stokes)

Seagrass wrack (also known as Beach cast wrack) found regularly on beaches has an important ecological function recycling nutrients back to coastal waters as well as protection and stabilisation of the shoreline and coastal dunes by acting as a trap that binds drifting sands and reduces sand erosion during winter (PIRSA 2014). Beach wrack also provides an important role as habitat and shelter for Hooded Plovers (*Thinornis cucullatus cucullatus*) and Pied (*Haematopus longirostris*) and Sooty Oystercatchers (*Haematopus fuliginosus fuliginosus*) as well as other shorebirds and juvenile fish. Beach cast wrack collection within Encounter Marine Park is prohibited in all zones except general managed use zones. Therefore, no removal of beach wrack is permitted in this cell.

Vegetation clearance has limited suitable habitats for many fauna species, however the isolated nature and cliff lines likely provide refuge and valued habitat for a range of seabird species, including the White-bellied Sea Eagle (*Haliaeetus leucogaster*), Eastern Osprey (*Pandion haliaetus cristatus*), Little Pied Cormorant (*Microcarbo melanoleucos melanoleucos*), Australian Pied Cormorant (*Phalacrocorax varius hypoleucos*), Greater Crested Tern (*Thalasseus bergii cristatus*) and Silver Gull (*Chroicocephalus novaehollandiae novaehollandiae*).

Multiple common butterfly species that are observed across the Fleurieu Peninsula are found in this cell, including Southern Grass-dart (*Ocybadistes walkeri hypochlora*), White-banded Grass-dart (*Taractrocera papyria papyria*), Meadow Argus (*Junonia villida calybe*), Australian Painted Lady (*Vanessa kershawi*), Australian Admiral (*Vanessa itea*), Lesser Wanderer (*Danaus petilia*), Monarch (*Danaus plexippus plexippus*), Long-tailed Pea-blue (*Lampides boeticus*), Two-spotted Line-blue (*Nacaduba biocellata biocellata*), Wattle Blue (*Theclinessthes miskini miskini*), Salt-bush Blue (*Theclinessthes serpentatus serpentatus*) and Common Grass-blue (*Zizina otis labradus*) (Stolarski 2024). Many of the species of conservation significance do not occur in this cell, as their host plants are not present or are in low numbers and unable to support reintroduction from neighbouring cells.



Southern Grass-dart (Ocybadistes walkeri hypochlora) is a relatively common species likely to be seen within this cell (M Endacott)

Estuary (Yattagolinga River)

Yattagolinga River is a recognised estuary (DEH 2007)

The Yattagolinga River estuary is situated at the mouth of the Yattagolinga River and is approximately 20-25m wide, with modified direction and constructed banks (Telfer and Milne 2014). Steep upper reaches and coastal slopes on the southern side, greater than 45 degrees grading to gentler northern slopes. Fair habitat potential was described by Telfer and Milne (2014), with 10-30% of stable habitat present. However, no visible instream wood/logs/snags were present. The estuary supports a vegetation community of Common Reed (*Phragmites australis*) +/- Narrow-leaf Bulrush (*Typha domingensis*) Closed sedgeland, with surveys reporting six native plant species, indicating a “Moderate” level of diversity for this type of plant community, Common Reed (*Phragmites australis*), Narrow-leaf Bulrush (*Typha domingensis*) and Lignum (*Duma florulenta*) swamps in permanent water. Large Bindweed (*Calystegia sepium*) was the only species of conservation significance recorded in the estuary. Birds of conservation significance which may use the estuary as habitat include Hooded Plover (*Thinornis cucullatus cucullatus*), although rarely seen at this site, and Common Sandpiper (*Actitis hypoleucos*) (Telfer and Milne 2014).



Yattagolingo River estuary (Coast Protection Board, March 2024)

Fish biodiversity and water quality monitoring surveys have been undertaken at Yattagolingo estuary and lower catchment. Recent and historical surveys indicate it supports a small range of fish species, including Swan River Goby (*Pseudogobius olorum*), Common Galaxias (*Galaxias maculatus*), Climbing Galaxias (*Galaxias brevipinnis*), Yelloweye Mullet (*Aldrichetta forsteri*), Congolli (*Pseudaphritis urvillii*) (Schmarr et al. 2022).



Climbing Galaxias (Galaxias brevipinnis) (D Schmarr)

Estuarine Habitats: Yattagolinga River



0 50 100 200 Metres

- Channel
- Beach
- Riparian
- Estuary Extent



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Fig 21.1 Yattagolinga River estuarine habitats

Vegetation Communities

Coastal Cliffs and slopes

Twiggy Daisy-bush (*Olearia ramulosa*) mid open shrubland

- Twiggy Daisy-bush (*Olearia ramulosa*) mid open shrubland over * Hare's Tail Grass (*Lagurus ovatus*) + Sea-berry Saltbush (*Rhagodia candolleana* ssp. *candolleana*) + Prickly Ground-berry (*Acrotriche patula*) low shrubs over Variable Groundsel (*Senecio pinnatifolius* spp.) +/- Short-stem Flax-lily (*Dianella brevicaulis*) +/- Thyme Riceflower (*Pimelea serpyllifolia* ssp. *serpyllifolia*)

Drooping Sheoak (*Allocasuarina verticillata*) Low woodland

- Drooping Sheoak (*Allocasuarina verticillata*) Low Woodland over an open grassy and herbaceous understorey of Hard Mat-rush (*Lomandra multiflora* ssp. *dura*) + Scented Mat-rush (*Lomandra effusa*) + Wallaby Grass (*Rytidosperma* spp.) + Spear grass (*Austrostipa* spp.)

Rock Wattle (*Acacia rupicola*) + Twiggy Daisy-bush (*Olearia ramulosa*) Open Shrubland over Common Fringe-myrtle (*Calytrix tetragona*)

Coastal Dune (Rapid Bay)

Coast Daisy-bush (*Olearia axillaris*) + Coast Beard-heath (*Leucopogon parviflorus*) Shrubland

- Coast Daisy-bush (*Olearia axillaris*) + Coastal Wattle (*Acacia longifolia* ssp. *sophorae*) +/- Common Boobialla (*Myoporum insulare*) +/- Coast Beard-heath (*Leucopogon parviflorus*) mid sparse shrubland over Sea-berry Saltbush (*Rhagodia candolleana* ssp. *candolleana*) +/- *Annual Veldt Grass (*Ehrharta longiflora*) mid tussock grasses over Thyme Riceflower (*Pimelea serpyllifolia* ssp. *serpyllifolia*) + Native Pigface (*Carpobrotus rossii*) + Bower Spinach (*Tetragonia implexicoma*)

Estuary (Yattagolina River)

- Common Reed (*Phragmites australis*) +/- Narrow-leaf Bulrush (*Typha domingensis*) Closed sedgeland

Nearshore habitats

This cell forms part of the Encounter Marine Park. Part of the marine areas of cell F21 are within a Habitat Protection Zone (HPZ-5), with part within a Sanctuary Zone (SZ-5). This area has a very high diversity of marine species and areas around the old Rapid Bay jetty are internationally recognised as a dive site to see Leafy Sea Dragons (*Phycodurus eques*) and Weedy Sea Dragons (*Phyllopteryx taeniolatus*). Suitable habitat to support White-bellied Sea Eagle (*Haliaeetus leucogaster*) and), Eastern Osprey (*Pandion haliaetus cristatus*) exist along the cliffs within this and neighbouring cells. Long Nosed Fur Seals (*Arctocephalus forsteri*) and Australian Sea Lions (*Neophoca cinerea*) haul out in large numbers along the cliff base near Rapid Head year-round. The marine areas of cell F21 have a high diversity of invertebrates from increased larval settlement from rotating currents.



Long Nosed Fur Seals (*Arctocephalus forsteri*) (M Stokes)

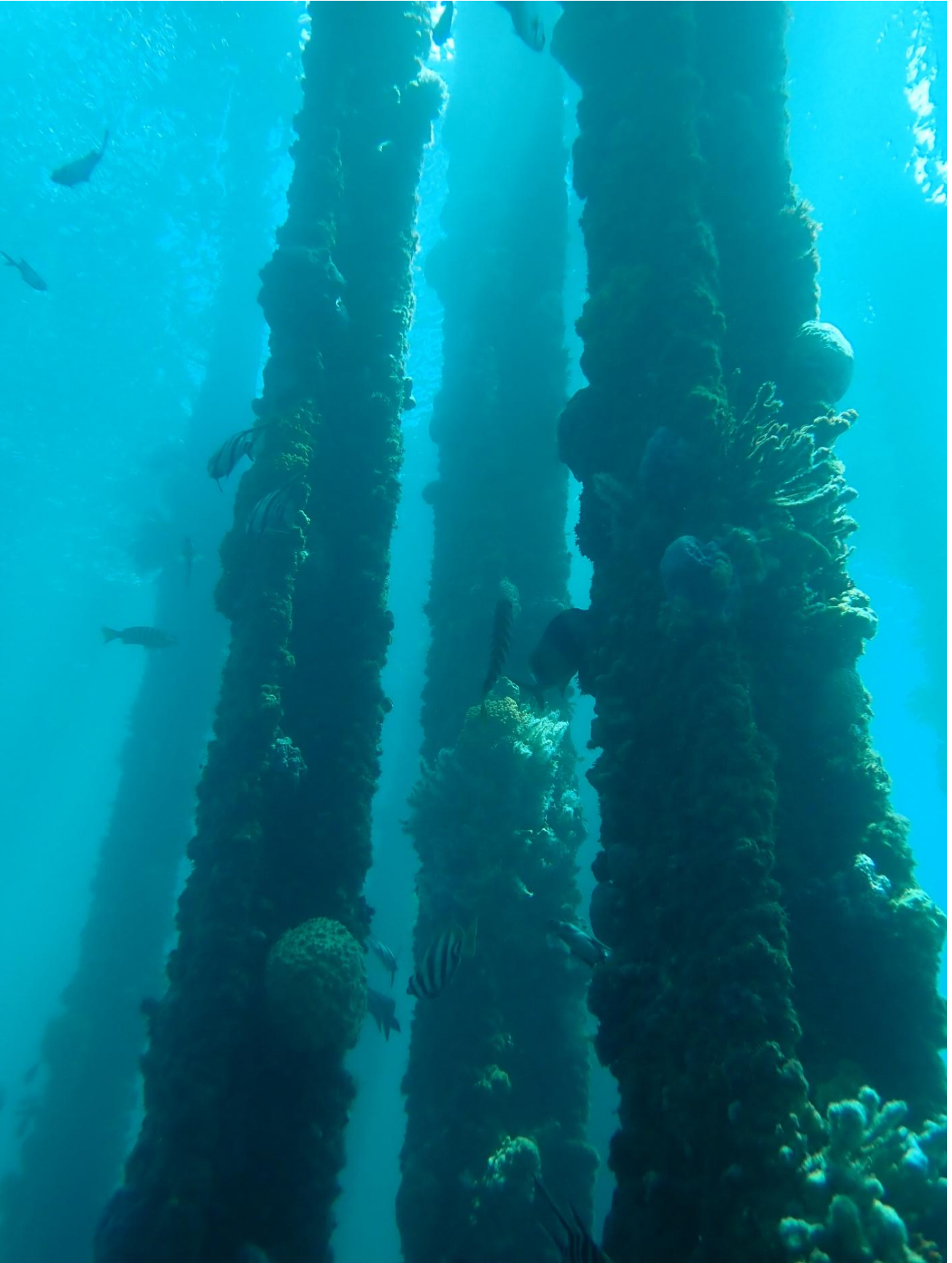
Bryars (2013) describes the cell as dominated by continuous seagrass meadows (Figure 21.2). There are also significant areas of bare sand inshore at Rapid Bay and further offshore in the NW part of the cell beyond the depth limit of seagrass growth. Small amounts of continuous and patchy low profile reef are scattered inshore across the cell.

