# Adelaide Dolphin Sanctuary

## Draft Management Plan 2024

Government of South Australia
Department for Environment and Water

# Your views are important

This plan is being developed to set directions for the management of the Adelaide Dolphin Sanctuary. The plan aims to focus on priority themes for the Sanctuary and set achievable strategies for its management.

This draft plan is released for public comment so that members of the community can express their views and contribute to the setting of management directions for this important area. Feedback received on this draft plan will be used to develop a final management plan. Once developed, the final plan will be submitted to the Minister for Climate, Environment and Water for adoption in accordance with section 11 of the *Adelaide Dolphin Sanctuary Act 2005*.

**I encourage you to make a submission on this draft plan. Guidance for making a submission can be found on page 13.**

**Mike Williams**
**Executive Director,**
**National Parks and Wildlife Service**

## Acknowledgement of Country

The South Australian Government acknowledges Aboriginal peoples as the state's first peoples and nations, and that Aboriginal peoples' deep knowledge and relationship with Country continues to be critical in sustainably caring for our lands and waters.

Photograph Marianna Boorman

# Developing this plan

The *Adelaide Dolphin Sanctuary Act 2005* (the Act) requires that a management plan is developed, and sets out how the objectives of the Act will be achieved. The first management plan for the Adelaide Dolphin Sanctuary was adopted in 2008. The Act requires the management plan to be reviewed periodically and this draft was developed through discussions with key stakeholders and a review of strategies and actions in the 2008 management plan.

Submissions received on this draft management plan will inform the development of a final management plan which will then be submitted for adoption by the Minister for Climate, Environment and Water. Its adoption will fulfil responsibilities under the Act for review of the current management plan.

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# Directions for management

The *Adelaide Dolphin Sanctuary Act 200*5 provides the legal basis for the establishment and management of the Adelaide Dolphin Sanctuary (the Sanctuary). It also requires that it is managed to achieve the following objectives:

**a)** the protection of the dolphin population of the Port Adelaide River estuary and Barker Inlet from direct physical harm is to be maintained and improved

**b)** the key habitat features in the Port Adelaide River estuary and Barker Inlet that are necessary to sustain the dolphin population are to be maintained, protected and restored

**c)** water quality within the Port Adelaide River estuary and Barker Inlet should be improved to a level that sustains the ecological processes, environmental values and productive capacity of the Port Adelaide River estuary and Barker Inlet

**d)** the interests of the community are to be taken into account by recognising indigenous and other cultural, and historical, relationships with the Port Adelaide River estuary and Barker Inlet and surrounding areas, and by ensuring appropriate participation in processes associated with the management of the Port Adelaide River estuary and Barker Inlet

**e)** public awareness of the importance of a healthy Port Adelaide River estuary and Barker Inlet to the economic, social and cultural prosperities of the local communities, and the community more generally, is to be promoted

**f)** the principles of ecological sustainable development in relation to the use and management of the Port Adelaide River estuary and Barker Inlet are to be promoted.

This plan has been built around three key themes

1) **Protecting dolphins from threats;**
2) **Maintaining and enhancing the quality of dolphin habitats;**
3) **Community understanding and participation.**

These themes set the scene for the objectives and supporting strategies over the next seven years.

The plan recognises that achieving these objectives and strategies will require a long-term, strategic, and coordinated effort. DEW is responsible for managing the Sanctuary together with other agencies including the Department of Primary Industries and Regions (PIRSA), Environment Protection Authority (EPA) and the Department for Infrastructure and Transport (DIT) who also have responsibilities for furthering the objectives of the Act and implementing strategies outlined in this management plan. Community groups, Kaurna People, land and marine managers, industry and residents throughout the Port River catchment also play a role in delivering this plan of management.

This is a seven year plan that will be supported by the development of annual implementation programs. The performance against the annual implementation program, and ultimately the management plan, will be documented in the Adelaide Dolphin Sanctuary Annual Report. The Sanctuary is also protected through a catchment-wide approach guided by regional landscapes plans which are prepared under the *Landscape South Australia Act 2019*.

The Parks and Wilderness Council will receive a copy of the Adelaide Dolphin Sanctuary Annual Report on or before 30 September to provide advice to the Minister on the following:

- The effectiveness of the Adelaide Dolphin Sanctuary Management Plan in achieving the objects and objectives of the *Adelaide Dolphin Sanctuary Act 2005*
- The effectiveness of the Adelaide Dolphin Sanctuary annual implementation program.

