# .... about the Estuary



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### FORESHORE MASTER PLAN

The City of Melville is coordinating the development of a Master Plan for the area of foreshore in its care, bordering the Swan Estuary Marine Park (SEMP) and associated A-Class Nature Reserve at Alfred Cove. It will encompass Attadale, Alfred Cove and a small section of the Applecross foreshores. Forming part of Bush Forever Site 331 it is an extensive area of high conservation worth, directly impacting on the health and well-being of the River itself.

While the original landscape has been greatly compromised over many years, it still maintains and supports superb and internationally significant natural and ancient cultural heritage values, as well as important social values. Much of the terrestrial area has been highly modified and now designated for recreation.

The location faces many challenges. Ranking highest are those associated with climate change: higher temperatures, decreasing rainfall, sea-level rise and an increased severity and frequency of storms. As urban infill accelerates, there is also a growing demand for unspoilt places along our beautiful River for passive recreation.

SERAG is contributing to the community consultation process with a plan that will protect and strengthen the fragile biodiversity and ecological resilience of the Estuary and - at the same time - improve public amenity into the future. Our recommendations focus on addressing existing and potential threats to the site's natural heritage values, thus augmenting its capacity to provide wonderful passive recreational experiences for the community. Suggestions include widening riparian embankments immediately adjacent to the Marine Park to maintain natural visual landscapes and wildlife corridors; creating interesting walks, viewing spots and quiet resting places in pockets of native vegetation, and improving accessibility by softening particularly barren and uninviting areas with scattered plantings of trees.

Our vision for this very special place has been presented to the City of Melville and DBCA for consideration.



Little Black Cormorants (and a few other species) resting on a sandbar off Troy Park Photograph courtesy C O'Neill

# 'PROJECT ROBIN HOOD': DJINANG DJIDIMYA

This year SERAG is involved in the City of Melville's 'Project Robin Hood' - a participatory budgeting program through which people vote for funding support of community ideas, projects and events that build better neighbourhoods.

Our proposal is for the creation of a small seating area that would nestle softly in a particularly beautiful shady spot on the SEMP foreshore. Sensitively designed and constructed by a local artist, it would enable escape from life's stresses – creating a place where people can quietly pause to contemplate and enjoy some of the natural sights and sounds that have graced the Estuary for millennia.

Called Djinang Djidimya, Look! A Place of Many Birds it would acknowledge ancient natural and cultural heritage values.

We have suggested that lines spoken by Yagan in Jack Davis's play Kullark are embedded in the structure: The swan, the duck and other birds you gave me, And the waters teemed with fish a-shimmering bright. (Jack Davis, Kullark (1982))

The community can vote at <a href="https://www.melvillecity.com.au/projectrobinhood5">www.melvillecity.com.au/projectrobinhood5</a> until 5pm Sunday, 30 May.

# PRINCE PHILIP AND PELICAN POINT

The death of HRH the Duke of Edinburgh in early April has reminded many of us about his strong interest in and direct advocacy for the protection of Pelican Point as an important sanctuary for Estuary birdlife.

A plaque in the pavilion at the end of Australia II Drive acknowledges his early morning visit there in March 1963 - the result of a request he made the previous evening, from on-board the *Britannia*, to visit a good place for bird-watching.

It made front page headlines in various newspapers at the time and prompted Rigby (a top cartoonist of the day) to respond too.

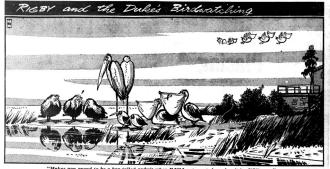
In 2013 we held a little celebration at Pelican Point, using the 50th anniversary of Prince Philip's visit to strengthen community commitment towards protecting this internationally significant bird habitat.

His archivist sent copies of some photographs the Prince took during that morning, for inclusion in our displays.

Around sixty guests from community groups, local and state government bodies, managing authorities and the wider public attended.

These images briefly recount the two events.

28 Daily News, Thursday, March 28, 1968.







# THREE OF MANY GOOD REASONS

The outstanding natural values of Pelican Point are captured wonderfully by this image of a Bar-tailed Godwit (a migratory shorebird) and a pair of Pied Oystercatchers (local shorebirds), probing the beach for nutritious morsels.

These fabulous birds would surely inspire anyone to make every effort to protect the Estuary's Marine Park, with its aim of conserving their habitat and that of a magnificent diversity of other native fauna and flora.