The cell is regionally significant due to its substantial coverage of seagrass, while the jetty structures are also significant as artificial habitats for marine life (Bryars 2013).



Diver amongst the jetty pilons and school of Old Wives (Enoplosus armatus) (M Stokes)

Subtidal reefs in the Rapid Head area are composed of metamorphic rock with a cover of macroalgae and sessile invertebrates (DEH 2008, Brook et al. 2020, Brock et al. 2023). Artificial reefs occur within the cell in the form of jetties and a breakwater at Rapid Bay. The inshore bare sand is characterised by a low-energy reflective beach system at Rapid Bay that has been building seaward due to a supply of rock debris from the quarry at Rapid Head (Short 2001). The inshore bare sand at the base of the cliffs to the northeast of Rapid Bay is also a result of the rock debris (Short 2001, see Threats below).



Jetty pilons provide an artificial reef structure that is colonized by multiple species (K Peters)

Subtidal reef

Surveys of the subtidal reef at Rapid Head have found a high diversity of fishes, invertebrates and macroalgae (Edgar et al. 2006, DEH 2008, Brock et al 2023). The cell lies within a region of low macroalgal species diversity. However, this is probably partly due to a low level of collection effort (see Baker and Gurgel 2010). Over 100 bony fish species have been recorded at Rapid Bay Jetty alone (See Appendix 2 in Baker et al. 2008) and it is recognised as a hotspot for fish diversity in the region (Shepherd and Baker 2008). The Rapid Bay area is also a recognised hotspot for the Leafy Sea Dragon (*Phycodurus eques*).



Leafy Sea Dragon (Phycodurus eques) (S Bryars)

The reef ecosystem baseline study (Brook et al. 2020) and current study by Brock et al. (2023) assessing the trends in the condition of rocky reef ecosystems of the greater Adelaide and Fleurieu Peninsula region found that the overall status of rocky reefs was stable or improving, based on several key indicators of condition (e.g. fish and macroinvertebrate species richness, community structure, large fish biomass, macroalgae percentage cover, and reef thermal index). The Central Fleurieu subregion comprises 24 long term monitoring survey reef sites, with four sites found within the cell or closely to and adjacent cell F20. Most sites are focussed around Rapid Head. Combined reef surveys in this subregion indicate that macroinvertebrate and fish species richness, large fish biomass and the percentage cover of canopy-forming algae has remained stable or is increasing (Brock et al. 2023). Marine species in the Central Fleurieu subregion include 143 bony fish, 12 sharks and rays, 104 species of marine invertebrate, and 20 species of crustacean (Brock et al. 2023, Edgar and Barrett (2012), Edgar and Stuart-Smith (2014), Edgar et al. (2020)).

Seagrass habitats

Seagrass composition has not been described for this cell (Bryars 2013). While the seagrass and sand habitats are likely to support a range of species (e.g. see Bryars 2003), apart from mapping studies that have characterised the sea floor (Shepherd and Sprigg 1976, Tanner 2002, DEH 2008), no habitat condition or biological surveys appear to have been undertaken on these habitats within Cell F21.

Species diversity

Bryars (2003) listed 10 fish and two macroinvertebrate species for the sheltered beach habitat at Rapid Bay, 12 fish and four macroinvertebrate species for the seagrass habitat between Sellicks Beach and Rapid Head, 14 fish and six macroinvertebrate species for the unvegetated soft bottom habitat between Sellicks Beach and Rapid Head, and 14 fish and six macroinvertebrate species for the reef habitat between Sellicks Beach and Rapid Head.

Surveys for uncommon and cryptic reef fishes have been conducted in the cell (see Baker et al. 2008, 2009).



Long snout Boarfish (Pentaceropsis recurvirostris) (S Bryars)

Nearshore Habitats: Cell F21

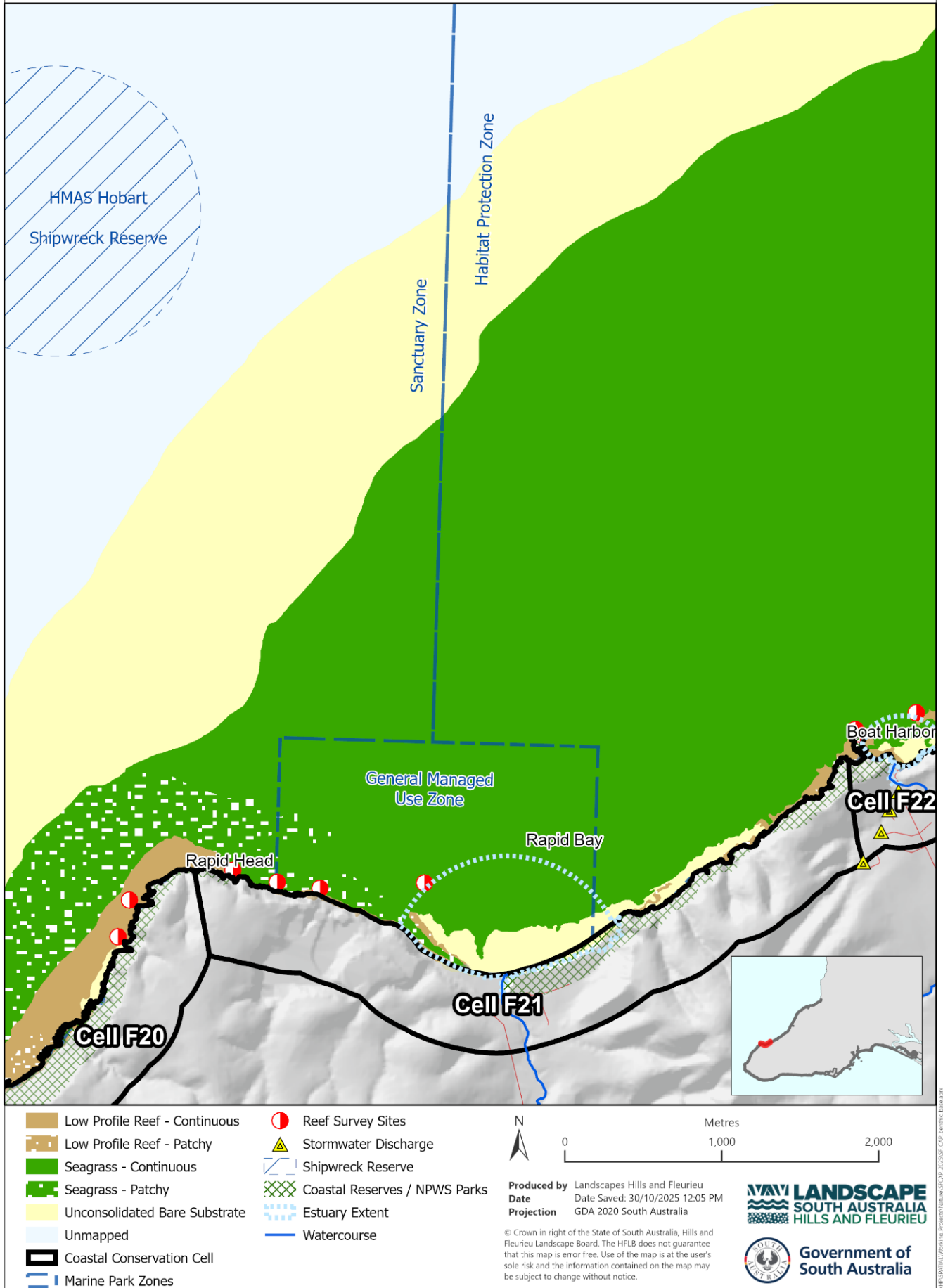


Figure 21.2. Nearshore habitats of Cell F21

Threats

Whole cell

Due to historical vegetation clearance (up to the cliff lines) and stock grazing, there is now limited biodiversity across some areas of this cell. High threat values are identified for proportion of exotic plants, for viewscape and viewshed, land ownership and land use (mining). Coastal reserves are narrow to non-existent. Only the embayment at Rapid Bay has an extensive coastal reserve (Caton et al., 2007).