The *Adelaide Dolphin Sanctuary Act 2005* recognises that this area must accommodate a broad range of industrial, commercial and recreational activities. The Act seeks to facilitate conservation of key habitat features, while allowing a continuation of the recreational, industrial and commercial activities that depend on this waterway. Some sections of the Sanctuary are overlayed by parts of the Adelaide International Bird Sanctuary National Park - Winaityinaityi Pangkara and Torrens Island Conservation Park, which are proclaimed under the *National Parks and Wildlife Act 1972* (Figure 1). Fishing restrictions apply within the two aquatic reserves under the *Fisheries Management Act 2007* (1) Barker Inlet St Kilda Aquatic Reserve and (2) St Kilda Chapman Creek Aquatic Reserve (Figure 1).

The Adelaide Dolphin Sanctuary is the Country of the Kaurna People, who have maintained a connection to this Country for countless generations. The plan recognises the important role Kaurna People can play in the management of the Sanctuary, in particular how traditional knowledge can guide its implementation.

The community is very passionate about the protection of the Sanctuary and the dolphins that inhabit it. They dedicate their time to raising awareness about dolphin conservation and monitor their movements, behaviour and welfare. Educating people about the conservation of dolphins and supporting the efforts of volunteers will continue to be a key management direction for the Sanctuary.

# Significance and purpose

The Adelaide Dolphin Sanctuary (ADS) was proclaimed in 2005 to protect a local population of Indo- Pacific bottlenose dolphins (*Turisops aduncus*) and their habitats within Adelaide's Port River and Barker Inlet. At present, the Sanctuary is home to around 20 resident Indo-Pacific bottlenose dolphins with some 400 more dolphins thought to visit the area. Dolphins from within the ADS are members of a wild free ranging population and may form part of a larger dolphin population in Gulf St Vincent.

The Sanctuary is a key part of an extensive marine, estuarine and terrestrial protected area network. Together with Upper Gulf St Vincent Marine Park, Adelaide International Bird Sanctuary National Park – Winaityinaityi Pangkara and Torrens Island Conservation Park, it forms a contiguous network of marine and coastal protected areas stretching north from Port Adelaide and across Gulf St Vincent. Refer to Figure 1.

The Sanctuary is economically, socially, culturally and historically important. The Port River and LeFevre Peninsula are connected to larger Kaurna song-lines and stories that extend from Kaurna Country, throughout South Australia, and into the Northern Territory. It contains infrastructure such as power plants and large scale industries employing many South Australians, a wastewater treatment plant servicing 70% of Adelaide, the state's major port with up to 2,000 large vessel movements per year, and new commercial and residential developments. The Sanctuary contains sites and stories significant to Kaurna People and has important European historical areas. It also provides important recreational sites for activities like fishing, bird watching and dolphin watching. Many local, interstate and international tourists seek out the Adelaide Dolphin Sanctuary as a destination to experience an encounter with a wild population of dolphins.

The Sanctuary helps to protect:

