



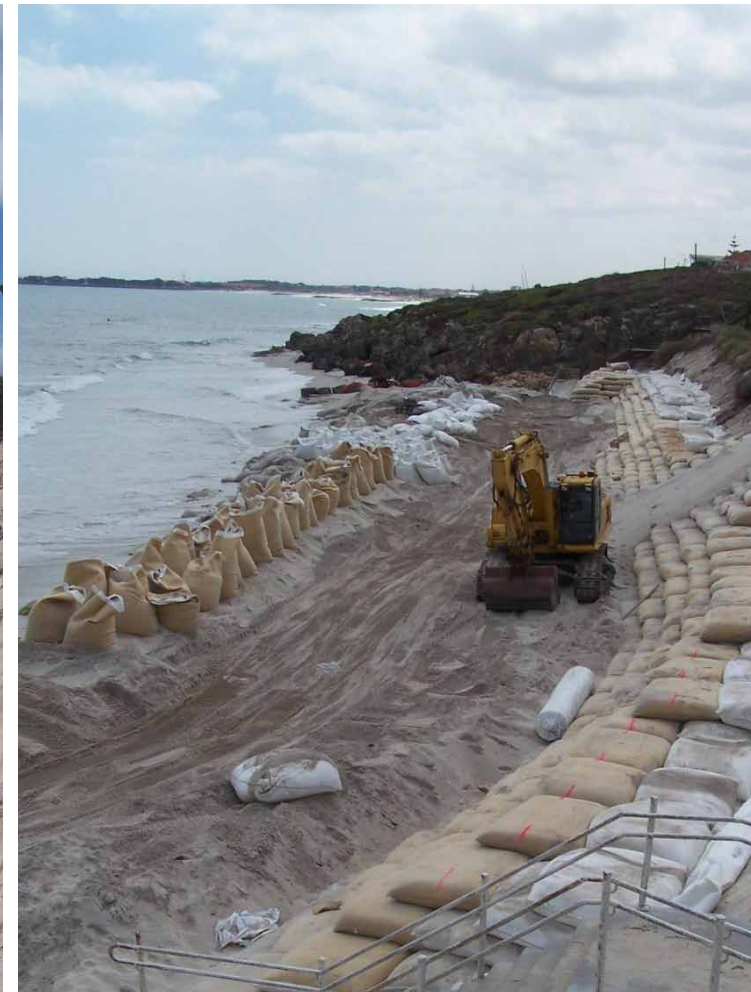
## Waterman Bay Coastal Protection Project

The Bay Beaches within the City of Stirling are subject to a high degree of erosion and instability due to the geological nature of the area and narrow beach widths. Over the years, Waterman's Bay has lost a significant amount of sand, which has put the existing infrastructure and potentially this section of West Coast Highway at risk. Following sand renourishment undertaken last year, the City is currently in the process of implementing the second phase of its strategy to contain the re-built dunes and to defend these dunes from repeated erosion over subsequent winter seasons.

If you have been through the area recently you may have noticed some large-scale activities happening at Waterman's Bay - this work involves the construction of a defensive 'soft wall' designed to withstand the buffeting of high tides and storm surges. The 'soft wall' will comprise layers of heavy duty geo-textile bags filled with beach sand and packed tightly against the frontal slopes of the rebuilt dunes. The 'soft wall' will be based on a concrete foundation 'keyed' into limestone rock occurring naturally just below beach level so as to ensure that the structure is not undermined by tidal action.

It is expected that the wall will cover the lower two thirds of the re-built dune surfaces, with the upper one third of the dunes subject to further sand nourishment as well as natural accretion of wind blown sand. Extensive planting with appropriate coastal species should aid in the stabilisation of the area and the retention of sand - this may give the Coastcare groups working within the area a chance to get involved!

The project is an interesting case study and may well prove to set an example for other regions facing similar problems. With the increasing threat of climate change and sea level rise impacts, this type of construction could become common along the urban coastline, so it is worthwhile following the progress of the construction and keeping an eye on how it fares through the next few winters.



# Challenger Beach Bandicoot Refuge at Kwinana

Following the sighting of bandicoots at Challenger Beach Reserve, the Town of Kwinana, in association with the Department of Conservation and Environment and with support from Alcoa, initiated the Bandicoot Refuge Project.

At four sites in the reserve a series of 100mm clay pipes were laid out in two configurations (one straight and one curved section approximately 1.1 metres in length). The pipes were covered with sand to provide protection from the sun then covered by branches to help blend in with the surrounding vegetation. The refuge pipes were installed in November 2009 then in February 2010 one nesting box was installed at each of the refuge sites.

The pipes will provide a refuge from predators including foxes and cats and the inclusion of a nest box will hopefully encourage bandicoots to nest in safety.