This cell faces a high level of threat due to land use and ownership patterns, with extensive private holdings directly abutting the narrow Crown land corridor along the coastal fringe. The threat of land ownership and land use identifies some land parcels as potential threats to coastal areas due to factors like proximity to the coast or vulnerability to hazards. This highlights land parcels for potential intervention, such as zoning changes, restrictions or land purchase, to mitigate risks like erosion, inundation (storm surges, or sea-level rise), or the potential impact of current or future land use on coastal ecosystems, such as development or agriculture.

Grazing of cliff tops and faces increases cliff instability, especially through erosion and gully development, leading to periodic increases in turbidity in the nearshore marine zone. Historical land management practices in coastal catchments led to hillside erosion scarring, eroded creek banks, raised sediment transport and creek nutrient levels (Caton et al., 2007).

Despite the highly cleared landscape declared and red alert weed threats exist within this cell including Western Coastal Wattle (*Acacia cyclops*), African Boxthorn (*Lycium ferocissimum*), Olive (*Olea europaea* ssp. *europaea*), Salvation Jane (*Echium plantagineum*), Cape Weed (*Arctotheca calendula*), Broad-leaf Cotton-bush (*Gomphocarpus cancellatus*), Sea-lavender (*Limonium companyonis*), Pincushion (*Sisalix atropurpurea*), Soursobs (*Oxalis pes-caprae*), Gazania (*Gazania linearis*), African Love-grass (*Eragrostis curvula*), Chilean Needle Grass (*Nassella neesiana*), Tambookie Grass (*Hyparrhenia hirta*), Buffel grass (*Cenchrus ciliaris*), Horehound (*Marrubium vulgare*) and Apple of Sodom (*Solanum linnaeanum*).

African Love-grass (*Eragrostis curvula*), Chilean Needle Grass (*Nassella neesiana*), Tambookie Grass (*Hyparrhenia hirta*) and Buffel grass (*Cenchrus ciliaris*) are targets for eradication (monitor and control required). Pest animal threats to coastal fauna and flora from rabbits (*Oryctolagus cuniculus*), foxes (*Vulpes vulpes*), and feral cats (*Felis catus*). There is a need to monitor and control Fallow deer (*Cervus dama*) incursions. Coordinated collaboration between landowners and managers is required to manage pest animals (refer to Regional Pest Management Strategies).



African Love-grass (*Eragrostis curvula*) along with several other invasive grass species are eradication targets for this cell (D Miles)

Several butterfly and skipper species that have localised populations are limited in capacity for dispersal and/or colonisation of new sites. The lack of suitable habitats, weed invasion and interconnectivity between habitats prohibits movements and therefore creates localised isolation of populations. Several species are now restricted to pockets of isolated habitats resulting in some being vulnerable to population collapse (Stolarski 2024).

Coastal raptors are recorded to utilise habitats within the cell, including Wedge-tailed Eagles (*Aquila audax audax*) that have established breeding territories. Current and potential future threats include disturbance, recreational and industrial use of drones, windfarms and spread of urban development (Rowe et al 2018).

Rapid Head a well-known haul out site for Long-nosed Fur Seals and lesser numbers of Australian Sea Lions. These species haul out at this site year-round, however greater numbers are observed in winter months (upwards of 100 animals). Regular and persistent visitation by boats and kayakers to this area results in significant issues with disturbance during summer months. Illegal fishing inside the Sanctuary Zone (SZ-5) within Encounter Marine Park is a threat to the resident fish communities. These no-take areas are located at core conservation areas within marine parks, protecting vital feeding, breeding, nursery, and resting areas for marine life.



Coastal cliffs and pocket beaches with increasing visitation via watercraft (Coast Protection Board, March 2024)

Estuary (Yattagolinga River)

Yattagolinga River estuary is a popular beach for swimming and fishing, and experiences high visitation levels via the directly adjacent caravan park. The estuary has no connectivity to the sea due to the large build-up of sand on the beach, except during high freshwater flow events. Stream width and direction have been modified with the construction of banks, with Telfer and Milne (2014) describing a moderate deposition of gravel, sand or fine sediment due to the dense cover of reeds, with banks prone to erosion, moderately unstable and streambank surfaces have <50% covered by vegetation.

Disturbance is obvious, with a high cover of weedy grasses and herbs (Telfer and Milne 2014). Multiple weeds can be found within the estuary, including Dog Rose (*Rosa canina*), Kikuyu (*Cenchrus clandestinus*), Sea Lavender (*Limonium compansyonis*) and Sea Spurge (*Euphorbia paralias*).

Artificial opening by mechanical opening of the estuary can be undertaken by the Council (associated with an EPA permit) to manage river build-up. There are upstream implications and complexities associated with opening and closure of estuaries, particularly related to permanent water bodies. The opening of the estuary mouth can dramatically affect the functioning of organisms within the estuary and near shore. Changes to mouth opening will impact water quality and fish within the estuary, and the movements of fish between the estuary and the coastal environment.

Nearshore habitats

Caton et al (2007) describes turbidity in estuary of the Yattagolinga River and nearshore following storm run-off from farmland in catchment and from cliffs adjacent to quarry. The continued migration of quarry gravel nearshore, burying nearshore habitats, pocket beaches and shore platforms, to Second Valley and beyond, is a threat to benthic habitats and restoration.

Bryars (2013) suggests that poor water quality may impact on regionally significant marine species such as Leafy (*Phycodurus eques*) and Weedy Sea Dragons (*Phyllopteryx taeniolatus*), and Southern Blue Devil (*Paraplesiops meleagris*).

A quarry and loading facility at Rapid Bay operated until 1982, during which time limestone gravel from the operation was spilt into the ocean. Over time, water movement has transported this gravel in a NE direction in the inshore zone (up to 300m offshore) from Rapid Bay to near Second Valley (Caton et al. 2007). The gravel has covered some of the inshore reefs (Caton et al. 2007) and transformed them to bare sand (see DEH 2008 mapping). The continued NE movement of this 'gravel train' represents an ongoing threat to inshore habitats (Caton et al. 2007).



The limestone quarry at Rapid Bay has over a long period spilt limestone gravel into the nearshore environment. Loose material continues to move down coastal slopes, forming an artificial beach platform and 'gravel train' that is moving in a northeasterly direction as seen above (Coast Protection Board, March 2024)

Bryars (2013) describes the coastline as sparsely populated, with minor (but unquantified) freshwater inputs, including those from Yattagolinga River. Thus, nutrient and sediment inputs from stormwater and catchment water are likely to be minor. Nonetheless, Caton et al. (2007) identified that turbidity nearshore was affected by storm run-off from the Yattagolinga River and quarry cliffs (e.g. see photo below). Sediment plumes adjacent to the quarry cliffs and gravel train are evident in examination of aerial photos (Bryars 2013) and site visits (see photos above and below). The potential impacts of increased turbidity and sedimentation from these sources on nearshore habitats have not been investigated.



Plume of turbid water adjacent to Rapid Bay. (Landscapes Hills and Fleurieu)

Considering the variability documented above, Bryars (2013) considered the risk ratings for threats to seagrass and reef ranged from low to extreme, while no measurable threats to sand were identified.

As there is a relatively small area of reef within the cell and it all occurs inshore where contact with catchment discharges is most likely, it was considered by Bryars (2013) that there would be a moderate consequence from catchment water. Thus, the risk rating for reef was moderate. Seagrass was given a lower risk rating by Bryars (2013), as there is a large area of seagrass within the cell and it mostly occurs further offshore than the reef; thus the consequence and likelihood were both lower than for reef.

The presence of the quarry in this cell was assessed by Bryars (2013) for risk for physical disturbance to the reef from quarry gravel, considering the relatively small area of inshore reef and the large area of reef already smothered by an ongoing gravel train from Rapid Bay quarry. It was considered that the consequence of the gravel train was major and that this was likely to continue, hence the risk rating was extreme.

Marine debris surveys

Long term bioregional monitoring (Fleurieu Peninsula, Yorke Peninsula, Gulf St Vincent, Kangaroo Island) of beach litter has been conducted at Rapid Bay Beach since 2010 by the previous AMLRNRM Board, and currently by Green Adelaide's marine debris program. Rapid Bay is one of nine survey locations designated for biennial litter assessments on the Eastern beaches of Gulf St Vincent. Litter items recovered from the site and subregion comprise plastic fragments, plastic packaging (food wrappers and bags), drink bottles, lids and caps, rope pieces and recreational fishing debris (Peters and Flaherty, 2013).

Opportunities

Whole cell

Manage visitor numbers and impacts to ensure coastal areas can support growing demand while maintaining and improving the quality of experiences without diminishing the values of the cell. Work with tourism operators and agencies to support visitor education about coastal values and appropriate behaviors. Community education opportunities regarding:

- Unique and valuable coastal landscape (for example, wildflowers, birds, and mammals)
- Fragile nature of coastal areas that are sensitive to foot traffic, soil compaction and erosion.
- Community education and targeted communications regarding Marine Parks and no-fishing in Sanctuary Zones and disturbance to wildlife (including Sea Lions and Long-nosed Fur Seals). Including marine education opportunities of significant species such as Leafy and Weedy Sea Dragons, and Southern Blue Devils.
- Beach-nesting birds, such as Hooded Plovers (dogs on leash, nesting sites, citizen science projects, managing visitor disturbance).
- Citizen science monitoring to contribute to intertidal reef monitoring, seagrass restoration, dolphin watch, beach pole monitoring, Fleurieu seabird monitoring program and beach-nesting birds.
- Value of place and coastal values, responsible beach use and reducing human impact on coastal habitats.
- There is opportunity for signage renewal across coastal areas to educate the community about coastal conservation, cultural significance and appropriate behaviours across the Fleurieu Peninsula coast.