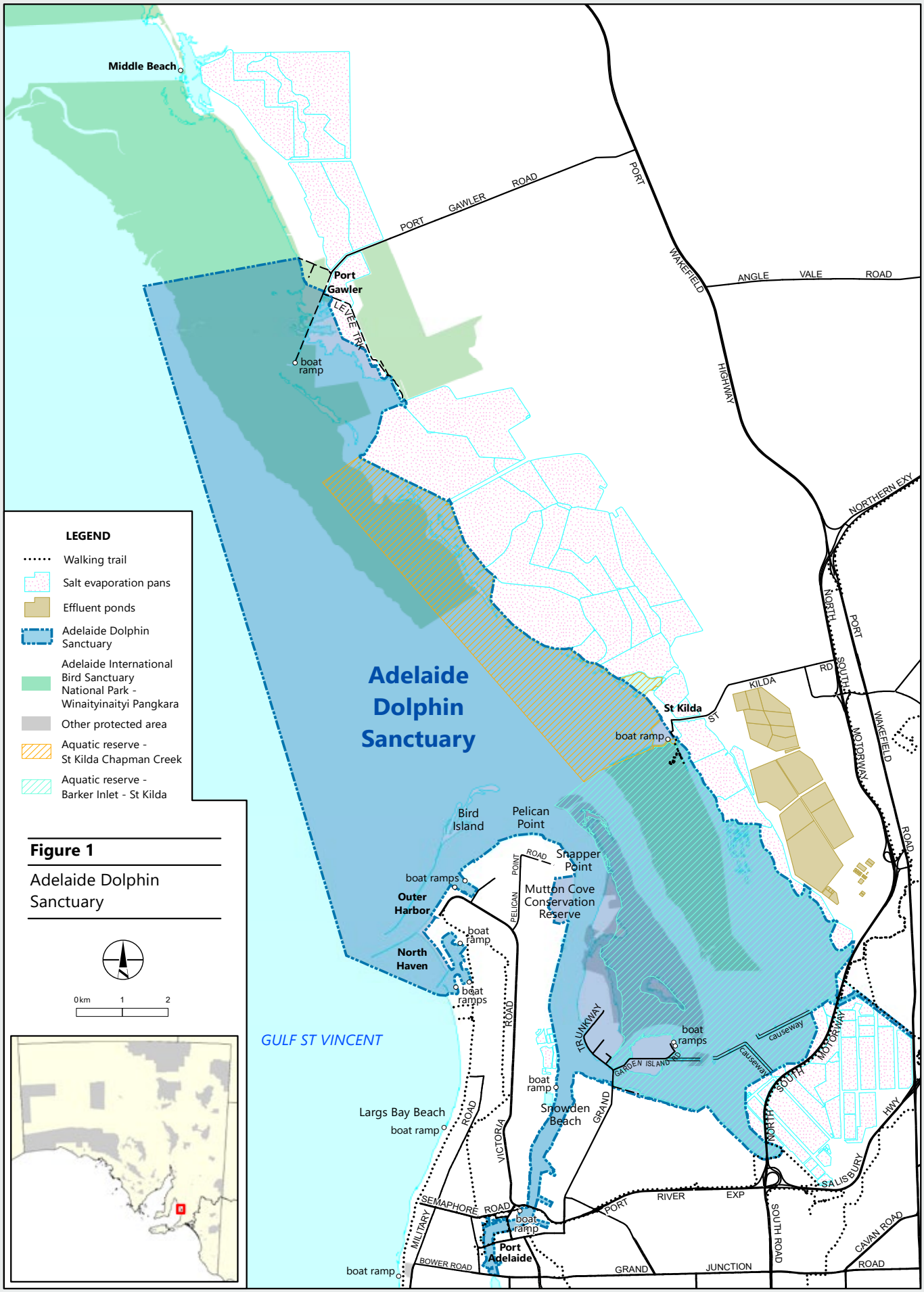
- a local population of Indo-Pacific bottlenose dolphins and their habitat
- the Barker Inlet, with its sheltered mangrove creeks, tidal flats, and seagrass and sand habitats, is an important nursery area for a number of fish and crustacean species, some of which are critical sources of food for the dolphin population
- feeding and roosting habitats for local and migratory shorebird species and breeding habitats (such as Bird Island) for resident shorebird species, a number of which are listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999* ( EPBC Act) and/or *National Parks and Wildlife Act 1972* (NPW Act)
- Kaurna cultural connections to the seascape and to the Yambu (dolphin)
- areas of saltmarsh and seagrass that help to protect the coastline and mitigate the effects of climate change by sequestering carbon dioxide from the atmosphere and oceans
- haul out sites (Outer Harbor breakwater rock walls) for the nationally endangered (under the EPBC Act) Australian sea lion (*Neophoca cinerea*) and the long-nosed fur seal (*Arctocephalus forsteri*)).

Dolphins are particularly vulnerable to cumulative long term impacts as they are long lived, take a number of years to reach sexual maturity, have few offspring, and typically take two to three years or longer between giving birth. Population declines may take many years to become evident, by which time it may be too late to address the impacts causing the decline. It is important to look at the full range of impacting activities, across the catchment, to really understand the impacts on the dolphins in the Sanctuary. To help better understand how the Sanctuary's ecosystem functions and the potential pressures and threats a conceptual model has been created (Figure 2). The model shows how these pressures and threats interact and impact the ADS dolphins.

