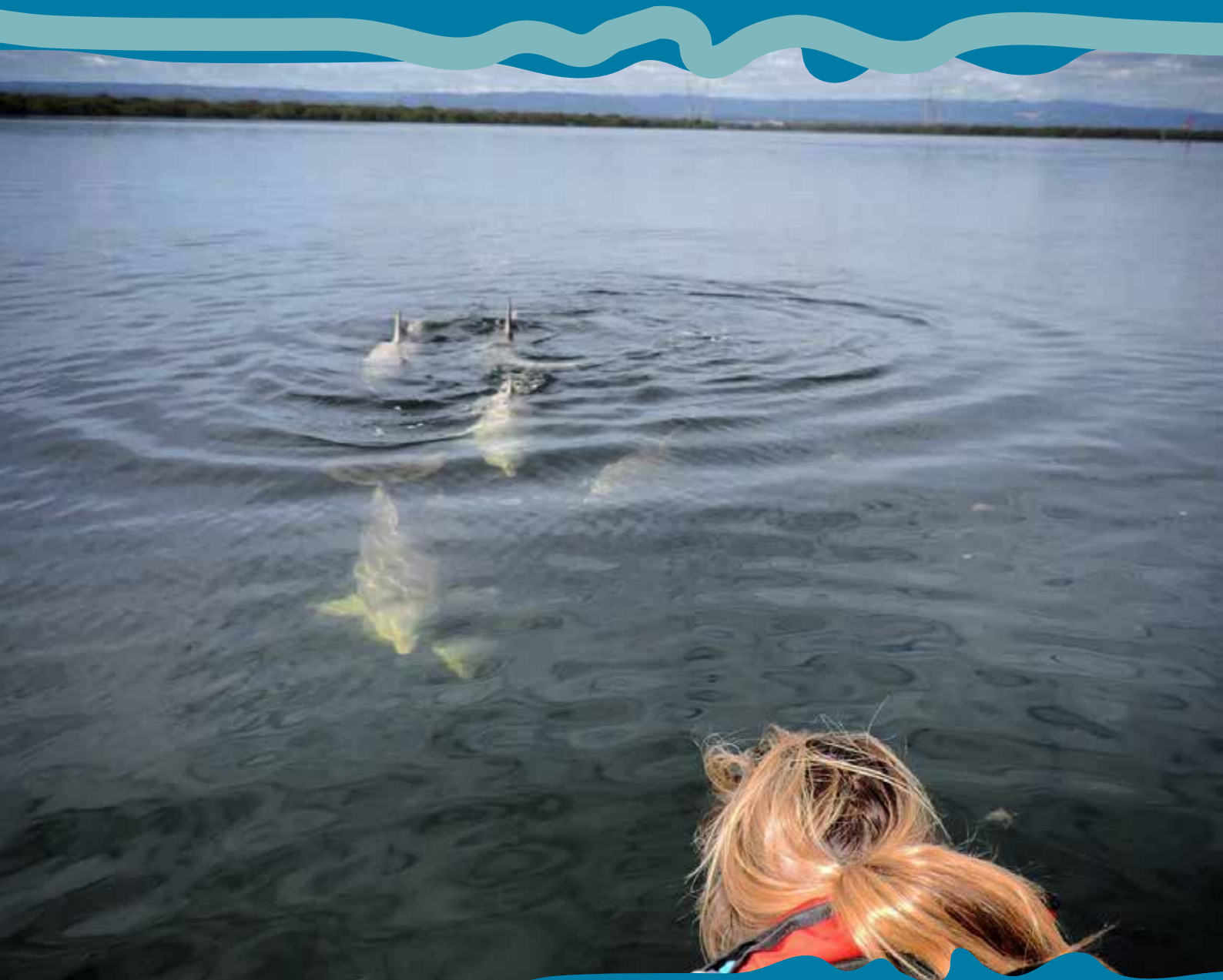


# The Adelaide Dolphin Sanctuary annual report summary

2014-15



Government  
of South Australia



**Natural Resources**  
Adelaide and Mt Lofty Ranges







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This brochure provides a summary of the *Adelaide Dolphin Sanctuary's Annual Report 2014–15*, organised according to the six objectives of the *Adelaide Dolphin Sanctuary Management Plan*.