Partial closure of the foreshore caravan park footprint gives opportunity, in collaboration with local community, to expand native vegetation plantings and reestablish dune vegetation on public land. Weed management is a key priority to help retain the limited biodiversity values within the cell across the parcels of crown lands. Targeted control of declared and red alert weeds is a high priority, as they are actively invading intact native vegetation and displace or choke out native plant species. Ongoing monitoring for, and mapping of, new weed infestations should also be undertaken as part of an ongoing weed control program, which is critical to addressing high priority weeds and maintaining conservation values for the cell. Education for local residents on the impact of coastal garden weeds that spread to coastal reserves.

Implement appropriate management regimes to restore long term ecological function and biodiversity, including for rare and threatened species that inhabit the ecological communities within the cell. Investigate opportunities for rehabilitation of mine and coastal areas, particularly coastal cliffs where remnant vegetation persists but is being impacted by mining activities and quarry waste.

Monitor the impacts and effects of total grazing pressure that are causing impacts on native vegetation and revegetation programs and reducing plant diversity and habitat quality for other important and conservation rated species. Implement measures to reduce grazing pressure and erosion on coastal slopes, creek lines, estuaries and high conservation value pockets of remnant vegetation.

Pest animal threats to coastal fauna and flora from rabbits (*Oryctolagus cuniculus*), foxes (*Vulpes vulpes*), and feral cats (*Felis catus*). There is a need to monitor and control Fallow deer (*Cervus dama*) incursions, and coordinated collaboration between landowners and managers is required to manage pest animals (refer to Regional Pest Management Strategies).

Support long-term marine debris monitoring to understand local impacts and sources.



Landscape Board staff undertaking a marine debris survey at Rapid Bay (C Taylor)

Maintain and expand coastal restoration actions, including revegetation with local native plants and priority weed control. Increase suitable habitat for coastal butterfly populations, including planting of host plants in coastal areas to increase habitat suitability for local introductions.

Golden-haired Sedge-skipper (*Hesperilla chrysotricha cyclospila*) with its current Fleurieu Peninsula extant of four known population sites; Stipiturus CP, Myponga River Gorge private property (PP), and Deep Creek PP is considered as locally vulnerable. Opportunities have been identified by Stolarski (2024) in the following cells; F15, F21, F22, F23 and F24 for the restoration of the species habitats with Saw-sedge (*Gahnia* ssp. including Curled Saw-sedge (*Gahnia ancistrophylla*), Limestone Saw-sedge (*Gahnia deusta*), Thatching Grass (*Gahnia filum*), Red-fruit Saw-sedge (*Gahnia sieberiana*); Cutting Grass (*Gahnia trifida*)) in view of introduction into sites.

This cell is important for coastal raptors, and ongoing monitoring and management is critical to minimise visitor disturbance and protection from emerging threats, particularly to breeding habitats (DEW 2022, Rowe et al 2018). Investigate opportunities to support and implement the recovery plan for Eastern Osprey (*Pandion haliaetus cristatus*) and White-bellied Sea Eagles (*Haliaeetus leucogaster*) (2022). Monitor, maintain and improve the quality of vegetation for the provision of wildlife habitat for priority species.



White-bellied Sea Eagle (Haliaeetus leucogaster) (D Westmoreland)

Rapid Bay Beach may be suitable breeding habitat for Hooded Plovers, but they have not been recorded to date. Investigate opportunities for collaboration to manage foxes within the cell to support Hooded Plover populations. Maintain council beach controls to support Hooded Plover protection efforts. There is opportunity for collaboration between partners, such as National Parks, Marine Parks, Traditional Owners, First Nations, landscape boards, volunteer groups, community and nature-based tourism operators, for monitoring of seabirds, coastal raptors, marine mammals and other wildlife.

As part of the *Coastal Dune and Clifftop Vegetation Surveys (1995–1997)* (Opperman 1999), long-term monitoring sites were established across South Australia and the Southern Fleurieu region to assess the structure and composition of coastal dune and clifftop plant communities, and their relationships to regional and environmental factors. Given that nearly 30 years have passed since these surveys were undertaken, there is strong potential for shifts in geographical range and changes in species composition due to the long-term impacts of climate change. The *Survey of Remnant Vegetation of the Southern Fleurieu Peninsula* involved biological surveys conducted between 1987 and 1991 to establish baseline data on remnant vegetation and swamps in the region south of Adelaide, South Australia.

During the development of this plan, and through the assessment of flora and fauna (both native and introduced) species lists available via the Biological Database of South Australia (BDBSA), significant gaps were identified between recorded species and known species distributions within cells. To address these data deficiencies and improve the accuracy of long-term ecological records, both above foundational vegetation survey projects should be repeated and incorporated into an ongoing monitoring program. Fauna assessments across cells to establish population baselines, update existing records and species distribution, particularly of underrepresented groups (reptiles and invertebrates) should be undertaken.



Peregrine Falcon (Falco peregrinus Macropus) is commonly seen along the cliff lines in this cell but like many coastal raptors and fauna species, under reported in databases (M Stokes)

Support community volunteer efforts to undertake priority restoration and conservation work in this cell. Strengthen partnerships with Traditional Owners, First Nations, lessees, adjoining landowners, volunteer organisations, researchers, and the wider community to foster collaboration and long term management benefits for biodiversity protection and restoration. Continuing to develop and maintain good relationships with privately owned land neighbours.

Collaborate with the SA Climate Ready Coasts program to enhance, resource, and implement coastal management initiatives and accelerate coastal hazard adaptation planning across South Australia. This program supports the development and delivery of Coastal Hazard Adaptation Plans (CHAPs), led by the Local Government Association (LGA) of South Australia in partnership with the SA Coast Protection Board, the Department for Environment and Water, the Adelaide Coastal Councils Network, and the SA Coastal Councils Alliance.

Estuary (Yattagolinga River)

Weed control within the estuary and across grazing pastures, bare coastal slopes on private property and crown lands parcels, needs to be maintained to prevent further incursion into limited remnant patches of high conservation value. Upgrades, replacement and installation of appropriate fencing to restrict stock access to cliff lines, watercourses and the estuary is required. Following weed control, undertake activities to improve bank stabilisation and revegetation to reduce further erosion and weed cover.

Maintenance of natural conditions in creeks and estuaries depends on integrated catchment management. Land use that minimises the negative impacts to the stream, including limited water extraction, the reestablishment of native vegetation following priority weed control, and exclusion of stock from creek lines, should be encouraged within the cell and throughout the catchment.

Improvement to the estuarine flora and fauna habitats and connectivity with marine environments can be achieved through the development and employment of an Estuary Entrance Management Support System (EEMSS). This would include a framework for decision makers, considering both the ecological and infrastructure/amenity concerns. Improved management of estuaries within the region (and across the state) is required for a more strategic planning and management approach to deliver positive and coordinated outcomes for estuary habitats. Improved monitoring of ecological communities, connectivity with marine systems and water quality conditions within the estuary will allow more effective adaptive management; being aware of conditions and responding as required.

Nearshore habitats

Bryars (2013) recommends that biological surveys of the seagrass and sand habitats are required to better understand habitat values and compile meaningful species lists and distributions for the cell.

A status update and ongoing monitoring of the quarry gravel train and area of reef being smothered is required.

Climate change threats to coastal biodiversity (see BMT 2025)

Potential climate change threats to coastal biodiversity

Cell F21 includes coastal cliffs, creek and estuary ecosystems, supported by native vegetation, as well as intertidal and reef ecosystems supported by dense seagrass meadows and other temperate flora and fauna.

Biodiversity assets potentially vulnerable to climate change in this cell include:

- Native dune vegetation
- Creek and estuary ecosystems
- Intertidal and reef ecosystems
- Coastal cliffs

These ecosystems may be particularly vulnerable to the direct impacts of climate change, particularly sea level rise, coastal erosion, increased drought, higher temperatures and more intense storms.

A projected rise of 0.3m in 50 years would cause minor recession to the gravel beach face and minor flooding to low ground near the creek. The water table under the broad gravel plain would directly reflect tide heights. Flow in the creek would become irregular, mainly occurring following unpredictable intense rainstorms (Caton et al 2007).

Marine heatwaves place further stress temperate reefs and seagrasses, reducing biodiversity. Higher atmospheric temperatures will lead to increased marine heatwaves, loss of species in the intertidal, with longer than experience to grow back due to increased stressors; e.g. loss of sediment. Higher sea surface temperatures increase the potential for algal blooms.

Changes in ocean temperatures, salinity, and acidity (from increased CO₂ levels) can directly affect the health of temperate reefs. Warmer waters and increased acidification may hinder the growth of calcareous organisms, such as marine molluscs and phytoplankton.