*"Port Adelaide has always been an important place for Aboriginal people. The Kaurna people gave the Port Adelaide area the name Yartabulti. Yarta is land; bulti a place to sleep. Mudla [the tip of LeFevre Peninsula] is the place of the nose, a natural corral where you can round up the emus."*

Kaurna Elder Dr Lewis Yerloburka O'Brien

# Figure 1: Adelaide Dolphin Sanctuary map

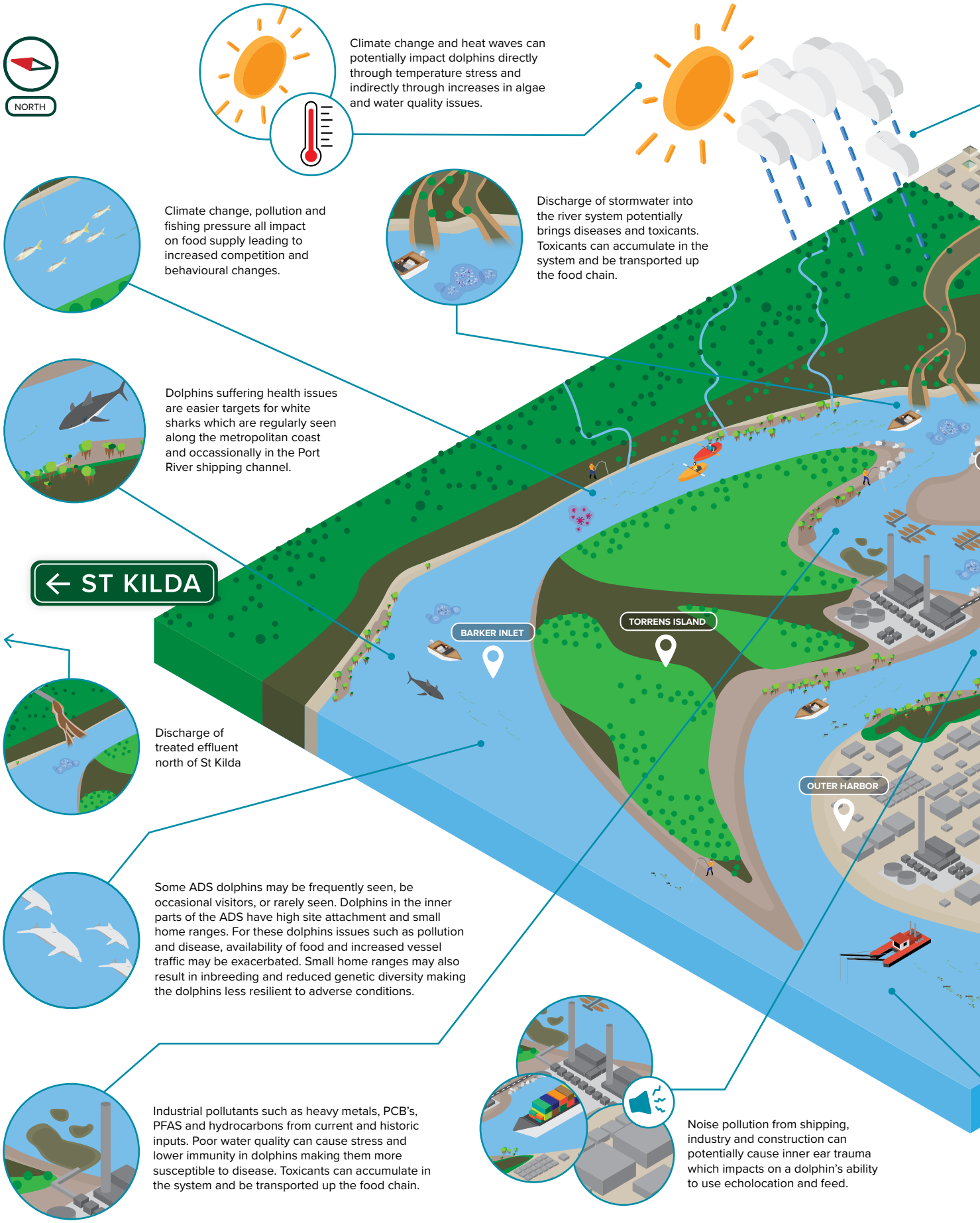


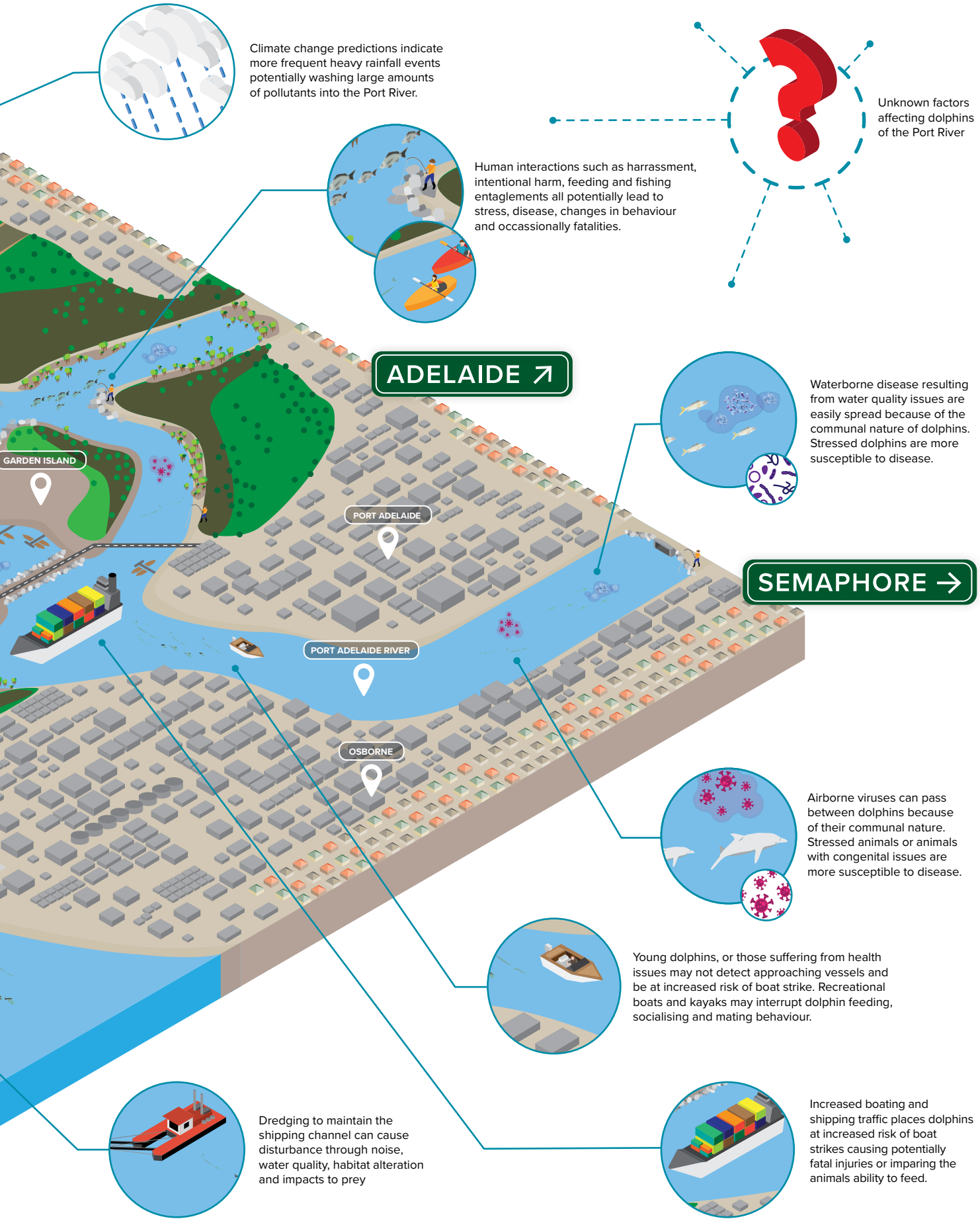
# Challenges and opportunities

The Adelaide Dolphin Sanctuary has achieved significant improvements in the protection of the local dolphin population and habitats of the area. Key challenges and opportunities for the Sanctuary are:

- managing threats and understanding their impacts on dolphins, other wildlife and supporting ecosystems to ensure long term conservation outcomes
- maintaining and enhancing the connection of Kaurna people to their Country
- protecting important cultural and heritage sites
- providing opportunities to connect people with nature and Kaurna culture
- facilitating opportunities for community to be involved in the Sanctuary's protection
- promoting the Sanctuary as one of South Australia's iconic nature based tourism destinations
- promoting ecologically sustainable development practices and principles
- strengthening research partnerships to support the long term conservation of the dolphin population, habitats and other ecological values
- ensuring the ecosystems are resilient and able to adapt to a changing climate
- increasing community awareness of the Sanctuary's environmental significance.

