

## Overview

In its second year of operation, Estuary Care Foundation has continued to develop a broad base within the local community while surging ahead with several environmental projects. It has also been active in sharing information and knowledge about healthy estuaries and their management. Through the extensive involvement of volunteers and supporters, and enthusiastic endeavour, the Foundation is converting relatively small grants into significant projects that open the way for major restoration efforts to follow.

Estuary Care Foundation is committed to the protection and restoration of the ecology and shores of the Port River and Barker Inlet in South Australia – known by the Kaurna people as Yerti Bulti.

The Aims and Objectives of Estuary Care Foundation are:

Aims	Objectives
Habitat Restoration	Shellfish Reefs: Restoring shellfish reefs.
	Seagrass Meadows: Restoring seagrass meadows.
	Living Shorelines: Developing living shorelines.
Community Engagement	Communities: Sharing knowledge and experiences.
	Practitioners: Exciting and enabling contributors.
	Research: Facilitating world class research.

## Programs – Habitat restoration

### Shellfish

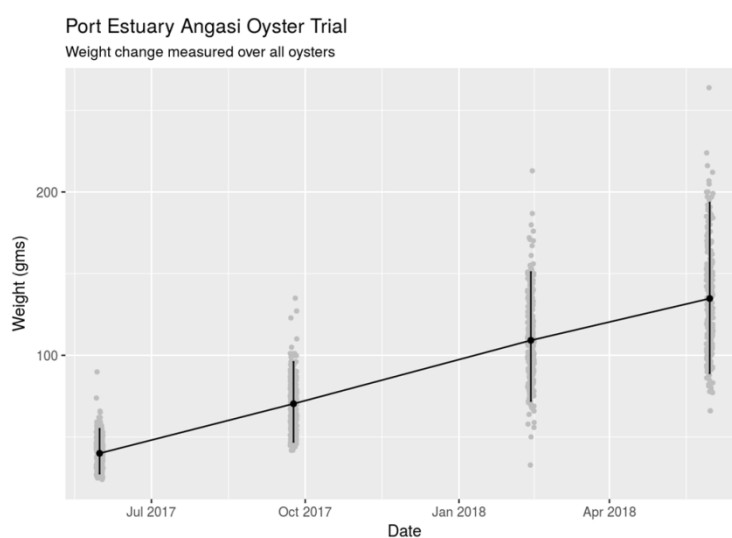
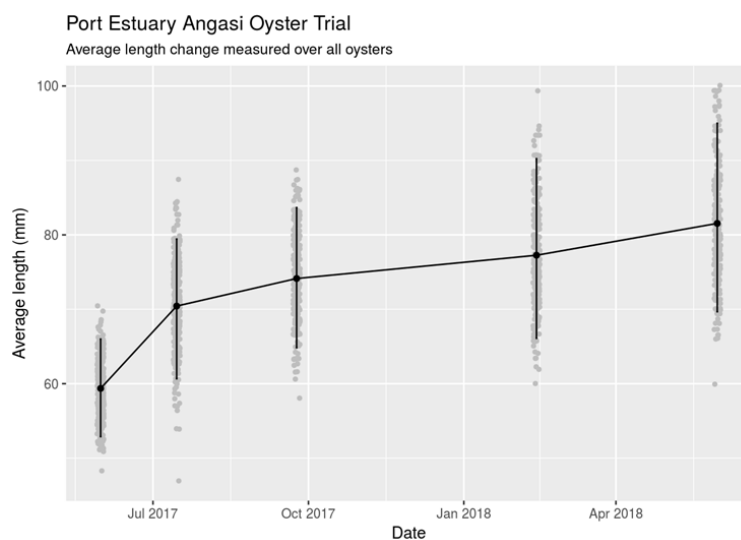
The Port River Shellfish Restoration Project commenced in 2016-17. It is a trial to see if native oysters - *Ostrea angasi*, which were once prolific in the estuary - can survive in oyster baskets, and if spat (baby oysters and mussels) can seed new reefs. It is part of broader efforts to restore shellfish reefs in South Australia, and is part of the national [Shellfish Reef Restoration network](#).