Cell Action Table

Component	Issue	Proposed Action	Priority	Key Players
Whole Cell	Threats and opportunities to improve protection of cultural heritage within cell.	Cultural consultation and collaboration to appropriately manage cultural heritage within this area.	High (Cons/ threat)	Traditional Owners, First Nations, Council, LHF, coastal community groups
		Prevent damage, disturbance, or interference to cultural heritage by adhering to the Aboriginal Heritage Act		
	Increased visitation and recreational pressure on dunes and viewing points due to increased local population and tourist promotion.	Assess increased visitation capacity at known sites, ensure infrastructure is sufficient to meet the demands of increasing visitor numbers. Manage visitor numbers within sustainable limits in ecologically and culturally sensitive and significant areas - consult with Traditional Owners.	High (cons/ threat)	Council and land managers, Traditional Owners, First Nations
		Investigate opportunities for community education and engagement regarding unique and valuable coastal landscape and fragile nature of coastal areas. Dedicated cultural education and training for land managers, agency staff and land stewards	High (Cons/ Soc)	Council, LHF, DEW, NPWSSA, Traditional Owners, First Nations, coastal community groups, Community groups
		Opportunity to work with nature-based tourism operators to increase education and stewardship of local coastal environments. Support opportunities for Traditional Owner-led tourism and cultural education.	Medium (Cons)	Council, land managers, NPWSSA, Coastal Community groups, Traditional Owners, First Nations
		Development of consistent signage and messaging for coastal values and compliance for conservation areas (public managed lands, coastal reserves) across the Fleurieu Peninsula coast. Co-design signage with Traditional Owners/ knowledge holders.	Medium (Soc/ Cons)	Council, land managers, Traditional Owners, First Nations, NPWSSA, coastal community groups
		Collaborate and manage access with event managers to ensure protection of coastal areas and groups do not impact high conservation value areas, or cultural heritage in consultation with Traditional Owners.	High (threat)	NPWSSA, Council, Traditional Owners, First Nations, coastal community groups
		Monitor aquatic activities (boating, paddleboard and jet skis) for increased pressures on local coastal habitats and fauna species interactions.	High (threat)	Council, NPWSSA, DEW and land managers
	Targeted control of declared and red alert weeds to protect limited biodiversity values.	Continue to control weed species particularly WONS and red alert species, including African Love-grass (<i>Eragrostis curvula</i> .)	High (Threat)	Council, land managers, DEW, LHF, Traditional Owners, First Nations business/ contractors/ rangers.
		Monitor new and existing incursions of African Boxthorn (<i>Lycium ferocissimum</i>), olives (<i>Olea europaea</i> ssp. <i>Europaea</i>), Chilean Needle Grass (<i>Nassella neesiana</i>) and Tambookie Grass (<i>Hyparrhenia hirta</i>). Control any re-emergence of Buffel grass (<i>Cenchrus ciliaris</i>).	High (threat)	Council, LHF, coastal community groups, Traditional Owners, First Nations business/ contractors/ rangers.
		Targeted interventions for threatened/ rare plant species and communities.	High (cons)	DEW, LHF, coastal community groups, Council, Traditional Owners, First Nations business/ contractors/ rangers.
		Monitor changes to dunes through BushRAT or similar monitoring to measure condition assessment and change.	High (cons/ threat)	Council, DEW, LHF, Community Groups.

Component	Issue	Proposed Action	Priority	Key Players
Whole Cell	Coordinated approach to monitoring of coastal wildlife.	Collaboration between land manager and stakeholders to support research and citizen science of beach-nesting birds, seabirds, coastal raptors, marine mammals and other wildlife.	Medium (cons)	DEW, NPWSSA, BirdLife Australia, LHF, Council, SA Whale Centre, Encounter Whales, Ecotourism operators, Cape Jervis Coastal Community Groups, Traditional Owners, First Nations business/contractors/rangers.
	Aged baseline data and significant gaps in recorded flora and fauna species across the Southern Fleurieu region.	Repeat and integrate historical vegetation surveys into a long-term monitoring program to update records and address data deficiencies.	Medium (cons/ threat)	DEW, LHF, councils, coastal community groups
		Undertake fauna assessments across cells to establish baselines, update records and species distribution, particularly of underrepresented groups (reptiles and invertebrates).	Medium (cons/ threat)	DEW, LHF, councils, coastal community groups
		Identify potential funding sources to repeat these long-term flora monitoring sites and fauna assessments.	High (cons/ threat)	DEW, LHF, councils.
	Impacts of marine debris on coastal habitats and species.	Continue long term bioregional monitoring of marine debris at priority sites.	High (threat)	Landscape Boards, coastal community groups, Council, Traditional Owners, First Nations business/contractors/rangers.
	Protection of significant flora and fauna.	Protect existing populations through targeted weed control.	High (cons/ threat)	Council, land managers, LHF, coastal community groups, Traditional Owners, First Nations business/contractors/rangers.
		Revegetation programs to improve the conservation prospects of threatened species.	High (cons/ threat)	DEW, land managers, LHF, coastal community groups, Traditional Owners, First Nations business/contractors/rangers.
		Propagate local plants for reintroduction to other sites to maintain genetic diversity and increase source populations.	High (cons/ threat)	Council, land managers, LHF, coastal community groups, local coastal plant nurseries, Traditional Owners, First Nations business/contractors/rangers.
		Improve knowledge of fauna and flora through increased monitoring, mapping and reporting to better inform conservation management.	High (cons)	DEW, land managers, LHF, coastal community groups, Traditional Owners, First Nations business/contractors/rangers.
	Butterfly habitats and host plant protection	Identify locations of potential butterfly habitats and host plants with the cell.	High (cons)	Council, DEW, LHF, coastal community groups, Traditional Owners, First Nations business/contractors/rangers.

Component	Issue	Proposed Action	Priority	Key Players
Whole Cell	Butterfly habitats and host plant protection	Extension of existing habitats and reintroduction of locally extinct butterfly species	Medium (cons)	Council, DEW, LHF, coastal community groups, Traditional Owners, First Nations business/contractors/rangers.
		Undertake survey of cell to identify diversity of species within cell and potential habitats for restoration and reintroduction.	Medium (cons)	Council, LHF, coastal community groups, Traditional Owners, First Nations business/contractors/rangers.
		Restore riparian corridor, include plantings of Cutting Grass (<i>Gahnia trifida</i>) for Golden-haired Sedge-skipper (<i>Hesperilla chrysotricha cyclospila</i>).	Medium (cons)	Council, LHF, coastal community groups, Traditional Owners, First Nations business/contractors/rangers.
	Coordinated approach to monitoring of coastal wildlife.	Collaboration between land manager and stakeholders to support research and citizen science of beach-nesting birds, seabirds, coastal raptors, marine mammals and other wildlife.	Medium (cons)	DEW, NPWSSA, BirdLife Australia, LHF, Council, SA Whale Centre, Encounter Whales, ecotourism operators, coastal community groups, Traditional Owners, First Nations business/contractors/rangers.
	Threat to coastal fauna and flora from pest animals (rabbits, foxes and cats.)	Coordinated collaboration between landowners and managers is required to manage pest animals. Ensure control methods refer to cultural heritage protocols.	High (threat)	Councils, landowners, LHF, CPB, Traditional Owners, First Nations business/contractors/rangers.
		Report sightings of feral animals (deer, fox, rabbit, cat and declared species) through the feral scan pest animal recording and management tool	High (threat)	Land managers, community, coastal community groups
	Stormwater impacts from inland development and catchment changes are likely to impact marine intertidal habitats and may accelerate seabed deepening and coastal erosion. Turbidity from suspended sediments and nutrients are a significant threat to reef and seagrass habitats.	Monitor and manage stormwater to minimise impacts in the coast and marine environment. Implement Water Sensitive Urban Design (WSUD)	High (Threat)	Council, LHF, CPB, Water Sensitive SA
		Develop guidelines for projects within Council areas to support improved stormwater management and reduce land-based impacts on coastal and nearshore marine environments.	Medium (cons/ threat)	Council, LHF, DEW, Stormwater Management Authority
	Physical changes on the coast and natural assets from sea level rise (such as coastal squeeze on tidal habitats, erosion, vegetation loss, marine turbidity and light reduction)	Development of a council wide Coastal Hazard Adaptation Plan, including key locations, recommendations and priorities for funding. Support partnerships for ongoing investigation and monitoring in the coastal zone, working with the Coast Protection Board to identify adaptation options for the future.	High (Cons. Threat)	CPB, Council, community, university and research agencies, Climate Ready Coast Program
Tjilbruke / Tjirbruki cairn (monument) and Dreaming story sites within cell	Significant cultural marker within cell and opportunities to increase community cultural education through reconciliation. Support existing Traditional Owner cultural walks and communications to build broader community education.	High (cons/ threat)	Traditional Owners, First Nations, Council, LHF	

Component	Issue	Proposed Action	Priority	Key Players
Tjilbruke / Tjirbruki cairn (monument) and Dreaming story sites within cell	Significant cultural marker within cell and opportunities to increase community cultural education through reconciliation.	Support cultural monitoring and communications to protect significant known heritage sites. Support Traditional Owner aspirations to care for Country and provide cultural education for the dunes, cliffline and estuary.	High (cons/ threat)	Traditional Owners, First Nations, Council, LHF, coastal community groups, community
		Traditional Owner-led cultural mapping to document cultural values of the cliff line, estuary and surrounds.	High (cons/ threat)	Traditional Owners, First Nations, Council, LHF, coastal community groups, community
Cliffs	Limited vegetation on cliff lines due to grazing.	Investigate opportunities to work with land managers to restrict grazing to coastal cliffs.	High (cons)	DEW, CPB, LHF, Council land owners
		Protection of existing remnant vegetation and revegetation of local coastal species.	High (cons)	Council, DEW, Land managers, LHF, coastal community groups
	Increasing grazing pressure from native and introduced species.	Coordinate with regional grazing pressure programs (kangaroos, Fallow Deer) to monitor populations and control as required to protect remnant vegetation and revegetation efforts.	High (cons/ threat)	DEW, PIRSA, Traditional Owners, First Nations business/ contractors/ rangers, LHF
	The potential for improved connectivity between remnant areas of native vegetation of high conservation value provides the opportunity to sustain the pockets of high biodiversity values of this cell.	Develop a strategy to connect land parcels and land management agreements to improve connectivity between remnant vegetation blocks.	High (Cons / threat)	DEW, CPB, LHF, Traditional Owners, First Nations business/ contractors/ rangers, Council, community.
		Continue to support land managers to protect of remnant vegetation and maintain revegetation and restoration efforts across land parcels within cell.	High (cons)	CPB, Council, LHF, coastal community groups
		Investigate opportunities for formal conservation agreement/protection including landowner Heritage Agreement.	Medium (cons)	CPB, DEW, LHF, Council
	Potential habitat for coastal raptors (White-bellied Sea Eagle and Eastern Osprey).	Ongoing monitoring and management of high values nesting and foraging areas. Partner with Traditional Owners to understand cultural value and obligations associated with local raptors.	High (cons)	NPWSSA, DEW, Traditional Owners, First Nations
		Implement the recovery plan for Eastern Osprey and White-bellied Sea Eagles (2022).	High (cons)	DEW, NPWSSA, LHF, Traditional Owners, First Nations business/ contractors/ rangers,
Investigate opportunities for establishment of nesting towers on private land for additional habitat.		Medium (cons)	DEW, LHF, land owners.	
Mine site and adjoining areas	Eroding cliff lines and areas impacted by mining require stabilisation.	Undertake rehabilitation of mine and coastal areas affected by mining activities and quarry waste deposition.	Medium (threat/ cons)	Land managers, EPA
Beach and gravel backshore	Extensive use as a caravan park. Continue planting of this site to increase species diversity and habitat.	Extend current work to revegetate the gravel backshore.	Medium (Cons)	Rapid Bay Primary School, community, Council.
Beach and reef system	Impacts of marine debris on beach and reef.	Support long-term marine debris monitoring to understand local impacts and sources.	High (threat)	Landscape Boards, council, coastal community groups
Yattagolanga River Estuary	Weed incursion within estuary reducing biodiversity values.	Active control of weed populations within estuary areas. Enhance and restore cultural values in collaboration with Traditional Owners.	High (cons/ threat)	Landowners, managers DEW, CPB, LHF, Traditional Owners, First Nations business/ contractors/ rangers.