# Figure 2: Conceptual diagram of pressures and threats to dolphins




Climate change predictions indicate more frequent heavy rainfall events potentially washing large amounts of pollutants into the Port River.
Unknown factors affecting dolphins of the Port River
Human interactions such as harrassment, intentional harm, feeding and fishing entaglements all potentially lead to stress, disease, changes in behaviour and occassionally fatalities.
ADELAIDE ↗
GARDEN ISLAND
PORT ADELAIDE
SEMAPHORE →
PORT ADELAIDE RIVER
OSBORNE
Waterborne disease resulting from water quality issues are easily spread because of the communal nature of dolphins. Stressed dolphins are more susceptible to disease.
Airborne viruses can pass between dolphins because of their communal nature. Stressed animals or animals with congenital issues are more susceptible to disease.
Young dolphins, or those suffering from health issues may not detect approaching vessels and be at increased risk of boat strike. Recreational boats and kayaks may interrupt dolphin feeding, socialising and mating behaviour.
Dredging to maintain the shipping channel can cause disturbance through noise, water quality, habitat alteration and impacts to prey
Increased boating and shipping traffic places dolphins at increased risk of boat strikes causing potentially fatal injuries or imparing the animals ability to feed.

# Theme 1: Protecting dolphins from threats

The Adelaide Dolphin Sanctuary was created to form a safe-haven for dolphins. While instances of deliberate harm to dolphins within the Sanctuary are infrequent, there are a number factors that can cause direct or indirect harm, many of which can be managed.

Dolphins may be impacted by noise, interaction with fishing gear, and vessel strikes. Disturbance through harassment and feeding associated with recreational boating and tourism activities may also have an impact. The *National Parks and Wildlife (Protected Animals – Marine Mammals) Regulations 2010* were introduced to minimise disturbance and to regulate commercial tourism interaction with marine mammals. These regulations ensure that vessels and people keep a safe distance while watching dolphins. In addition, limits on commercial tours and vessel speed apply to areas within the Sanctuary. An environment with too many stressors may greatly impact dolphin health, or ultimately cause them to move away.

DEW maintains a 'Marine Mammal Intervention Policy', which includes the appropriate government approval processes, that dolphins are a protected wild species, and as such, intervention to employ invasive research procedures is practiced only where it is deemed to be of clear benefit to the health of the animal.