To record bandicoot usage in the refuges, double sided tape was installed to collect hair samples that were then identified by DEC researchers. At each site a control was established and the area searched for conical holes - the tell tale sign that bandicoots are present. When Bandicoots forage for small insects they dig into the soft sand with their snouts leaving these distinctive diggings.

Surveys will be carried out on a monthly basis for a 12 month period to determine the frequency and seasonality of use by bandicoots. As bandicoots can breed throughout the year it is hoped that the nesting boxes will encourage nesting or at least provide additional shelter from predators and inclement weather.



DEC Regional Ecologist Geoff Barrett inspecting the bandicoot nest box

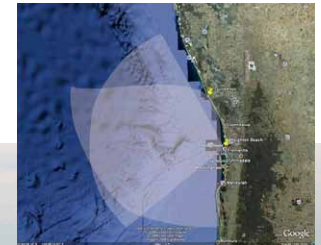
# ACORNS at Leighton Beach, Fremantle

If you have been to Leighton Beach recently and were wondering what the line of three metre tall aerials along the dunes might be - the answer to your question is ACORN. The Australian Coastal Ocean Radar Network or ACORN was installed earlier this year with the aim of providing continuous mapping of sea surface currents at locations around Australia. Other installation sites include Queensland, New South Wales, South Australia and another site on Western Australia's Turquoise Coast.

ACORN will map surface currents, wave heights and wind direction and will be used to support research on the Leeuwin Current including the transport of larvae and its potential impact on fish and lobster ecology. Accurate current maps can be used for search and rescue events or for pollution monitoring in the event of marine spills.

ACORN can also be used to produce maps that show current patterns out to the continental shelf and to study tsunamis as they enter coastal waters.

Additional information on the ACORN project is available on the following website: [www.imos.org.au/acorn.html](http://www.imos.org.au/acorn.html)



ACORN aerials at Leighton Beach (top) & Fremantle Site radar range

## Upcoming Events in 2010

### North Metro Coastcare

Friday 7<sup>th</sup> May – 3<sup>rd</sup> Waves Clean the Beach Challenge @ Trigg beach 9.00am  
 Sunday 2<sup>nd</sup> May - Cottesloe Coastcare Regular Working Bee – 9.00 – 11.00am Site TBC

### Joondalup Community Coastcare Forum - planting dates:

Sunday 30<sup>th</sup> May - Mullaloo Beach - 9.00am  
 Saturday 5<sup>th</sup> June - Mullaloo - 9.00am  
 Saturday 12<sup>th</sup> June - Iluka - 9.00am  
 Sunday 20<sup>th</sup> June - Mullaloo - 9.00am  
 Saturday 26<sup>th</sup> June - Mullaloo - 9.00am  
 Sunday 4<sup>th</sup> July - Mullaloo - 9.00am

Wednesday 7<sup>th</sup> July - Mullaloo - 9.00am  
 Saturday 10<sup>th</sup> July - Iluka - 9.00am

### Quinns Rocks Enviro Group:

Sunday 16<sup>th</sup> May - Bushcare Morning at Quinns Rocks Primary School - 8:30-10:30, Meet Quinns Rocks Primary School Carpark  
 Sunday 27<sup>th</sup> June - Planting at Quinns Beach bushland - 9.00 - 11.30am, Cnr McPharlin Ave and Quinns Rd, Quinns Rocks

### South Metro Coastcare

Sunday 18 April Indigenous walk at CY O'Connor Beach, Cockburn  
 Saturday 5 June Kwinana Beach, Kwinana  
 Saturday 12 June Leighton Beach, Fremantle  
 Saturday 19 June Singleton Beach, Rockingham  
 Saturday 26 June Coogee Beach, Cockburn  
 Sunday 4 July Bathers Beach, Fremantle

# New Lookout at Turtles Bend, Secret Harbour

**The City of Rockingham in conjunction with Perth Region NRM has recently completed a strategic beach rehabilitation project that involved crafting a substantial piece of coastal infrastructure.**

Through the Perth Coastal Biodiversity Project several areas of environmental value have been selected along the WA metropolitan coastline with the intent to protect and promote these areas for their strategic environmental and amenity value.

One such area is the node of remnant bushland located between the Secret Harbour and Golden Bay subdivisions situated approximately 10 minutes south of Rockingham.

The sites' coastal vegetation complex of *Acacia rostellifera* and *Acacia cochlearis* with *Rhagodia baccata*, *Spyridium globulosum* and *Acanthocarpus preissii* understorey is typical of the Quindalup Complex in that area.

Urban pressures from the newly created subdivisions have the potential to degrade the already fragile and pristine coastal ecosystems. The Parks Services Team from the City of Rockingham have allocated funding to better manage pedestrian traffic in this area with construction of the lookout. The lookout was built using jarrah bush poles and decking and was engineered to withstand user demands and the highly variable weather ranging from intense storms to intense sun.