The complete report is available at:  
**[www.naturalresources.sa.gov.au/  
adelaidentloftyranges](http://www.naturalresources.sa.gov.au/adelaidentloftyranges)**

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# Objective 1: Protection of the dolphins

During the reporting period a deceased mature female dolphin was found close to Port Gawler within the boundary of the Adelaide Dolphin Sanctuary. A routine necropsy of this animal was undertaken by the SA Museum, with the initial pathology discovering a total of four shotgun pellets in the animal, close to its fluke. Additional information may be obtained after the carcass has been fully 'skeletonised'. The Department of Environment, Water and Natural Resources notified South Australia Police (SAPOL) and publically called for anyone with further information regarding the incident to come forward. The animal was identified as a long-term resident of the sanctuary. This has been the first intentional kill of

an animal within the sanctuary since its establishment. Investigations into this incident failed to result in the identification of any persons of interest.

Pathological examination of dolphins stranded in the Adelaide and Mount Lofty Ranges Natural Resources Management area is undertaken by the South Australian Museum, supported by funding from the Adelaide and Mount Lofty Ranges Natural Resources Management Board.

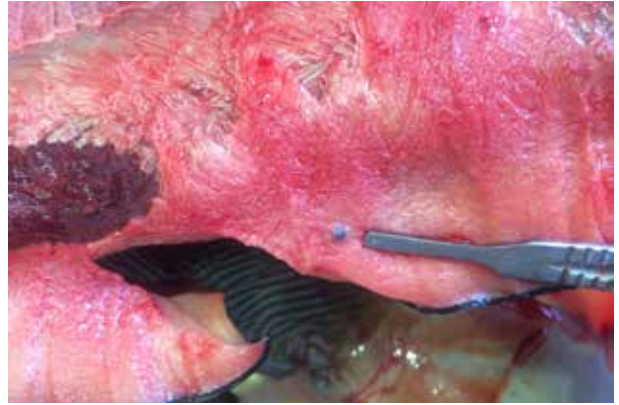
A further six dolphin deaths were recorded within the sanctuary during the reporting period and are listed in Table 1.



*Deceased dolphin with four pellets in its tailstock*



Deceased dolphin where it was found



Shotgun pellet

Table 1: Dolphin deaths within the Adelaide Dolphin Sanctuary 2014-15

| Date     | Species/sex/age   | Location   | Cause of death (from necropsy)   |
|----------|---|--|--|
| 10/09/14 | Bottlenose Dolphin ( <i>Tursiops aduncus</i> ), neonate calf  | Garden Island                                    | Body could not be retrieved  |
| 21/12/14 | Bottlenose Dolphin ( <i>Tursiops aduncus</i> ), mature female | Barker Inlet, Port Gawler                        | Circumstance of death is intentional killing (shotgun pellets found in tail stock). There was evidence of disease that may or may not have been related to its being shot. |
| 16/01/15 | Bottlenose Dolphin ( <i>Tursiops aduncus</i> ), neonate calf  | Barker Inlet                                     | Body could not be retrieved  |
| 10/02/15 | Bottlenose Dolphin ( <i>Tursiops aduncus</i> ), adult male    | Torrens Island, Australian Submarine Corporation | Disease (possibly infectious disease, severe blunt trauma). Slightly emaciated. Multiple skin lesions.   |
| 10/02/15 | Bottlenose Dolphin ( <i>Tursiops aduncus</i> ), neonate calf  | Australian Submarine Corporation                 | Body decomposing so hard to determine cause of death   |
| 16/04/15 | Short-beaked Common Dolphin ( <i>Delphinus delphis</i> )      | Torrens Island Food market                       | Cause of death: serious blunt trauma and severe parasite infection in pancreas and liver   |
|          | Bottlenose Dolphin ( <i>Tursiops aduncus</i> ), mature female |  | Carcass was never found but animal hasn't been seen since November 2014 and is presumed dead.  |



The board facilitated analysis of Dr Mike Bossley's long-term dataset on the sanctuary dolphins. This involved a review by cetacean researchers, with input from a biostatistician who will analyse data from 1988 to 2012 (10,521 sightings). The study seeks to provide an insight into habitat use, social structure and characteristics of the dolphin population, along with an assessment of potential changes in use of the area by dolphins.