The photograph was taken on 14 April; hopefully by now the Bar-tailed Godwit will have made it back to the Arctic to breed.

\*Photograph courtesy T Graham-Taylor\*\*



# OSPREYS IN TROUBLE AGAIN

On a closer look at these wonderful photographs, taken by a first-time visitor to Alfred Cove, you will notice some troubling details.

In the first the osprey has mistaken a fishing lure for a healthy meal. In the second, a fishing hook and line is still attached to the fish.

WWF estimates the number of seabirds dying as a result of plastic at one million a year. Together with entanglement, ingesting plastic is a leading cause of plastic-related deaths among birds.

To reduce such threats to birdlife in the Estuary, SERAG will continue to request that recreational fishing is excluded from the small Marine Park areas of the Swan Canning River Park.





Photographs courtesy B Barnett

#### CLEAN UP AUSTRALIA DAY

In early March again SERAG hosted a successful and well-attended Clean Up Australia Day event at Pelican Point. Twenty-two people contributed their time and energy, the youngest being eleven and the oldest approaching seventy.

Excluding some large pieces of timber flotsam, over thirty-two kilos of litter was collected from parkland and bushland areas then sorted in the two-hour session. Bottles, metals, some plastic and paper items were carefully separated from each bag and recycled - but unfortunately much had to go to landfill.

Community volunteers relaxed afterwards, enjoying a delicious morning tea provided by our members.

















Photographs courtesy Y Fong & C O'Neill

# DBCA & DWER PLASTIC MONITORING PROJECT

There is a clear need for a coordinated action plan on plastics in Australia. Data collected indicates in the 2018-19 financial year, Australians used 3.5 million tonnes of plastic with a recycling rate of just 13%. Of this total, over 1 million tonnes was single-use plastics that went straight to landfill and approximately 130,000 tonnes leaked into the marine environment.

The Department of Biodiversity, Conservation and Attractions and Department of Water and Environmental Regulation have commenced a collaborative plastic monitoring project to determine the abundance, distribution and potential sources of plastic pollution in the Swan Canning Estuary. Field work for this project started in late April, with beach surveys and surface water trawls taking place in early March. Sampling will be conducted every three months.

We look forward to the results of this important research.

# TOMPKINS PARK PROJECT COMPLETED

SERAG has been working for just over a year on recovering a penultimate stretch of SEMP foreshore at Tompkins Park, which had been heavily degraded by weeds.

Many cycles of perennial and seasonal weed-removal and their replacement have been completed - the last substituting an aggressive monoculture of *Typha orientalis* with *Juncus kraussii*.

We are very pleased to see native species such as *Sarcocornia* quinqueflora, *Suaeda australis*, *Tetragonia tetragonoides* and *Apium prostratum* re-emerging of their own volition; and that species able to cope with drier conditions (eg *Ficinia nodosa*, *Conostylis* sp, *Rhagodia baccata*), planted last winter to stabilize the artificial embankment, have survived the summer well.

All will strengthen the narrow buffer's vital ecological functions, especially those of providing a habitat corridor for native flora and fauna, and filtering contaminants from surface water runoff.





CV! and Santa Maria College students assist with final planting; weeds gone, coastal saltmarsh species (Sarcocornia quinqueflora) recovering naturally among planted Juncus kraussii Photographs courtesy C O'Neill

This project was completed with State NRM Community Stewardship grant support. (We have one more section to go!)

## TTT TAKING A BREAK IN A SHADY SPOT

After an energetic two-hours on the Attadale foreshore, a volunteer's ute is piled high with bags of weeds for disposal, and the TREEmendous Tuesday Team can finally stop to enjoy morning tea and a chat.

Weeds removed during this particular session were mainly seasonal: prickly lettuce and fleabane, with some wild radish and black berry nightshade.

In the photograph, volunteers take advantage of the protection of the few remaining casuarinas along the water's edge, to recuperate.

When these trees are finally removed there will be nowhere left along that long stretch of foreshore for volunteer workers (or the wider community) to escape the searing temperatures of summer or shelter from winter winds.