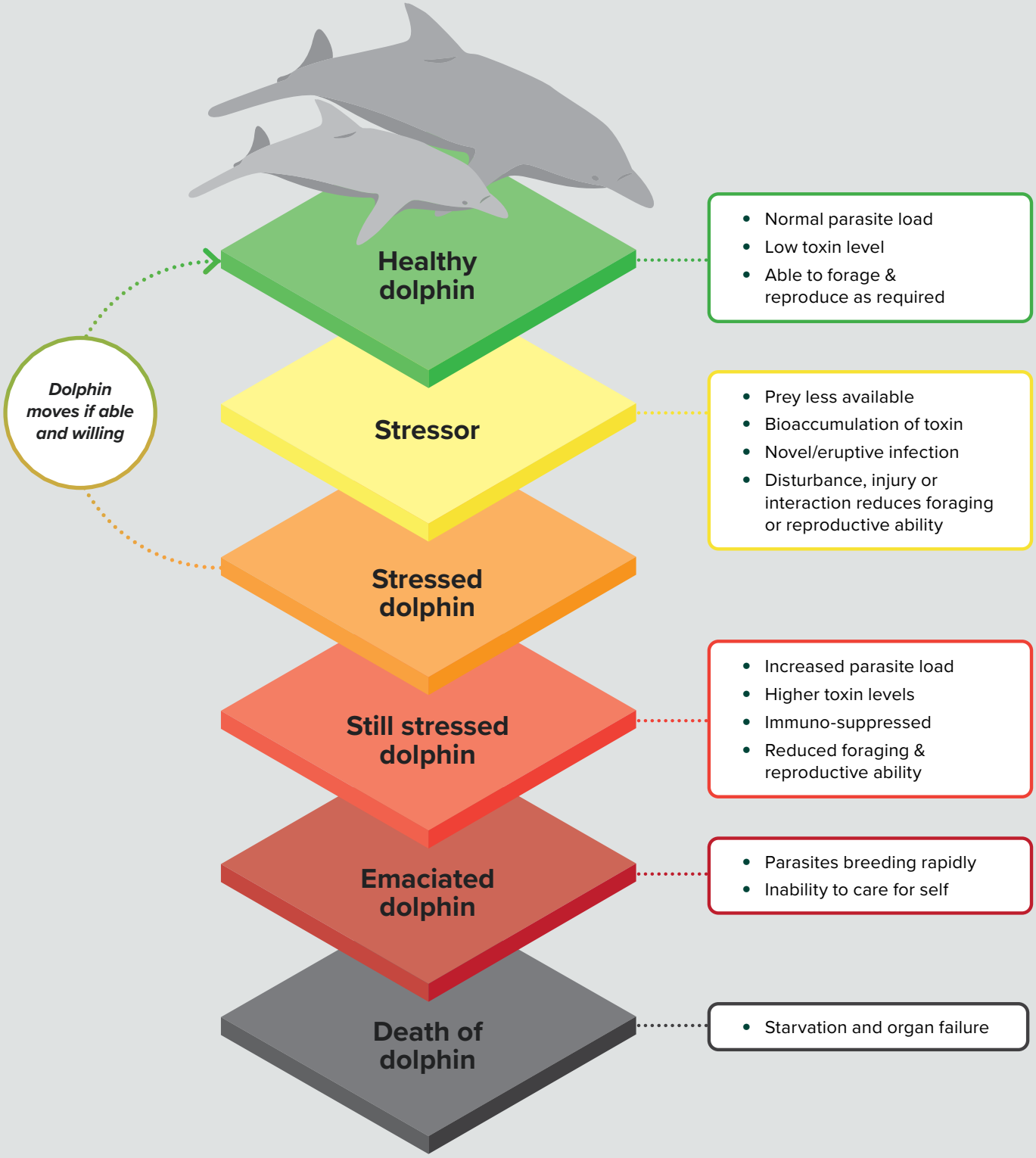
## Objective

- The protection of the dolphin population of the Port Adelaide River estuary and Barker Inlet from direct physical harm is to be maintained and improved.

## Strategies

- Encourage users of the Sanctuary to abide by regulations and guidelines to minimise the likelihood of harm to dolphins, through ranger patrols and community education.
- Work with Green Adelaide, state and local government, commercial tour operators, schools, industry and community groups to conduct activities that build community understanding and stewardship of the local dolphin population and the environments which support them.
- Encourage research and monitoring that builds an understanding of dolphin populations, threats, and strategies to avoid and minimise harm.
- Implement and review policies and procedures that protect dolphins from harm, ensuring that they are relevant, effective and developed from evidence based research.

# Figure 3: Potential pathway to mortality for a dolphin



# Theme 2: Maintaining and enhancing the quality of dolphin habitats

Functioning, productive ecosystems are required to sustain the Sanctuary's dolphin population and are essential to ensure:

- there is sufficient food
- adequate water quality for the dolphins and their prey
- there is sufficient vegetation to support all species in the ecosystem with food and shelter.

Within the Sanctuary, mangrove, seagrass and tidal flat communities are important to the health and productivity of the ecosystem, providing shelter and food for the dolphins. These habitats rely on adequate water quality to maintain a functioning ecosystem and hence dolphin population health.

There are several threats that impact ecosystems in the Sanctuary and include; acid sulfate soils, high nutrient loads from catchment runoff, acoustic pollution and direct habitat removal. Toxins from heavy metals and polychlorinated biphenyls (PCBs) are present in the Sanctuary and may impact on dolphins by causing disease, genetic disorders or the exacerbation of chronic conditions. It is vital to acknowledge the numerous challenges associated with managing the long-term environmental and health impacts of legacy pollutants in the Sanctuary. To address these challenges, collaboration between local and state agencies, as well as researchers, is imperative. This collaboration should focus on identifying stressors affecting the Sanctuary and dolphins, such as stormwater quality and its management. By prioritizing these challenges we can develop a comprehensive plan to mitigate the negative impacts on the dolphins and their habitat.

## Objectives

- The key habitat features in the Port Adelaide River estuary and Barker Inlet that are necessary to sustain the dolphin population are to be maintained, protected and restored.
- Water quality within the Port Adelaide River estuary and Barker Inlet should be improved to a level that sustains the ecological processes, environmental values and productive capacity of the Port Adelaide River estuary and Barker Inlet.

## Strategies

- Ensure any threats associated with development, recreation, tourism and industry are minimised to protect seagrass, mangrove and samphire habitats and supporting species.
- Advocate for climate change adaptation and mitigation strategies in any future management actions within and adjacent to the Sanctuary.
- Work with relevant researchers and agencies to monitor the health status of the Sanctuary's ecosystem, identify threats and develop adaptive management measures.
- Encourage and support Green Adelaide, local government, EPA and other government agencies to implement water quality improvement plans and pollution mitigation programs.
- Partner with local and state government agencies to ensure the objects of the Act are furthered in the planning and assessment of developments and other uses within and adjacent to the Sanctuary.