The initial analysis indicates a significant annual increase over this time, of over 6%, in the number of dolphins sighted during surveys in the inner estuary, although the number of dolphins in the outer parts remained constant. Increased sightings probably signify improved biodiversity across the local ecosystem but the increases may also reflect improved water quality, augmented by surveillance and education activities arising from the proclamation of the area as a dolphin sanctuary. However, the combination of a greater dolphin presence and human activities is likely to result in an increased probability of human and dolphin interaction and possible impacts (harassment, illegal provisioning, boat strike and entanglement). Therefore, the success associated with increasing dolphin numbers will require a new set of management responses.

Regular patrols and observations of the resident dolphin population were undertaken by staff to observe any notable changes in behaviour of the population, with assistance from ADS Action Group volunteers, who undertook regular observations of the dolphin population, monitoring individual resident dolphins to increase knowledge of the dolphins within the sanctuary.

A resident calf was reported entangled in fishing gear in two different incidents during the reporting period. In both instances the animal freed itself of the entanglement and its health was not affected.

To ensure compliance with the legislation protecting dolphins, habitat and water-quality, staff completed over 50 water patrols. Staff investigated, recorded and reported all incidents of harassment and feeding of dolphins. All reported offences under Section 68 of the *National Parks and Wildlife Act 1972* and the *National Parks and Wildlife (Protected Animals – Marine Mammals) Regulations 2010* were investigated. All reported offences and the outcomes are summarised in Table 2.



Staff monitoring the area



Dolphin with fishing line entanglement



*Volunteer monitoring the area*

*Table 2: Offences and compliance effort in the Adelaide Dolphin Sanctuary 2014–15*

| Offence and legislation   | Number of reports received and investigated | Compliance effort  |
|---|---|--|
| Feeding a marine mammal and disposing of any material into the water if a marine mammal is present or likely to eat the material. | 1   | Official verbal warning  |
| Approaching within 50 m of a dolphin or within 150 m of distressed dolphin or a calf  | 7   | One case still under investigation   |
| Intentionally swimming closer than 30 m to any marine mammal  | 1   | Official verbal warning  |
| Intentionally harassing a marine mammal   | 1   | Still under investigation  |
| Intentionally harming, injuring or killing a marine mammal  | 1   | Investigations into this incident failed to result in any persons of interest being identified |
| Failure to comply with permit conditions  | 3   | One on-spot fine issued  |



# Objective 2: Protection of key habitat features

The Adelaide Dolphin Sanctuary is comprised of mangroves, seagrass, salt marsh, tidal flats, tidal creeks and estuarine rivers, which in combination provide habitat for the dolphins and their food resources. The *Adelaide Dolphin Sanctuary Act 2005* (ADS Act) requires that the key habitat features necessary to sustain the dolphin population in the Port River and Barker Inlet are to be maintained, protected and restored.

Table 3 outlines the actions undertaken by Natural Resources Adelaide and Mt Lofty Ranges staff to address threats to specific vegetation communities within the sanctuary. Works were undertaken to assess and improve the vegetation condition, with precedence given to the control of declared weeds in the highest conservation priority areas, as identified in the *Metropolitan Adelaide and Northern Coastal Action Plan 2009*. Funding was also provided by the Australian Government for the board's Samphire Coast Icon Project, which aims to improve the biodiversity conservation of salt marsh and shorebird

habitats and increase community awareness of the conservation significance of coastal habitats in the Northern Adelaide area.