Photograph courtesy M Matassa

# SUMMER TEMPERATURES ON ATTADALE FORESHORE

To explore the importance of trees in enabling community enjoyment of parkland, temperature measurements were taken on Attadale foreshore at 12.00noon, Saturday March 20 - a day Perth's officially recorded maximum was 36.7°:

- On the mown walkway down the centre of the open grassed dog-exercise area 42.5°
- On a seat under a mature lemon-centred gum tree: (i) in scattered shade 33.5° (ii) in the sun 37°
- On a seat in the shade of a Cape Lilac tree along the mown path 32.5°
- In the shade of remnant woodland trees at Haig Road 32°

No wonder the ~kilometre-long riverside location is unable to be enjoyed for so much of the time!

#### PLATFORM REPAIRS APPRECIATED

With repairs completed by DBCA, people can once again enjoy the beauty of Alfred Cove from a little viewing platform SERAG installed in 2013.

Constructed as part of a habitatrecovery project, with support from DBCA and *Caring for Our Country* and *Coastwest* programs, it was damaged by fire in November 2019.

It nestles unobtrusively within the A-Class Nature Reserve, providing disabled access to a quiet place at which passers-by can pause to rest and enjoy nature's loveliness, without disturbing or destroying it.





Repairs near completion; TTT enjoys nature and morning coffee, following yet another weeding session *Photographs courtesy R Napier & J Bishop* 

# ENCHYLAENA TOMENTOSA

It is often difficult for other plants to survive under the beautiful native *Casuarina obesa* - a tree species which fulfils important ecological functions on riparian margins. However, *Enchylaena tomentosa* is doing very well under a stand of *C. obesa* on Attadale foreshore.

Commonly known as 'ruby saltbush' it is an open, small perennial shrub, growing up to a meter in diameter. Its leaves are between 1–2cm long, narrowly cylindrical and may be hairy or smooth. Its leaf colour varies from dark blue-green to light shades of silver-grey and silver-green.

Its stems are distinctively marked with parallel lines and it generally flowers from June to September, producing succulent fruits which form as fleshy berries which change colour from bright green-yellow to bright red-orange.

Notably, the berries are a good food source for native birds, lizards and small mammals, so we will use it more widely in our restoration work.



Photograph courtesy C O'Neill

#### PLANTING BEGINS

Despite very dry soils and limited autumn rainfall, over the last few weeks volunteers have commenced planting in each of our principal recovery sites.

Seedlings provided by the City of Melville have enabled in-fill planting along the narrow riparian shoulder at Tompkins Park, where previous attempts have been lost through trampling or other pressures. Among a variety of species, *Rhagodia baccata* has been planted in 'dishes' to capture any rainfall.

This is a low-growing native shrub able to survive in challenging conditions - although it and the other 'newies' will be hand-watered until good winter rains help them become fully established.



Photograph courtesy R Napier

#### SALP 21

This year SERAG was again fortunate to receive a grant through the Swan Alcoa Landcare Program (SALP).

The grant will enable us to rehabilitate an area at Pelican Point choked by a plethora of seasonal and perennial weeds - thereby strengthening its habitat value. The project is an extension of work completed in past years.

Recipients were presented with their grants at a function at UWA. The photograph shows representatives from Friends of Bennett Brook, SERAG, Friends of Maylands Samphires and Friends of Lake Claremont, with Mr Reece Whitby MLA representing the Environment Minister.



Photograph courtesy Melinda McAndrew, SALP Manager

# SEAS OF FLEABANE REMOVED...

Always a challenging weed, summer's weather conditions proved conducive to explosions of fleabane across our various project sites.

An area of Marine Park at Pelican Point that has been our focus for a couple of years was no exception, transforming into a sea of fleabane.

Deterred from tackling the outbreak sooner by the breeding season for beach-nesting birds - and taking care not to disturb birds currently feeding and resting - hand-removal began in March and concluded in early May.

Unfortunately it quickly re-emerges!







Students from *Curtin Volunteers!* helped on a number of occasions, and the celebration of *International Day of Action for Rivers* was excellent motivation for *UWA Students 4 Environmental Action* (S4EA) to assist in this seemingly interminable task.

# ... AND SAMPHIRE RECOVERS

It is heartening to once more have swales of samphire emerging where weed species have been removed. This photograph shows *Sarcocornia quinqueflora* and *Suaeda australis* flourishing at a spot once strangled by couch and *Casuarina glauca*. Some was planted last year, but most is regenerating naturally.

A large clump of spinifex can be seen in the background and *Sporobolus virginicus* (native couch) in the immediate foreground.

The recovery of this special habitat for beach-nesting birds will be extended and enhanced with the help of this year's SALP grant.