The South Metro Coastcare Officer, Mr Craig Wilson, in partnership with Conservation Volunteers Australia (CVA) organised several planting days after the construction of the lookout to return the "building footprint", which was created during construction, back to its original form with endemic coastal species.

The lookout located off Turtles Bend has been named in honour of Mr Riki Tirikatene who made an outstanding contribution to the development of Golden Bay and to environmental conservation in the local area.

If you would like further information please contact the City or Rockingham Conservation Officer, Mr David Mort, on 9528 0487.



**Turtles Bend Lookout**

## Coastal Plants Workshop

**In November 2009 the Coastcare Program held a coastal plants workshop in conjunction with Conservation Volunteers Australia and generous support from Woodside. The workshop was open to all Coastcare group members, students, and interested members of the public, and we saw a great response from various corners of the metro area.**

We were fortunate to have the services of Julia Cullity (from Department of Environment and Conservation's Urban Bushland Program) to facilitate the workshop. The day started off with a session on the importance of good plant identification skills and the relevance of these to effective management, with practical exercises in learning about

botanical terms and plant morphology. Following this, Julia described some of the resources available to help with plant identification - everything from textbooks to web-based data collections.

Once well-versed in knowing bipinnate from striate, perianth from phyllode and other tricky taxonomic terms, we launched

into a plant identification activity that involved using the resources available to work out what various coastal plant specimens were and how to differentiate between species that can be easily confused. This proved especially challenging when it came to the grasses and sedges – many participants found themselves stuck on these plants for quite a while!

Following a well-deserved lunch break we headed up the coast to North Beach/Watermans Bay. Here we were able to use our identification skills in the field whilst taking a walk through some of the coastal rehabilitation areas that the Stirling Natural Environment Coastcare group are working on.



**LEFT: Participants developing their identification skills**

**BELOW: Sue Conlan and Julie Cullity viewing a computer bases identification program.**

All in all a very successful day and hopefully all participants are out putting their increased skills in plant identification to the test!

If you are interested in coming along to future Coastcare workshops or have a suggestion as to a workshop theme or subject, please contact either Craig Wilson or Kate Sputore.



# Ecological Restoration of Mudurup Rocks

Cottesloe Coastcare Association (CCA) and the Town of Cottesloe were successful in receiving a grant to the value of \$34,420 to carry out a coastal rehabilitation project at Mudurup Rocks.

This grant is courtesy of Synergy and Landcare Australia, and the work to be carried out at the site involves the protection of valuable remnant vegetation, enhancement of biodiversity, planting of local native species and erosion control at this fragile coastal site. The location is highly central to Cottesloe's main beach, is bordered by the dual use path and Marine Parade and sees a huge amount of passing traffic, so it is hoped that the main rehabilitation area will provide a great visual example of how native coastal vegetation can be utilised in place of grass.



*Synergy staff and Cottesloe Coastcare volunteers in action at Mudurup Rocks, Cottesloe.*

Cottesloe Coastcare Association volunteers have been busy collecting seed and hand weeding the site to prepare the area for planting thousands of local provenance seedlings during autumn and winter 2010. On Friday 13th November 2009 Synergy staff and CCA volunteers worked together in an afternoon of hand weeding. Many bags of dune onion weed, sea spinach and rose pelargonium seedlings were removed, with the roots being cut with knives and small trowels to create minimal soil disturbance at the site. After a good afternoon's work the Synergy crew gathered at the Cottesloe Civic Centre and enjoyed a well earned picnic. During winter, Synergy staff will return for a planting session and really get their hands dirty!

Over the next 6 months there will be the opportunity for the local community, surfing groups and schools to all get involved in this project and give Cottesloe Coastcare a helping hand.

# Coastal Upgrade at C.Y. O'Connor Beach, Cockburn

As a significant component of a Coastwest grant, the City of Cockburn have installed new access management fences at the southern end of C.Y.O'Connor Beach. Existing fences were in a severely weather degraded condition which posed a hazard for beach goers and created wind tunnels effecting the stabilisation of nearby dunes and recent planting areas.

The upgrade is part of a broader program of works at C.Y. O'Connor Beach including a revegetation program which will see over 5000 plants native to the coastal zone installed to help improve biodiversity values at the site and encourage

responsible use of the beach.

A seed collection workshop, also funded by Coastwest for community members, was held on 23<sup>rd</sup> January. Community members were instructed in the legal requirements of seed collection of native flora, the importance of responsible seed collection and developed skills in collection and processing of native seed. The City of Cockburn will also be holding an Indigenous cultural walk on 18<sup>th</sup> April at C.Y.O'Connor to highlight aspects of Noongar culture including bush tucker animals and plants, as well as stories of the coast and its importance to Aboriginal people.



*New fencing installed at CY O'Connor Beach, Cockburn*