*Rubbish collected at Port Gawler Conservation Park*



*Coastal on ground works*



Table 3: Habitat protection and restoration works within the Adelaide Dolphin Sanctuary

| Location                         | Investment  | Works  |
|----------------------------------|---|--|
| Buckland Park                    | \$36,000 (AMLR NRM Board Land Management Program)<br>\$4,000 (Department funding)<br>\$2,328 (AMLR NRM Board)<br>\$16,760 (Australian Government) | Weed control ( <i>Casuarina glauca</i> , African Boxthorn, Artichoke, <i>Juncus acutus</i> , Euphorbia, Bridal Creeper, Horehound, Sharp Rush)<br>Gahnia plantings                     |
| Mutton Cove                      | \$21,500 (Australian Government)  | Weed control (Bridal Creeper, African Boxthorn, Olive, False Caper, Onion Weed, Galenia, weedy grasses etc.)<br>Site preparation for revegetation<br>Revegetation with 1,110 seedlings |
| Port Gawler Conservation Park    | \$13,865 (Australian Government)<br>\$3,790 (AMLR NRM Board)<br>\$2,000 (District Council of Mallala in kind)                                     | Bridal creeper, calomba daisy control<br>Revegetation (1000 plants)<br>Rubbish collection  |
| Bird Island                      | \$14,240 (AMLR NRM Board)   | Rat control<br>African Boxthorn control  |
| Salisbury Wetlands               | \$13,300 (Australian Government)  | Gahnia plantings   |
| Torrens Island Conservation Park | \$10,630 (Australian Government)  | Weed control (Bridal Creeper, African Boxthorn, Pyp Grass etc.)<br>Revegetation – supply of 500 seedlings for planting day with Kaurna community                                       |
| St Kilda                         | \$150 (AMLR NRM Board)<br>\$800 (Australian Government)   | Revegetation<br>Weed control   |
| <b>TOTAL</b>                     | <b>\$139,363</b>  |  |

The purpose of the Torrens Island Biodiversity Action Plan, which is funded by the board, is to assist managers in their efforts to protect and conserve the coastal, estuarine and marine ecological values of Torrens Island Conservation Park. The plan documents the key biodiversity values and threats on Torrens Island and prioritises the management of the threats for effective biodiversity conservation.

Feral deer in the northern coastal areas of the sanctuary have had an adverse impact on coastal habitats. An assessment and subsequent report were prepared by Bushcare and Beyond and funded by the Australian Government. The report, *An assessment of the presence of feral fallow deer (Dama dama) and environmental damage in the Gawler River delta: using motion-sensitive trail cameras and opportunistic ground search*, determined that the large numbers of feral deer were significantly impacting upon sensitive northern coastal habitats within and adjacent to the sanctuary. The results of the surveys

have been crucial in determining the level of hazard posed by feral deer on public and private land in the area. Based on the information gathered during this process, an assessment will be made by Natural Resources Adelaide and Mt Lofty Ranges (AMLR) of the need for a feral deer control program along the northern coastal plain, which will be implemented if considered necessary.

The board funded the development of an on-ground works action plan for Bird Island/Section Bank and Natural Resources AMLR is progressing a memorandum of understanding with the Department of Planning, Transport and Infrastructure (DPTI) and Flinders Ports for the collaborative management of this significant conservation area.

In 2014, the South Australian Government committed \$1.675 million over four years for the establishment of the Adelaide International Bird Sanctuary. This sanctuary will protect vital habitat for the internationally significant migratory shorebirds that visit South Australia from the northern hemisphere each summer. The birds travel along a major migratory route, the East Asian-Australasian Flyway.

The Adelaide International Bird Sanctuary will stretch from Dry Creek in the south, to Parham at its northern extent. From Port Gawler Conservation Park to Dry Creek, the coastal crown land proposed to be included in the bird sanctuary lies within or adjacent to the Adelaide Dolphin Sanctuary.