# Theme 3: Community understanding and participation

The Adelaide Dolphin Sanctuary was established as a result of community concerns about the safety of dolphins living in the Port Adelaide River estuary and Barker Inlet. The government has always appreciated and valued the significant amount of time the community has spent raising awareness about dolphin conservation and monitoring their movements, behaviour and welfare.

The Adelaide Dolphin Sanctuary is the Country of the Kaurna people. The Kaurna People have continued to live, practice and bring a spiritual and cultural connection to *Yartabulti pirri* (the Port Adelaide River estuary and Barker Inlet area) for thousands of years. Management of the Adelaide Dolphin Sanctuary will recognise, promote and protect Kaurna cultural and spiritual relationships with *Yartabulti pirri* through the implementation of this management plan.

The Sanctuary environment is complex, diverse and fragile, however despite the habitat damage already caused by human activity, the area holds considerable environmental, heritage and cultural importance. Community understanding and participation is central to the implementation of the management plan and the success of the Adelaide Dolphin Sanctuary. Without support from the diverse users of the Sanctuary, it will not be possible to achieve the Act's objectives of protecting the dolphins and their habitat.

The scientific understanding of complex ecosystem function is constantly evolving, and hence all activities that operate in the Sanctuary need to be open to change as knowledge increases. Communicating these changing needs to those who use and value the area in so many different ways is a challenge but also an opportunity. A well-informed community is critical for the safety of the dolphins and to protect existing habitats and water quality from the impact of current and future activities.

## Objectives

- The interests of the community are to be taken into account by recognising indigenous and other cultural, and environmental, relationships with the Port Adelaide River estuary and Barker Inlet and surrounding areas, and by ensuring appropriate participation in processes associated with the management of the Port Adelaide River estuary and Barker Inlet.
- Public awareness of the importance of a healthy Port Adelaide River estuary and Barker Inlet to the economic, social and cultural prosperities of the local community.
- The principles of ecological sustainable development (ESD) in relation to the use and management of the Port Adelaide River estuary and Barker Inlet are to be promoted.

## Strategies

- Facilitate opportunities for the Kaurna People, community groups and other stakeholders to be involved in management and monitoring activities in the Sanctuary.
- Build partnerships with Kaurna to protect cultural connections with Country and create economic opportunities for their community.
- Support nature-based tourism operators to educate visitors on the value of the Sanctuary and the importance of its health for the dolphin population.
- Work with all users to improve practices that have an impact on the Sanctuary's health.
- Provide visitors and the community with accessible and culturally inclusive interpretive information that promotes the importance of a healthy Adelaide Dolphin Sanctuary environment.
- Guide and influence the development of visitor experiences and supporting facilities aimed at improving people's connection, appreciation and understanding for the Sanctuary.
- Continue to work with proponents of new development and existing industries to develop and promote ESD principles in their practices.

# Appendix

## Acts amended by the Adelaide Dolphin Sanctuary Act 2005

The amended Acts are:

- Aquaculture Act 2001
- Coast Protection Act 1972
- Development Act 1993
- Environmental Protection Act 1993
- Fisheries Management Act 2007
- Harbors and Navigation Act 1993
- Historic Shipwrecks Act 1981
- Mining Act 1971
- National Parks and Wildlife Act 1972
- Native Vegetation Act 1991
- Petroleum and Geothermal Energy Act 2000

# References

Lewis Yerloburka O'Brien & Mandy Paul, 'Kaurna People', SA History Hub, History Trust of South Australia, https://sahistoryhub.history.sa.gov.au/subjects/kaurna-people, uploaded 8 December 2013.

# Invitation to contribute

## Your feedback is important

Stakeholders and the community are invited to provide feedback on the draft management plan.

## Guidelines for making a submission

To ensure that your submission is effective:

- ensure that your submission relates specifically to this draft document
- make sure that your submission is clear and concise
- If you disagree with the proposed amendment, explain why you disagree and outline what you would like to see as an alternative
- If you agree with the proposed amendment, explain why you agree.

Please note that your submission will become part of the public record and will be available to anyone who requests a copy unless you specifically request otherwise.

### Written submissions:

Att: Adelaide Dolphin Sanctuary
Draft Management Plan 2024
National Parks and Protected Area Program Unit
Department for Environment and Water
GPO Box 1047 Adelaide SA 5001.

### Email submissions:

Please ensure that you place ADS Draft Management Plan in the subject heading of the email.
DEWProtectedAreaManagement@sa.gov.au

### Online submissions:

https://yoursay.sa.gov.au/adsreview

### Deadline for submissions:

Submissions close 28 June 2024.

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