The project is supported by a \$5,000 Community Action grant from the Adelaide & Mount Lofty Ranges NRM, by land and infrastructure owners providing trial sites, and by volunteers and researchers. Sixteen baskets, containing 314 adult oysters, were deployed in the trial on May 31<sup>st</sup>, 2017. The oysters were weighed, measured and photographed at the commencement of the trial, and that has been repeated several times since.

The spat of *Ostrea angasi*, and of other shellfish, have been found on the settlement plates (terracotta tiles) and oyster baskets. At the Cruising Yacht Club (CYC) some spat (*angasi* and others) were then transferred to socks within baskets, to see if they would survive and grow - which many did. On May 31<sup>st</sup>, 2018 about 1,000 *angasi* spat (supplied by SARDI) went out in socks within baskets at the ASC Inner Harbour and a private North Haven pontoon. The latter was a cause for celebration, in recruiting 'oyster gardeners'.

Tony Bazeley, of the Port Adelaide Residents Environment Protection Group, analysed the data for the weights and measures and found evidence that the oysters were not only surviving but growing.

Average length (averaged across left, centre and right measurements) increased rapidly and continued to rise at a slower rate, while weight rose steadily. Data from all sites is presented below.



The results are very positive and give confidence to future plans for the establishment of shellfish reefs within the estuary. The 'citizen science' approach used (e.g. community and commercial sites, and volunteer monitors) has engaged a wide range of people, extended knowledge and understanding, and provided reliable data for analysis and planning.

Examples of the collaboration include:

- Provision of trial sites and assistance in care and maintenance of sites.
- Site monitoring (including students from Ocean View College, Portside Christian College and Australian Science and Maths School) and site maintenance (e.g. removing fouling growth).
- Water quality monitoring (Australian Science and Maths School).
- Promotion, e.g. articles in the newsletters of the Cruising Yacht Club (CYC) and Royal SA Yacht Squadron (RSAYS), presentations, and displays (e.g. Science Alive, 2017).

During the year, POMS (Pacific Oyster Mortality Syndrome – a lethal virus specific to Pacific Oysters) was detected in the Port River. Fortunately, native oysters (such as *Ostrea angasi*) are not affected, and nor are mussels or other molluscs; though, like water, they may carry the virus. During the emergency response period for POMS, project volunteers suspended monitoring at the Inner Harbour sites, to limit boat traffic and the possible spread of infection. Following the outbreak, the Foundation continues to monitor local shellfish and to maintain hygiene through cleaning boats and kayaks used.

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## Seagrass

Estuary Care Foundation received a \$5,000 Community NRM Grant from the Adelaide and Mt Lofty NRM in November, 2017, for a seagrass restoration trial along the shoreline at Snowden's North (north of the public boat ramp). The Foundation was then able to supplement that with a Coastal Participation Grant of \$2,750 from the Coast Protection Board, and \$700 from the City of Port Adelaide Enfield, for materials and supplies.

The trial will create a mini 'breakwater' from clean, recycled, bagged shell that will protect seagrass (*Zostera* - transplanted from other sites in the estuary), from wave action. Hopefully the bagged shell will also be colonised by resident molluscs and shellfish to form a 'living shoreline'.

This approach has been used in Sydney Harbour and the University of NSW Water Research Laboratory is providing coastal engineering advice. Associate Professor Jason Tanner (SARDI) is also assisting.

The Foundation lodged a Permit Application with PIRSA on December 13th, 2017 to deploy the bagged shell and translocate the *Zostera*, and is awaiting approval before the trial can commence.

Seagrass seems to be gradually re-establishing itself along the western bank of Torrens Island and recent monitoring in the Barker Inlet shows significant patches of healthy seagrass.

Volunteers from the Foundation and the Defence Shed in Port Adelaide undertook training, by Jason Tanner, for seagrass monitoring at 6 sites along the western banks of Torren Island. The group trialled their methodology and will begin formal monitoring in August 2018. Two kayak training sessions were held for them, thanks to local paddling expert, Peter Carter for his instruction.



In a second project, planning commenced with AusOcean (Ocean Lab Australia) to undertake seagrass monitoring, deploying one of their rigs in the Port River to measure the environment (e.g. turbidity and water temperature) and provide live video coverage.