Photographs courtesy C O'Neill

### FLEABANE IN THE BUSHLAND TOO!

Good numbers of wonderful volunteers came along to our *UWA@PP* events in April and May, which were general 'tidy-up' sessions in Bush Forever Site 402.

Various tasks were undertaken.

In April we removed masses of tall fleabane and tiny Victorian teatree seedlings from an earlier project site. Two strong people worked hard on clearing returning clumps of giant reed and *Casuarina glauca* suckers, and a few looked out for tambookie grass.



Tackling tambookie and fleabane Photographs courtesy C O'Neill & Y Fong

In May we completed a total 'sweep' of the site, discovering and removing major outbreaks of tambookie while collecting bags of litter on the way.



# HOLDING ON SO FAR

The soft erosion-mitigation strategies we are using to stem gnawing problems at the end of an unofficial track at Pelican Point seem to be working - although they are yet to be tested by a severe winter storm.

First, we have narrowed the width of the track, using stakes and tape to reduce the steady loss of vegetation along its edges.

A series of coir rolls have been installed, complemented by plantings of rushes and sedges in front and behind. Deep-rooting spinifex is also being trialed.

The coir rolls replace that function once provided by mature vegetation, lost to the site through trampling. Two processes are initiated: wave attenuation and shore-line stabilization that together maintain shorelines and reduce erosion.

As they allow surges to pass through and over them, the rolls absorb much of the impact of waves, reducing wave-energy that scours embankments where breaches in vegetation occur. As waves withdraw more slowly due to the roll impediment, any sediments they contain are deposited, steadily rebuilding the shoreline.

These energy-softening and accretion processes will also help newly planted species to establish themselves, and hopefully replace the need for artificial installations. Made of natural fibre, the rolls will eventually break down, with no negative impact on the environment.

#### EARTHDAY

On Earth Day - 22 April - further work was completed with help from our CV! team.

We installed hessian bags, behind the rolls and immediately against the retreating embankment. Filled with specially screened sand so as not to introduce foreign pathogens or other problems to the site, they will temporarily add strength to the embankment and time for vegetation to become established - but will naturally disintegrate over a couple of seasons.

Our efforts may need to be repeated before the 'blowout' is finally stabilized.







Photographs courtesy T Graham-Taylor & C O'Neill









### SHIFTING THE EROSION PROBLEM TO MILYU

Most of the narrow margin of River foreshore along the Kwinana Freeway north of Canning Bridge has been walled as a strategy to manage erosive pressures on infrastructure. Once walling begins it is difficult to stop - so now only Milyu is left.

This time last year geotextile sandbags were installed on the Milyu side of a storm-water drain. These hard structures encourage waves to dissipate their energy by sliding up the beach, often resulting in scouring of adjacent natural embankments.

Regrettably, with hard erosion-management practices, shallows may eventually be lost, along with benthic communities that underpin the biodiversity of Estuary life.



Photograph courtesy C O'Neill

#### SEDGES&RUSHES&WEEDS

Botanically, rushes are members of the *Juncaceae* family, while sedges are members of the *Cyperaceae* family.

Unfortunately, species' common names and general usage frequently confuse this division. For example, the *Typhaceae* family are often called 'bullrushes' and what are called 'sedge-banks' often comprise rushes.

At various places along the SEMP foreshore in Alfred Cove there are insidious weeds growing over, within and around the banks of native species. The problem is that some of these weeds are 'exotic' members of the same rush and sedge families, so herbicide treatments are not an option. Therefore they have to be removed by hand.

We have steadily tackled *Juncus acutis* for many years, but another weed - *Carex divisa* (which is part of the *Cyperaceae* family) - is unfortunately developing into a major problem, rapidly smothering healthy banks of *Juncus kraussii*. *Carex divisa* is of Eurasian origin and spreads by rhizomes (underground stems).

And there are others...

The first photograph is of *Cyperus rotundus* - most commonly called 'nut grass' - growing among *Juncus kraussi* and the native herb *Centella asiatica*, in a degraded area of A-class Nature Reserve east of Lentona Street. (A respected commentator has listed nut grass as one of the world's worst weeds!)

The second shows a volunteer holding *Cyperus rotundus*, but standing near a clump of *Cyperus involucratus* - a garden ornamental that has 'escaped' to become an environmental weed.

In the third, two volunteers examine *Cyperus eragrostis* - a robust, tufted perennial and a declared Pest Plant from South America. Declared Pest Plants are managed

under the Agriculture and Related Resources Protection Act 1976 with documented control strategies in place.