Component	Issue	Proposed Action	Priority	Key Players
Yattagolonga River Estuary	Limited monitoring data of estuary flow and opening and closing durations exist for these estuaries.	Consider monitoring of estuaries to determine the connectivity and functionality with marine ecosystems.	High (cons/threat)	CPB, Landscape Boards, DEW
	Impact of reduced flow and reduced water quality to aquatic biodiversity values.	Review opportunities to measure and increase environmental flow opportunities through Water Allocation Planning (WAP), low flow bypass on farm dams and other local opportunities.	High (cons/threat)	DEW, Landscape Boards
	Estuary entrance blocked with increasing frequency due to low flows.	Develop an Estuary Entrance Management Support System (EEMSS). (1), including a framework for decision makers considering both the ecological and infrastructure/amenity concerns.	High (Cons / Soc / Econ)	Council, DEW, Traditional Owners, First Nations business/contractors/rangers, LHF
Rapid Bay settlement	A regional need, in association with the Encounter Marine Park, to develop coastal and marine interpretation in the area.	Planning and development of an interpretation centre (or similar) with Rapid Bay Primary School or adjacent site. Identify and support cultural education opportunities for Traditional Owners.	Medium (Soc / Econ)	DEW, CPB, Rapid Bay Primary School, Council, Traditional Owners, First Nations business/contractors/rangers.
Beach nesting birds	Potential nesting site for Hooded Plovers.	Monitor beach for birds using beach (flocking or breeding activities) throughout the year.	High (cons)	Council, LHF, BirdLife Australia, Friends of the Hooded Plover, Fleurieu Peninsula volunteers, Traditional Owners, First Nations business/contractors/rangers.
Nearshore habitats (Reef, Seagrass)	Sediments and nutrients from cliff top erosion and small creeks.	Support initiatives for catchment revegetation and improved land management practices.	Medium (threat)	Council, LHF, Rapid Bay quarry owners, EPA
		Monitor catchment and stormwater impact on nearshore habitats and reefs across the cell.	High (Threat)	Council, DEW, EPA, SA Water, Landscape Boards
	Smothering by gravel train from Rapid Bay quarry.	Support initiatives to prevent further deposition of quarry material into the sea and investigate possibility of removal of gravel from sea.	High (threat)	Council, DEW, Adelaide Brighton Cement, EPA
	Lack of knowledge of seagrass condition and species diversity in cell.	Collaboration between government agencies, researchers, and community to monitor seagrass cover, species diversity, condition and inform active management.	Medium cons/(threat)	DEW, SARDI, EPA, SA Water, LHF, NPWSSA, universities, Council, community
		Investigate opportunities to support reduction of land-based impacts to avoid further loss, promote natural recovery of seagrasses and investigate potential for assisted restoration of seagrass habitats with community	High (cons/threat)	DEW, LHF, SARDI, NPWSSA, Council
Caring for Sea Country	Culturally significant Sea Country - including caves, hunting grounds, fish traps marine life - are neglected and require Traditional Owner access and self determination to care for Country.	Support Traditional Owner mapping of southern Sea Country. Support establishment of Traditional Owner-led caring for Sea Country program. Traditional Owner led restoration of Sea Country and known significant places.	High (cons/threat)	Traditional Owners, First Nations, NPWSSA, DEW, Council, LHF, coastal community groups
Climate (Cliffs)	More intense rainfall events likely to increase soil erosion.	Restoration of native plant species to assist soil stabilisation.	High (Cons/threat)	DEW, land owners, Coastal community groups, Council, LHF, Traditional Owners, First Nations business/contractors/rangers.
	Increased aridity likely to make growing conditions less suitable to native vegetation fragments.	Restoration of native plant species to assist soil stabilisation.	High (Cons/threat)	DEW, land owners, Council, coastal community groups, LHF, Traditional Owners, First Nations business/contractors/rangers.

Component	Issue	Proposed Action	Priority	Key Players
Climate (Creek/ Estuary)	More intense rainfall events likely to lead to increased pollutants, nutrients and sediments washed into the estuary especially during first flush from the landward end.	Monitor stormwater quality and estuary condition.	Medium (threat)	Council, DEW, LHF, EPA, Land owners
	Higher temperatures likely to lead to increased algal blooms with impacts on estuarine fauna.	Monitor stormwater quality and estuary condition.	Medium (threat)	Council, DEW, LHF, Land owners
Climate (Beach and dunes)	Increased sea levels and more intense storms and higher winds can contribute to more frequent and intense wave action, which accelerates beach and dune erosion. Predicted increases in aridity can lead to reduced vegetation cover and increased dune drift and dune mobility.	Restrict public access to fragile dunes.	Medium (threat)	Council, coastal community groups, LHF
		Implement restoration of native plant species.	Medium (threat)	Council, coastal community groups, LHF
		Monitoring of cross-shore dune, beach and nearshore sand level profiles.	Low (Hazard) Medium (cons/threat)	DEW CPB, Research Institutions, Universities.
	Increased sea levels and more intense storms and higher winds can contribute to more frequent and intense wave action, which accelerates beach and dune erosion. Predicted increases in aridity can lead to reduced vegetation cover and increased dune drift and dune mobility.	Update DEW Coastal Hazard Mapping spatial layer identifying the change in extent and stability of coastal dunes across South Australia since the previous hazard mapping was undertaken approximately 20 years ago	Medium (hazard) Medium (cons/ threat)	DEW, CPB, Research Institutes, Universities
		Beach and dune topographic and photogrammetry drone surveys to provide detailed 2D and 3D digital surface models for monitoring changes to the coastal landforms over time in response to climate change.	Medium (Hazard) Medium (cons/threat)	DEW CPB, Research Institutions, Universities.
		Support cultural monitoring and communications to protect significant known heritage sites	High (threat)	Council, coastal community groups, LHF, Traditional Owners, First Nations business/ contractors/ rangers.
Climate (Macroalgal reefs and seagrasses)	More intense rainfall events likely to lead to increased pollutants washed into coastal waters during first flush.	Monitor stormwater quality and creek condition.	Medium (threat)	Council, DEW, LHF, land owners
	Increased storm surge can cause dislodgment of algae and seagrasses.	Monitor stormwater quality and creek condition.	Medium (threat)	Council, DEW, LHF, land owners
	Higher temperatures can lead marine heatwaves and increased stress on temperate reefs and seagrasses, reducing biodiversity.	Monitor stormwater quality and creek condition.	Medium (threat)	Council, DEW, LHF, land owners
	Ocean acidification can impact the life history of marine species.	Monitor stormwater quality and creek condition.	Medium (threat)	Council, DEW, LHF, land owners
		Undertake benthic flora mapping to determine areas or opportunities for restoration.	Medium (threat)	DEW, council, LHF, land owners
Climate (whole cell)	Coastal Hazard Adaptation Planning	Investigate future funding opportunities to undertake coastal adaptation plan for DC Yankalilla to improve understanding of coastal risk, to inform coastal hazard adaptation planning and for evidence-based decisions and investments in the coast.	Medium (threat)	Council, CPB, Climate Ready Coasts Program, LGA, SACCA, DEW, consultancies, research institutions

- (1) An Estuary Entrance Management Support System (EEMSS) has been developed by Deakin University and a number of Victorian Catchment Boards. This system takes into account a number of uses (including recreation use), conservation and hydrological factors in assisting with the decision to open or close an entrance (Arundel (2006) also refer to Appendix 15 in Caton et al 2007).

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Cell Biota (Flora and Fauna)

Lists provided are specific to this cell from Biological Database of South Australia (BDBSA), technical updates, review of publications and local input. Conservation ratings (National, State and Sub regional) are included for flora and fauna.

Note: Restricted species as per Department for Environment and Water (DEW) specifications have been omitted from the tables due to the size of cells and requirement for 10km² buffering of data. However, records are included in the total species numbers per cell. Please contact DEW directly for restricted data requests.