## Shorelines

Estuary Care Foundation applied to the Natural Disaster Resilience Program for funding for a trial Living Shoreline ('Inner Harbour Flood and Shoreline Protection') at Cruickshanks Corner in the Inner Harbour of Port Adelaide.

The project aims to enhance shoreline protection in an area of acute vulnerability. If funded, it will demonstrate the potential of innovative 'environmentally friendly seawalls' to contribute to community protection in the event of natural disaster. The central, accessible location of the project will enable it to be viewed publicly, and to contribute to broader understanding of eco-engineering responses to climate related risks. The project proposal has the support of Renewal SA, the Coast Protection Board, and the City of Port Adelaide Enfield.

## Community Engagement – Linking people and knowledge

### Communities

Considerable effort has gone into sharing knowledge about the science and importance of estuary care and restoration. Examples include:

- **Exhibition: Science Alive** (August 4th to 6th, 2017). The Port River Shellfish Restoration Project exhibited at Science Alive at the Showgrounds; and with 30,000 people attending there were ample opportunities to talk to teachers, scientists, locals, government agencies and children.
- **Film: BLUE** (May 2018). BLUE, a beautiful ‘cinematic song for our oceans’, was screened at Semaphore as a community information event.
- **Public Forum: ‘Aquatic Habitat Restoration – making a difference’** (August 12<sup>th</sup>, 2017). More than 40 people heard a [presentation](#) by Craig Copeland, founder of OzFish Unlimited, on the importance of habitat protection, re-connection and restoration. The forum was organised by the Estuary Care Foundation in collaboration with OzFish Unlimited, with the support of a National Science Week (SA) Community Grant; and the British Hotel who provided the venue.
- **Public Forum: Working together for a healthy coast** (February, 2018). Todd Miller, of the North Carolina Coastal Federation, presented *Working Together for a Healthy Coast: The Best Defence Against Our Changing Climate*, at a forum in Port Adelaide convened by the Estuary Care Foundation. The Australian Coastal Society, Adelaide & Mt Lofty NRM Board, the Coast Protection Board, and the British Hotel supported the Foundation’s endeavours.

Eighty people heard Todd speak about enhancing coastal resilience with nature, giving examples of returning stormwater to the landscape and nature-based low impact designs for shoreline protection that were cheaper than conventional engineering solutions.

Jennifer Hiscock filmed and edited [Todd’s presentation](#), highlights of which are now available.

- **Presentation: Little Buggers** (November, 2017). Bower Cottages Community Centre has a monthly Little Buggers Club, to interest children in nature. The Port Shellfish Restoration Project led a Club meeting with Peter Hunt from the SA Malacological Society. Peter brought a display of 100 shellfish common to the area and created a ‘Beach in a Box’ to show off reef building shellfish. Catherine McMahon and Mike Crampton led the first public singing of the [Port River Song](#).
- **Exhibit: Tennyson Dunes Open Day** (September, 2017). An exhibit of Port River Shellfish Restoration Project.
- **Presentation: U3A** (University of the Third Age), Port Adelaide (September, 2017). About 40 people attended each of two presentations by Catherine McMahon, on [Living Shorelines](#) and [Shellfish Restoration](#). Peter Hunt, of the Malacological Society, attended the second session and brought a display of 100 shellfish common to the Lefevre Peninsula.

The Foundation is keen to engage with the arts in promoting the Estuary. Foundation volunteers participated in a Tour Down Under applique flag making workshop, organised by local artists Kalyna Micenko and Bob Daly for the City of Port Adelaide Enfield, making four flags for display.

The Foundation also partnered with a local artist to submit an application for a Living Landscapes grant from the City of Port Adelaide Enfield.

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Estuary Care Foundation has built upon early electronic communication (posting [News & Milestones](#), via the LeFevre Peninsula & Port Adelaide Community NoticeBoard) with the development of a website by Tom Lindley-Donaldson of TOTLD – [www.estuary.org.au](http://www.estuary.org.au). There is also an associated Facebook presence, featuring a schedule of events and media opportunities. The website contains opportunities to ‘get involved’, including the lodging of donations.