Cyperus brevifolius has also been found at the site. Known as 'Mullimbimby couch' it has very long slender creeping pink/brown rhizomes with roots below every stem. It spreads easily under quite dense vegetation and does not respond to herbicide.

SERAG will persevere in hand-removing small outbreaks of these weeds, but we will need to rethink strategies for dealing with *Carex divisa*.

Photographs courtesy M Matassa





# WORLD MIGRATORY BIRD DAY 2021

Sing, Fly, Soar – Like a Bird! is the theme of this year's World Migratory Bird Day.

Celebrated across the world on two peak days each year — on the second Saturday in May and second Saturday in October — the Day is an annual global celebration of birds and nature dedicated to raising awareness of migratory birds and the need for international cooperation to conserve them along all the major flyways of the world.

2021 focuses on the phenomena of 'bird song' and 'bird flight' as a way to inspire to unite in a common, global effort to protect birds and the habitats they need to survive.

We have something special planned for October.

# SHOREBIRDS COMPETITION 2021



ANSTO, one of Australia's largest public research organisations, is hosting a Shorebirds Competition.

The competition aims to draw attention to the great natural beauty of Australia's wonderful wetland and coastal areas and their importance in supporting diverse plant and animal life. It is open to **Year 3 to 6 primary students across Australia**, with entry through their school or as an individual. Students are invited to create a poster for a local wetland or coastal area that provides an important habitat for shorebirds and other animals. **The closing date is 6 August**.

SERAG is contributing prizes for the best works relating to protecting shorebirds and their habitats in and about the Swan River Estuary – ensuring mudflats, shallows, sandbars and beaches vital for feeding and resting over the warmer months, are ecologically healthy and free from human disturbance, for generations to come.

Further details (and teaching resources) can be found though this hyperlink: Shorebirds Competition 2021 | ANSTO

#### MORE THAN BONNE CHANCE NEEDED

Hopefully by now our migratory shorebirds have survived their perilous journey from various parts of Australia to reach their breeding grounds in Arctic regions, and are successfully raising another generation of intrepid fliers.

Following are snippets of fascinating information from BirdLife Australia about three representative species, photographed in the Swan Estuary Marine Park:

'The Greenshank males are the first to arrive at the breeding site and, after establishing a territory, will begin display flights, rising up and down in the air, while singing richly and sometimes tumbling and turning. Females may join in the display. The male will often build more then one nest before the female selects one. Nests are shallow depressions lined with feathers ....'

'Australia is the #1 destination for Grey Plovers (Pluvialis squatarola), but only if they're girls. Virtually all of the Grey Plovers that spend the non-breeding season here are female, making Australia crucial for the survival of the species.'

'Bar-tailed Godwits are the world record holders for non-stop flight: they have been recorded travelling 11,000km from Alaska to New Zealand in only 8 days, flying at an average of more than 50km/h. This journey is also a fantastic weight-loss program, as the birds lose almost half of their body weight along the way. Luckily, once they arrive in Australia, our mudflats are waiting, filled with tasty morsels to help them recuperate.'

We are so very fortunate to have migratory shorebirds still come to the Swan River Estuary each year - as they have done for thousands of years - and an independent not-for-profit organisation such as BirdLife Australia undertaking vital research to inform their conservation.

Common Greenshank, Grey (Black-bellied) Plover & Bar-tailed Godwit feeding on the Estuary

Photographs courtesy S Waller & D Brauhart









#### FOR YOUR JUNE CALENDAR

- TREEmendous Tuesdays Bushcare Alfred Cove 7.30am 9.30am
- 05 World Environment Day
- 05 (Sat) UWA@PP Bushcare Pelican Point 8.30am 10.30am
- 08 (Tues) School Planting Afternoon Pelican Point 1.00pm 3.00pm
- 14 Monthly Monday at Milyu Litter Collection Milyu 7.30am 9.30am
- 24 (Thurs) Bird-count Alfred Cove
- 26 Saturday Morning at the Cove Bushcare Alfred Cove 8.00am 10.00am
- 30 Some SERAG members may receive a membership-renewal reminder

Please contact SERAG for further information or to register your interest in any event

To encourage responsible cat-ownership, the City of Melville is preparing a *Cat Management Plan*. Research confirms free-roaming cats can devastate many native wildlife populations, including birds, lizards, frogs and small mammals. The community is invited to comment at www.melvillecity.com.au/catplan.



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