FLORA Summary

Vegetation Block Metrics	Crown Coastal Reserve (Council and Minister Environment and Conservation)			
Terrestrial Habitat Description/s	See Terrestrial biodiversity vegetation communities in cell description.			
# Flora in cell	143			
# Native Flora in cell	80			
# Introduced Flora in cell	63			
# Conservation Rated Flora in cell	0			
# Threatened Ecological Communities (EPBC Act)	-			
Conservation Rated Flora	Species	Common Name	EPBC Act Status	NPW Status

All Native Flora in cell

Species	Common Name	EPBC Status	NPW Act Status	Subregional Status*
<i>Acacia longifolia ssp. sophorae</i>	Coastal Wattle			LC
<i>Acacia rupicola</i>	Rock Wattle			RA
<i>Acrotriche patula</i>	Prickly Ground-berry			RA
<i>Allocasuarina verticillata</i> [^]	Drooping Sheoak			
<i>Alyxia buxifolia</i>	Sea Box			RA
<i>Apium annuum</i>	Annual Celery			RA
<i>Arthropodium fimbriatum</i>	Nodding Vanilla-lily			NT
<i>Arthropodium strictum</i>	Common Vanilla-lily			LC
<i>Atriplex vesicaria</i>	Bladder Saltbush			RA
<i>Austrostipa acroclitata</i>	Graceful Spear-grass			RA
<i>Austrostipa curticoma</i>	Short-crest Spear-grass			LC
<i>Austrostipa puberula</i>	Fine-hairy Spear-grass			RA
<i>Austrostipa scabra ssp. falcata</i>	Slender Spear-grass			LC
<i>Austrostipa spp.</i> [^]	Spear Grass			
<i>Beyeria lechenaultii</i>	Pale Turpentine Bush			LC
<i>Billardiera cymosa ssp.</i>	Sweet Apple-berry			
<i>Calandrinia volubilis</i>	Twining Purslane			VU
<i>Calostemma purpureum</i>	Pink Garland-lily			LC
<i>Calystegia sepium</i> [^]	Large Bindweed			
<i>Calytrix tetragona</i>	Common Fringe-myrtle			LC
<i>Carpobrotus rossii</i> [^]	Native Pigface			
<i>Clematis microphylla</i>	Old Man's Beard			
<i>Convolvulus remotus</i>	Grassy Bindweed			LC
<i>Crassula colligata ssp. lamprosperma</i>				LC

Species	Common Name	EPBC Status	NPW Act Status	Subregional Status*
<i>Cullen australasicum</i>	Tall Scurf-pea			RA
<i>Cynanchum viminalis ssp. australe</i>	Caustic Bush			VU
<i>Dianella brevicaulis</i>	Short-stem Flax-lily			LC
<i>Dianella revoluta var. revoluta</i>	Black-anther Flax-lily			LC
<i>Disphyma crassifolium ssp. clavellatum</i>	Round-leaf Pigface			LC
<i>Dodonaea viscosa ssp. spatulata</i>	Sticky Hop-bush			LC
<i>Einadia nutans ssp. nutans</i>	Climbing Saltbush			LC
<i>Enchylaena tomentosa var. tomentosa</i>	Ruby Saltbush			LC
<i>Eutaxia diffusa</i>	Large-leaf Eutaxia			RA
<i>Exocarpos aphyllus</i>	Leafless Cherry			VU
<i>Glycine rubiginosa</i>	Twining Glycine			NT
<i>Goodenia amplexans</i>	Clasping Goodenia			NT
<i>Goodenia varia</i>	Sticky Goodenia			NT
<i>Leiocarpa supina</i>	Coast Plover-daisy			RA
<i>Leucophyta brownii</i>	Coast Cushion Bush			LC
<i>Leucopogon parviflorus</i>	Coast Beard-heath			LC
<i>Lobelia anceps</i>	Angled Lobelia			LC
<i>Lomandra effusa</i> [^]	Scented Mat-rush			
<i>Lomandra multiflora ssp. dura</i> [^]	Hard Mat-rush			
<i>Lotus cruentus</i>	Red-flower Lotus			VU
<i>Maireana brevifolia</i>	Short-leaf Bluebush			LC
<i>Maireana enchylaenoides</i>	Wingless Fissure-plant			LC
<i>Muehlenbeckia gunnii</i>	Coastal Climbing Lignum			LC
<i>Myoporum insulare</i>	Common Boobialla			LC
<i>Nicotiana maritima</i>	Coast Tobacco			NT
<i>Nitraria billardierei</i>	Nitre-bush			RA
<i>Olearia axillaris</i>	Coast Daisy-bush			LC
<i>Olearia ramulosa</i>	Twiggy Daisy-bush			LC
<i>Opercularia turpis</i>	Twiggy Stinkweed			LC
<i>Oxalis perennans</i>	Native Sorrel			LC
<i>Oxalis perennans/exilis</i>	Native Oxalis			
<i>Phragmites australis</i>	Common Reed			LC
<i>Pimelea serpyllifolia ssp. serpyllifolia</i> [^]	Thyme Riceflower			
<i>Pimelea stricta</i>	Erect Riceflower			LC
<i>Prostanthera aspalathoides</i>	Scarlet Mintbush			VU
<i>Ptilotus spathulatus</i>	Pussy-tails			NT
<i>Rhagodia candolleana ssp. candolleana</i> [^]	Sea-berry Saltbush			
<i>Rhagodia parabolica</i>	Mealy Saltbush			RA
<i>Roepera confluens</i>	Forked Twinleaf			VU
<i>Rytidosperma caespitosum</i>	Common Wallaby-grass			LC
<i>Rytidosperma fulvum</i>	Leafy Wallaby-grass			VU
<i>Rytidosperma setaceum</i>	Small-flower Wallaby-grass			LC
<i>Rytidosperma spp.</i> [^]	Wallaby Grass			
<i>Sagina maritima</i>	Sea Pearlwort			LC
<i>Salicornia quinqueflora ssp. quinqueflora</i>	Beaded Samphire			NT
<i>Scaevola crassifolia</i>	Cushion Fanflower			RA
<i>Scleranthus pungens</i>	Prickly Knawel			RA
<i>Sclerolaena diacantha</i>	Grey Bindyi			RA
<i>Senecio picridioides</i>	Purple-leaf Groundsel			LC

Species	Common Name	EPBC Status	NPW Act Status	Subregional Status*
<i>Senecio pinnatifolius</i> spp.^	Variable Groundsel			
<i>Sida petrophila</i>	Rock Sida			RA
<i>Spergularia marina</i>	Salt Sand-spurrey			
<i>Spergularia tasmanica</i>	Coast Sand-spurrey			
<i>Tetragonia implexicoma</i>	Bower Spinach			LC
<i>Threlkeldia diffusa</i>	Coast Bonefruit			NT
<i>Typha domingensis</i> ^	Narrow-leaf Bulrush			

^ denotes records from technical updates, review of publications and local input

*See Appendices for subregional map

Regional Conservation status, Mount Lofty Ranges IBRA (Interim Biogeographical Regionalisation for Australia) subregion (Gillam & Urban (2014). Regional Species Conservation Assessment Project, Phase 1 Report - Regional Species Status Assessments, Adelaide and Mount Lofty Ranges NRM Region. DEWNR: SA)

RE = Regionally Extinct CR = Critically Endangered EN = Endangered
 VU = Vulnerable RA = Rare NT = Near Threatened
 LC = Least Concern DD = Data Deficient NE = Not Evaluated

All Introduced Flora in cell

Species	Common Name	Red Alert Weeds	Declared Weeds	WONS
<i>Acacia cyclops</i>	Western Coastal Wattle	IC		
<i>Aira cupaniana</i>	Small Hair-grass			
<i>Arctotheca calendula</i>	Cape Weed	HP		
<i>Avellinia festucoides</i>	Avellinia			
<i>Avena barbata</i>	Bearded Oat			
<i>Brachypodium distachyon</i>	False Brome			
<i>Brassica tournefortii</i>	Wild Turnip			
<i>Bromus diandrus</i>	Great Brome			
<i>Bupleurum semicompositum</i>	Hare's Ear			
<i>Cakile maritima</i> ssp. <i>maritima</i>	Two-horned Sea Rocket			
<i>Carthamus lanatus</i>	Saffron Thistle			
<i>Cenchrus ciliaris</i> *	Buffel Grass	IC	Yes	
<i>Cenchrus clandestinus</i> *	Kikuyu	HP		
<i>Centranthus ruber</i> ssp. <i>ruber</i>	Red Valerian			
<i>Cerastium glomeratum</i>	Common Mouse-ear Chickweed			
<i>Cirsium vulgare</i>	Spear Thistle			
<i>Dittrichia graveolens</i>	Stinkweed			
<i>Echium plantagineum</i>	Salvation Jane		Yes	
<i>Ehrharta longiflora</i>	Annual Veldt Grass			
<i>Eragrostis curvula</i> *	African Love-grass	IC	Yes	
<i>Euphorbia paralias</i> *	Sea Spurge	HP		
<i>Euphorbia serpens</i>	Matted Sandmat			
<i>Fumaria muralis</i> ssp. <i>muralis</i>	Wall Fumitory			
<i>Galium murale</i>	Small Bedstraw			
<i>Gomphocarpus cancellatus</i>	Broad-leaf Cotton-bush	HP		
<i>Hyparrhenia hirta</i> *	Tambookie Grass	IC	Yes	
<i>Hypericum perforatum</i> ssp. <i>veronense</i>	St John's Wort			
<i>Hypochaeris radicata</i>	Rough Cat's Ear			
<i>Lagurus ovatus</i>	Hare's Tail Grass			
<i>Limonium companyonis</i>	Sea-lavender	IC		
<i>Lycium ferocissimum</i>	African Boxthorn	IC	Yes	Yes

Species	Common Name	Red Alert Weeds	Declared Weeds	WONS
<i>Lysimachia arvensis</i>	Pimpernel			
<i>Lythrum junceum</i> *	Mediterranean Loosestrife			
<i>Marrubium vulgare</i>	Horehound	IC	Yes	
<i>Matthiola incana</i>	Common Stock			
<i>Medicago minima</i>	Little Medic			
<i>Nassella neesiana</i> *	Chilean Needle Grass		Yes	Yes
<i>Oenothera stricta ssp. stricta</i>	Common Evening Primrose			
<i>Olea europaea ssp. europaea</i>	Olive	IC		
<i>Oxalis pes-caprae</i>	Soursob			
<i>Parapholis incurva</i>	Curly Ryegrass			
<i>Piptatherum miliaceum</i>	Rice Millet			
<i>Plantago coronopus ssp. coronopus</i>	Bucks-horn Plantain			
<i>Plantago lanceolata var. lanceolata</i>	Ribwort			
<i>Raphanus raphanistrum</i> *	Wild Radish			
<i>Reichardia tingitana</i>	False Sowthistle			
<i>Rosa canina</i> *	Dog Rose	HP	Yes	
<i>Rostraria cristata</i>	Annual Cat's-tail			
<i>Rumex vesicarius</i> *	Rosy Dock			
<i>Salvia verbenaca var.</i>	Wild Sage			
<i>Silene gallica var. gallica</i>	French Catchfly			
<i>Silene nocturna</i>	Mediterranean Catchfly			
<i>Sixalix atropurpurea</i>	Pincushion	IC		
<i>Solanum linnaeanum</i>	Apple Of Sodom	HP	Yes	
<i>Sonchus asper</i>	Rough Sow-thistle			
<i>Sonchus oleraceus</i>	Common Sow-thistle			
<i>Trifolium angustifolium</i>	Narrow-leaf Clover			
<i>Trifolium campestre</i>	Hop Clover			
<i>Trifolium dubium</i>	Suckling Clover			
<i>Trifolium scabrum</i>	Rough Clover			
<i>Urospermum picroides</i>	False Hawkbit			
<i>Vulpia bromoides</i>	Squirrel-tail Fescue			
<i>Vulpia myuros f. myuros</i>	Rat's-tail Fescue			

WONS = Weeds of National Significance.