The goals of the establishment phase of the bird sanctuary are to:

- protect the Adelaide hub of the East Asian-Australasian Flyway by establishing the bird sanctuary along a 60-kilometre stretch of the Gulf St Vincent coastline north of Adelaide
- create a more liveable and sustainable city by developing a network of natural green spaces on the fringes of the northern Adelaide Plains, which will allow stormwater recycling, absorb carbon dioxide and enhance the amenity and attractiveness of the region while also providing a natural buffer against the impacts of sea level rise
- provide opportunities for new and unique tourism experiences and natural spaces for interacting with nature across the northern parts of Adelaide and boosting the economic and intrinsic value of the area.

The protection of the salt marsh, mangrove and tidal flat coastal ecosystems of the gulf will be of equal benefit to the Adelaide Dolphin Sanctuary population.

*Red-capped Plover at Light Beach, part of the Adelaide International Bird Sanctuary.*





# Objective 3: Improvement of water quality

The South Australian Environment Protection Authority (EPA) is the lead agency in monitoring the quality of coastal, estuarine and marine water off the Adelaide coastline and for Gulf St Vincent. The authority is identified as a key agency under this objective in the Adelaide Dolphin Sanctuary Management Plan.

The Port River estuary and Barker Inlet contain large areas of shallow warm waters, with restricted flushing from the gulf waters. The Port River and Barker Inlet waters tend to retain poorer-quality water, maintain favourable conditions for algal growth and have an increased risk of environmental impacts.

During 2014–15 the Adelaide Dolphin Sanctuary continued to work with the EPA in relation to water-quality issues in the sanctuary's waters. The EPA investigated and provided information to the sanctuary and the community on the compliance of water-based industrial activities and instances of fuel spills along the sanctuary.

During the reporting period the Port Adelaide Enfield Council commissioned the following projects to improve the quality of stormwater entering the sanctuary, in accordance with the Barker Inlet, Magazine Creek and Range Wetlands management and maintenance plans and the board:

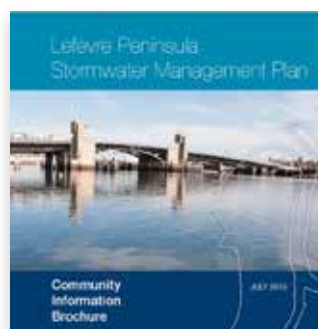
- plant aquatic species within the Magazine Creek Wetland
- build bunds to prevent carp from entering and breeding in the Barker Inlet wetlands.

The Port Adelaide Enfield Council also developed a series of plans to ensure proactive planning for stormwater management and climate change for the area, including:

- initiating and preparing the Lefevre Peninsula Stormwater Management Plan with the board and the SA Stormwater Management Authority, with a major focus on improving the quality of the stormwater discharged to the Port River and coasts from intensely developed areas
- progressing the preparation of the Western Adelaide Region Climate Change Adaptation Plan, which includes identification of the projected impacts of climate change on the region's vulnerable coastal environments and its ecological assets, including marine waters and species.

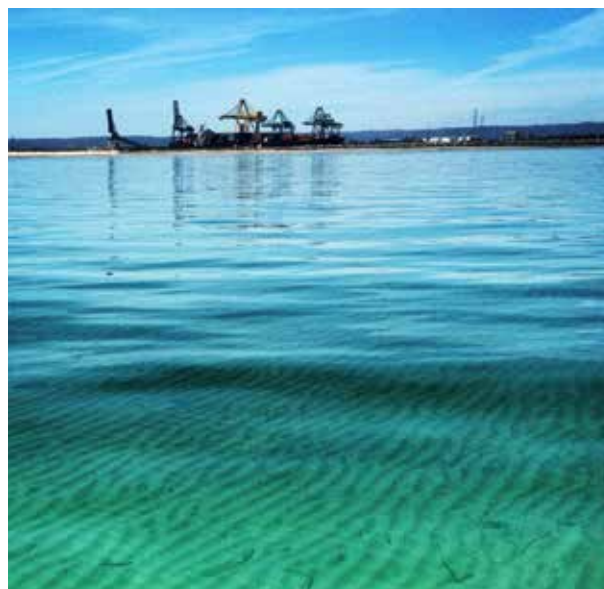
Other actions:

- Four aquatic licences referred to the Adelaide Dolphin Sanctuary under the *Harbors and Navigation Act 1993* were assessed for their potential to cause turbidity.
- New developments and activities referred to the Adelaide Dolphin Sanctuary were assessed for their potential impact on sediment disturbance, with subsequent recommendations made for appropriate actions to minimise any disturbance.
- Adelaide Dolphin Sanctuary staff continued to remove and document floating marine debris while on patrol.
- Adelaide Dolphin Sanctuary staff and volunteers organised a clean-up Australia Day at St Kilda Boat ramp to remove rubbish and discharged fishing line from the area.