The Foundation has also welcomed contributions of communication materials from sympathetic individuals, such as:

- A short animation showing the improving health of the Port River, developed by Royall Royal, a UniSA animation student.
- A short film, [Shellfish Revival in the Port River](#), about the recent natural history of the Port River system and the efforts of the Port River Shellfish Restoration Project to return the native oyster (*Ostrea angasi*), by Jenny Hiscock.

## Practitioners

Volunteers are valued highly by Estuary Care Foundation and are crucial to the objects of the organisation. Accordingly, the Foundation has ensured that they are protected with insurance cover while engaged in Foundation activities. SAICORP insurance, via DEWNR, covers the volunteers. The Board also contracts with Local Community Insurance Services for Public Liability Insurance (\$20 million) and Associations and Officials Liability Insurance (\$2million).

## Research

In addition to the research component of the shellfish and seagrass field trials, Estuary Care Foundation has been active in science communication. Examples include:

- **National Case Study: CoastAdapt** - Climate Adaptation (April, 2018). Estuary Care Foundation won a National Climate Change Adaptation Research Facility competition with a case study of their operations; securing flights, accommodation and registration to the national [Climate Adaptation 2018](#) conference. Publication of the case study will provide some national profile to the challenges faced by, and the responses through, the Foundation.
- **Presentation: 19th International Conference on Shellfish Restoration** and Australian Shellfish Reef Restoration Network AGM (Adelaide, February, 2018). Catherine McMahon gave a [presentation](#) about the Port River Shellfish Restoration Project to attendees, who came from Europe, USA, Asia and across Australia. Five members of the Port River Shellfish Restoration Project attended the conference, with the support of AML NRM.
- **Science Article: SEGments** (December, 2017). [SEGments](#), the journal of the Scientific Expedition Group Inc, (December edition) includes an invited article on the history and projects of the Estuary Care Foundation (pp5 – 7).
- **Presentation: SA State Coastal Conference** (November, 2017). Catherine McMahon assisted on the organizing committee and presented on ‘*Estuary Care Foundation SA: community led restoration & climate adaptation*’.
- **Presentation: Coastal Ambassadors (April, 2018)**. Providing information to assist the training of coastal ambassadors for the AML NRM.

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## Governance

Following the resignation of Len Stephens (transfer interstate) and the Foundation's AGM on Feb 6<sup>th</sup>, 2018, the Board members are: Vanessa McCluskey (Chairperson), John Watson (Deputy Chairperson), Catherine McMahon (Secretary), Karina Mignone (Treasurer), Dennis Steffensen, Mitchell Bacon, and Sam Taylor. Two further positions may be filled as casual vacancies.



Board members: C McMahon, V McCluskey, K Albanese, J Watson, S Taylor, M Bacon, D Steffensen.

During the year the Board, assisted by Peter Day, developed a [Strategic Plan](#) and an Operations Plan, to guide long and short term activities. Both were formally accepted by the Board in March, 2018. Thought is now being given to a potential 'structure' for the Foundation, involving volunteer contributions and foci on field programs, volunteers, communication, marketing and administration. A Business Plan is also under consideration.

In procedural matters, the Board (led by John Watson) has prepared a physical Book of Minutes and endorsed a Policy for Electronic Participation.

The Foundation has formalized relations with Flinders Ports, with Deeds covering the Shellfish and Seagrass projects; one for the oysters trial at Outer Harbour, and one for the seagrass restoration trial at Snowden's north. A Permit is also held from Renewal SA to deploy oyster baskets in an area of Inner Harbour under their responsibility.

## Finances

Estuary Care Foundation's application to be registered as a charity has been accepted by ACNC (Australian Charities and Not-for-Profit Commission). The ACNC Charity Tick provides public reassurance the Foundation is transparent and accountable, and enables the Foundation to take advantage of tax concessions.



Frederick R L Ecksteen, Audit Principal with Collins & Co in Melbourne, has agreed to be engaged on a pro bono basis as auditor, and prepared a *Special Purpose Financial Report for The Year Ended June 30, 2017*. A Financial Report for 2017-18 will be prepared as a separate document.

The Foundation is experimenting with fund raising activities to help provide for operational expenses. While the expenses for projects are met through grants, the modest operating costs of the Foundation are not, making additional income or donations essential for sustained operations.