Declared = Declared under the Landscape South Australia Act 2019. Pest plants that are a significant threat to agriculture, the natural environment and public health and safety are called declared plants. Land owners have a legal responsibility to manage these plants.

Red Alert = Weed Threat Level of four or greater out of nine. Plants in this categorised are either designated as requiring immediate control (IC – 6-9) or as a high priority for control (HP – 4-5). See Department for Environment and Water (2024)

Reference – Department for Environment and Water (2024). Threatening Processes - Environmental and Priority Weed Species. Southern Fleurieu Coastal Action Plan Review 2024. Prepared by SA Herbarium

FAUNA Summary

# Fauna in cell	72
# Native Fauna in cell	61
# Introduced Fauna in cell	11
# Conservation Rated Fauna in cell	12 (4 national, 11 state)

Conservation Rated Fauna				
Species	Common Name	Class	EPBC Act Status	NPW Act Status
<i>Actitis hypoleucos</i> [^]	Common Sandpiper	AVES		R
<i>Falco peregrinus macropus</i> [^]	Peregrine Falcon	AVES		R
<i>Falcunculus frontatus frontatus</i> [^]	Eastern Shrike-tit	AVES		R
<i>Haematopus fuliginosus fuliginosus</i> [^]	Sooty Oystercatcher	AVES		R
<i>Haematopus longirostris</i> [^]	Pied Oystercatcher	AVES		R
<i>Haliaeetus leucogaster</i>	White-bellied Sea Eagle	AVES		E
<i>Pandion haliaetus cristatus</i> [^]	Eastern Osprey	AVES		E
<i>Platycercus elegans</i>	Crimson Rosella	AVES	ssp	
<i>Thinornis cucullatus cucullatus</i> [^]	Hooded Plover	AVES	VU	V
<i>Zanda funerea whiteae</i>	Yellow-tailed Black Cockatoo	AVES		V
<i>Pteropus poliocephalus</i> [^]	Grey-headed Flying-fox	MAM	VU	R
<i>Tachyglossus aculeatus</i> [^]	Short-beaked Echidna	MAM	ssp	ssp

All Native Fauna in cell

Species Name	Common Name	Class	EPBC Act Status	NPW Act Status	Subregional Status
<i>Aldrichetta forsteri</i> [^]	Yelloweye Mullet	ACT			
<i>Galaxias brevipinnis</i> [^]	Climbing Galaxias	ACT			
<i>Galaxias maculatus</i> [^]	Common Galaxias	ACT			VU
<i>Pseudaphritis urvillii</i> [^]	Congolli	ACT			EN
<i>Pseudogobius olorum</i> [^]	Swan River Goby	ACT			LC
<i>Acrocephalus australis australis</i>	Australian Reed Warbler	AVES			LC
<i>Actitis hypoleucos</i> [^]	Common Sandpiper	AVES		R	RA
<i>Anthochaera carunculata</i>	Red Wattlebird	AVES			LC
<i>Aquila audax audax</i> [^]	Wedge-tailed Eagle	AVES			RA
<i>Chroicocephalus novaehollandiae novaehollandiae</i>	Silver Gull	AVES			LC
<i>Coracina novaehollandiae</i>	Black-faced Cuckooshrike	AVES			LC
<i>Corvus mellori</i>	Little Raven	AVES			LC
<i>Dacelo novaeguineae novaeguineae</i>	Laughing Kookaburra	AVES			
<i>Egretta novaehollandiae</i>	White-faced Heron	AVES			LC
<i>Eolophus roseicapilla</i>	Galah	AVES			LC
<i>Falco cenchroides cenchroides</i>	Nankeen Kestrel	AVES			LC
<i>Falco peregrinus macropus</i> [^]	Peregrine Falcon	AVES		R	RA
<i>Falcunculus frontatus frontatus</i> [^]	Eastern Shrike-tit	AVES		R	
<i>Gallinula tenebrosa tenebrosa</i>	Dusky Moorhen	AVES			RA
<i>Gavialis virescens</i>	Singing Honeyeater	AVES			LC
<i>Grallina cyanoleuca cyanoleuca</i>	Magpie-lark	AVES			LC
<i>Gymnorhina tibicen</i>	Australian Magpie	AVES			LC
<i>Haematopus fuliginosus fuliginosus</i> [^]	Sooty Oystercatcher	AVES		R	VU
<i>Haematopus longirostris</i> [^]	Pied Oystercatcher	AVES		R	VU
<i>Haliaeetus leucogaster</i>	White-bellied Sea Eagle	AVES		E	EN

Species Name	Common Name	Class	EPBC Act Status	NPW Act Status	Subregional Status
<i>Hirundo neoxena neoxena</i>	Welcome Swallow	AVES			LC
<i>Ocyphaps lophotes lophotes</i>	Crested Pigeon	AVES			LC
<i>Pandion haliaetus cristatus</i> [^]	Eastern Osprey	AVES		E	
<i>Parvipsitta porphyrocephala</i>	Purple-crowned Lorikeet	AVES			LC
<i>Petrochelidon ariel</i>	Fairy Martin	AVES			RA
<i>Phalacrocorax fuscescens</i>	Black-faced Cormorant	AVES			NT
<i>Phalacrocorax varius hypoleucos</i>	Australian Pied Cormorant	AVES			LC
<i>Platycercus elegans</i>	Crimson Rosella	AVES	ssp		LC
<i>Poodytes gramineus goulburni</i>	Little Grassbird	AVES			LC
<i>Ptilotula penicillata</i>	White-plumed Honeyeater	AVES			LC
<i>Rhipidura leucophrys leucophrys</i>	Willie Wagtail	AVES			LC
<i>Sterna striata</i>	White-fronted Tern	AVES			RA
<i>Thalasseus bergii cristatus</i>	Greater Crested Tern	AVES			LC
<i>Thinornis cucullatus cucullatus</i> [^]	Hooded Plover	AVES	VU	V	EN
<i>Tribonyx ventralis</i>	Black-tailed Nativehen	AVES			LC
<i>Trichoglossus moluccanus moluccanus</i>	Rainbow Lorikeet	AVES			LC
<i>Vanellus miles</i>	Masked Lapwing	AVES			LC
<i>Zanda funerea whiteae</i>	Yellow-tailed Black Cockatoo	AVES		V	RA
<i>Danaus petilia</i> [^]	Lesser Wanderer	INV			
<i>Danaus plexippus plexippus</i> [^]	Monarch	INV			
<i>Delias aganippe</i> [^]	Wood White	INV			
<i>Junonia villida calybe</i> [^]	Meadow Argus	INV			
<i>Lampides boeticus</i> [^]	Long-tailed Pea-blue	INV			
<i>Nacaduba biocellata biocellata</i> [^]	Two-spotted Line-blue	INV			
<i>Ocybadistes walkeri hypochlora</i> [^]	Southern Grass-dart	INV			
<i>Pieris rapae rapae</i> [^]	Cabbage White	INV			
<i>Taractrocera papyria papyria</i> [^]	White-banded Grass-dart	INV			
<i>Theclinesthes miskini miskini</i> [^]	Wattle Blue	INV			
<i>Theclinesthes serpentatus serpentatus</i> [^]	Salt-bush Blue	INV			
<i>Vanessa itea</i> [^]	Australian Admiral	INV			
<i>Vanessa kershawi</i> [^]	Australian Painted Lady	INV			
<i>Zizina otis labradus</i> [^]	Common Grass-blue	INV			
<i>Macropus fuliginosus</i> [^]	Western Grey Kangaroo	MAM			LC
<i>Pseudocheirus peregrinus</i> [^]	Common Ringtail Possum	MAM			
<i>Pteropus poliocephalus</i> [^]	Grey-headed Flying-fox	MAM	VU	R	
<i>Tachyglossus aculeatus</i> [^]	Short-beaked Echidna	MAM	ssp	ssp	

Class: ACT = Actinopteri, AMP = Amphibia, AVES = Aves, INV = Invertebrates, MAM = Mammalia, REP= Reptilia

All Introduced Fauna in cell

Species	Common Name
<i>Carduelis carduelis britannica</i>	European Goldfinch
<i>Cervus dama</i> [^]	Fallow Deer
<i>Columba livia</i>	Feral Pigeon
<i>Felis catus</i> [^]	Domestic Cat (Feral Cat)
<i>Mus musculus</i> [^]	House Mouse
<i>Oryctolagus cuniculus</i> [^]	Rabbit (European Rabbit)
<i>Passer domesticus domesticus</i>	House Sparrow
<i>Spilopelia chinensis</i>	Spotted Dove
<i>Sturnus vulgaris vulgaris</i>	Common Starling
<i>Turdus merula merula</i>	Common Blackbird
<i>Vulpes vulpes</i> [^]	Fox (Red Fox)



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