**Left:**  
*Lefevre Peninsula Stormwater Management Plan cover*

**Below:**  
*Waterways within the sanctuary*



# Objective 4: Community participation

There are significant Indigenous and other cultural and historical relationships within the Port River estuary and Barker Inlet which must be considered in the management of the Adelaide Dolphin Sanctuary environment. Without the support of all the diverse users of this environment, achieving the objectives of the ADS Act – protecting the dolphins and their habitat – would not be possible.

The ADS Action Group, established in 2012, has over 50 registered volunteers who contribute over 3,000 volunteer hours per year in support of the objectives of the sanctuary's management plan. They do this via on-water and land-based patrols, administrative tasks and community outreach projects.

Sanctuary staff delivered several training programs for volunteers, including dolphin identification, introduction to the Adelaide Dolphin Sanctuary, and, in conjunction with DPTI Marine Safety Officers, marine safety training.

Adelaide Dolphin Sanctuary staff provided executive support for the Adelaide Dolphin Sanctuary Advisory Board, who met twice during the reporting period, providing advice to the Minister as required on matters pertaining to the ADS Act.

In accordance with the objectives of the recent review and the reform of all boards and committees in South Australia, it was recommended that the advisory board be merged with the Wilderness Advisory Committee, the National Parks and Wildlife Council, the Marine Parks Scientific Working Group and the Marine Parks Council to form a new Parks and Wilderness Council.



*Adelaide Dolphin Sanctuary volunteers*





*Adelaide Dolphin Sanctuary staff provided training to commercial tour operator Adventure Kayaking*

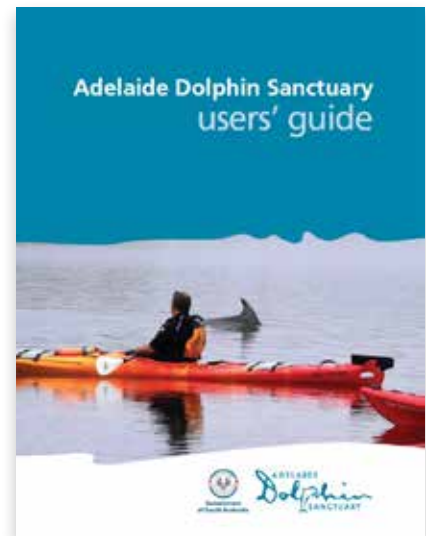
The advisory board prepared a legacy report for the new Parks and Wilderness Council with major recommendations for the continuation of its functions.

ADS staff assessed four referrals for aquatic activity licences (issued under section 26 of the Harbors and Navigation Act 1993) and worked with licensed and unlicensed recreational users to ensure best practices are undertaken. The referral assessments included sailing, rowing, and speed boat events.

Adelaide Dolphin Sanctuary staff provided advice and conducted assessments of permit applications for new and existing commercial tour operators within the sanctuary. These are issued under the Tour Operator Licensing and Permitting Policy, in support of the National Parks and Wildlife (Protected Animals – Marine Mammals) Regulations 2010.

Staff conducted a training session for one of the local tour operators to help its staff learn about the sanctuary, the dolphins and marine mammal regulations, and issued an on-spot fine to another tour operator for breaching their permit conditions.

Staff, supported by the ADS Action Group and the board, developed an *Adelaide Dolphin Sanctuary users' guide* to provide specific information on the sanctuary dolphins and their habitats and to highlight the importance of the Port River and Barker Inlet environs for South Australia. The booklet has been distributed during community engagement activities and other outreach opportunities.



*Adelaide Dolphin Sanctuary users' guide*

# Objective 5: Promotion of the sanctuary's environmental importance

On Saturday 11 April 2015, Adelaide Dolphin Sanctuary staff and volunteers delivered a third successful Dolphin Day. The event attracted around 7,000 people and was a collaborative effort, with many government and non-government organisations participating on the day. Sponsored by the Adelaide and Mount Lofty Ranges Natural Resources Management Board, Landcare, Port Adelaide Enfield Council and Renewal SA, Dolphin Day 2015 provided an opportunity to raise awareness of the sanctuary by engaging with the wider South Australian public and promoting the environmental importance of the area.

All the activities on the day aimed to raise the profile of the sanctuary within the community and encourage users of the sanctuary waters to understand and appreciate the unique resident dolphin population and the value of supporting habitats within the sanctuary.

Throughout the reporting period the aims and objectives of the sanctuary's management plan were promoted to the community through the presentation of information to community groups and public forums, including at:

- Wild at Hart markets in late August 2014 at the new and redeveloped Hart's Mill precinct in Port Adelaide
- Marine Fun Day, 1 October 2014, held at the SA Museum to promote the new Marine Parks network
- North Haven Primary School Junior Dolphin Ranger annual training day, SA Maritime Museum, 27 February 2015
- regular community engagement days at boat ramps within the sanctuary
- Dolphin Day community event, Port Adelaide, 11 April 2015
- Adelaide Boat Show, June 2015.



*Volunteers and children attending Dolphin Day 2015*





*Volunteers and children attending Dolphin Day 2015*

At these events staff and volunteers promote opportunities for the community to become involved in the sanctuary and to understand the environmental importance of the sanctuary.

The 3rd International Conference on Marine Mammal Protected Areas was held between 9 and 11 November 2014 at the Stamford Grand in Adelaide. Adelaide Dolphin Sanctuary staff attended the conference, which was supported by the board, and delivered several presentations. A public talk on the sanctuary was also given as part of the conference.

The board's Samphire Coast Icon Project, funded by the Australian Government, seeks to conserve and rehabilitate nationally threatened samphire species and migratory shorebird habitats around the sanctuary. The activities involved in achieving this include on-ground conservation works, community awareness and planning opportunities for habitat retreat with increasing sea level rise. Salt marsh and shorebird workshops assisted in raising public awareness of important areas within the sanctuary including:

- salt marsh restoration forum and field trip, 15 and 16 April 2015
- five community training sessions on shorebirds and the ecological values of Upper Gulf St Vincent
- four community training sessions on Red-capped Plover ecology and monitoring in the Samphire Coast/ Upper Gulf St Vincent
- presentation to Birds SA members on the ecological values of Upper Gulf St Vincent
- shorebird awareness talk and field trip to St Kilda with Angle Vale Primary School students and parents
- vertebrate fauna surveys at sites around the sanctuary.

# Objective 6: Promotion of the principles of ecological sustainable development

The Adelaide Dolphin Sanctuary worked with new and existing industries to support the achievement of ecologically sustainable development principles for the area. The *Adelaide Dolphin Sanctuary Act 2005* aims to protect and improve the environment of the Port River and Barker Inlet ecosystems, which includes the habitat of the resident dolphin population. The ADS Act recognises that the area will continue to support a wide range of uses and specifies provisions aimed to prevent or minimise the environmental impact of these activities and of new developments. Through the referral process the department continued to assess development proposals under the ADS Act's 'general duty of care', ensuring that all reasonable measures have been taken to prevent or minimise any harm to the sanctuary through their actions or activities.



## Further information:

### Adelaide Dolphin Sanctuary

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For any marine mammal emergencies please contact the Adelaide Wildlife Duty Officer on:

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Photos: Anita Newton, Marianna Boorman, Cristina Vicente, Zoltan Mihalik, Phillip Doddridge, Sharon Sharp, Warrick Barnes, Tony Flaherty and SA Museum.