# This is a submission

*To*:

State Development, Natural Resources and Agricultural Industry Development Committee
SDNRAIDC@parliament.qld.gov.au

*From*:

Robert Westerman
Convenor, Gold Coast Shorebirds Group
[redacted]
Mobile [redacted]
Email [redacted]

*Regarding*: 'Implementation of The Spit Master Plan Bill 2019'.

*Primary objective of Bill* Facilitate the implementation of the Spit Master Plan
*Purpose as in Part 1, Sect 2* (b) providing a streamlined process for the granting under the Lands Act 1994 of particular interests in land in the master plan area to the State.

*Background Information.* Curlew Island is about one kilometre south of Wavebreak Island and it falls within the Spit Master Plan area.
It is one of the most significant environmental sites in the whole of the Gold Coast Broadwater. It is only eclipsed by Swan Bay adjacent to Jumpinpin Bar. Sometimes up to 1000 shorebirds and seabirds gather here. It is the roost and feeding area for large numbers of International migratory birds, Australian shorebirds, terns, gulls and other species. These birds require a high tide roost site and Curlew Island is regarded as a critical roost site for these birds. A number major studies and collected data confirm its importance. A summary of these studies is attached.
The island is significant under the EPBC Act for the number of migratory birds (Eastern Curlews, Double-banded Plovers and Whimbrels) found here. It is also significant for the number of migratory species found here, and the number of *critically endangered* Eastern Curlews and *vulnerable* Bar-tailed Godwits (under the EPBC Act) present on this site.
Curlew Island is not official land and as such is denied all the protection and management practices which are normally associated with protected lands. This means people are free to behave as this wish here without fear of prosecution and the current harassment of its wildlife is very high. The unclear status of the island means that no government authority has the right to manage it. The recommendation of the Spit Master Plan aims to correct this situation.
Though the recommendation is only two lines long in the Spit Master Plan, a considerable amount of time was devoted to this topic during the consultation period. It was seen as a key element in the environment policy of the Master Plan. The recommendation for Curlew Island dovetails with the recommendations of Wavebreak Island.

*Curlew Island Recommendation.*
This is found on P54 of the Spit Master Plan recommendations.

**2.9 Curlew Island is appropriately zoned and managed to protect and enhance its environmental values.**

***Implication*** Curlew Island is not currently designated as land and it must be designated as land and registered as a land parcel for the Spit Master Plan recommendation to be implemented. This will require that it be surveyed for environmental purposes. Under the Lands Act 1994 protected areas are allowed more flexible surveys to reflect their environmental use. This allows temporary inundated areas and permanently inundated areas to be included in the land parcel. A marine boundary is suitable for Curlew Island but a boundary based on the average Neap High Tide rather than the average Spring High Tide is more appropriate as it would allow sandbank areas

where the wildlife gathers to be fully protected. Registration of the area as a land parcel may follow this survey providing all legislative requirements are met.
There are two courses which could be followed here:

- Curlew Island could receive an initial registration of 'Unallocated State Land'. This would facilitate its final designation at a later date.
- Curlew Island could receive its intended final designation.

There a number of appropriate zonings which could be applied to Curlew Island. These could include:

- Add Curlew Island to the existing 'Southern Moreton Bay Islands National Park'.
- Designate Curlew Island as 'National Park (Aboriginal)' under the Qld Nature Conservation Act.
- Designate Curlew Island as a Conservation Park under the Qld Nature Conservation Act. Administration could be carried out by the Qld Government, Gold Coast City Council or an appropriate trustee.
- Designate Curlew Island as an Environmental Reserve under the Lands Act 1994. Administration could be carried out by the Gold Coast City Council or an appropriate trustee.

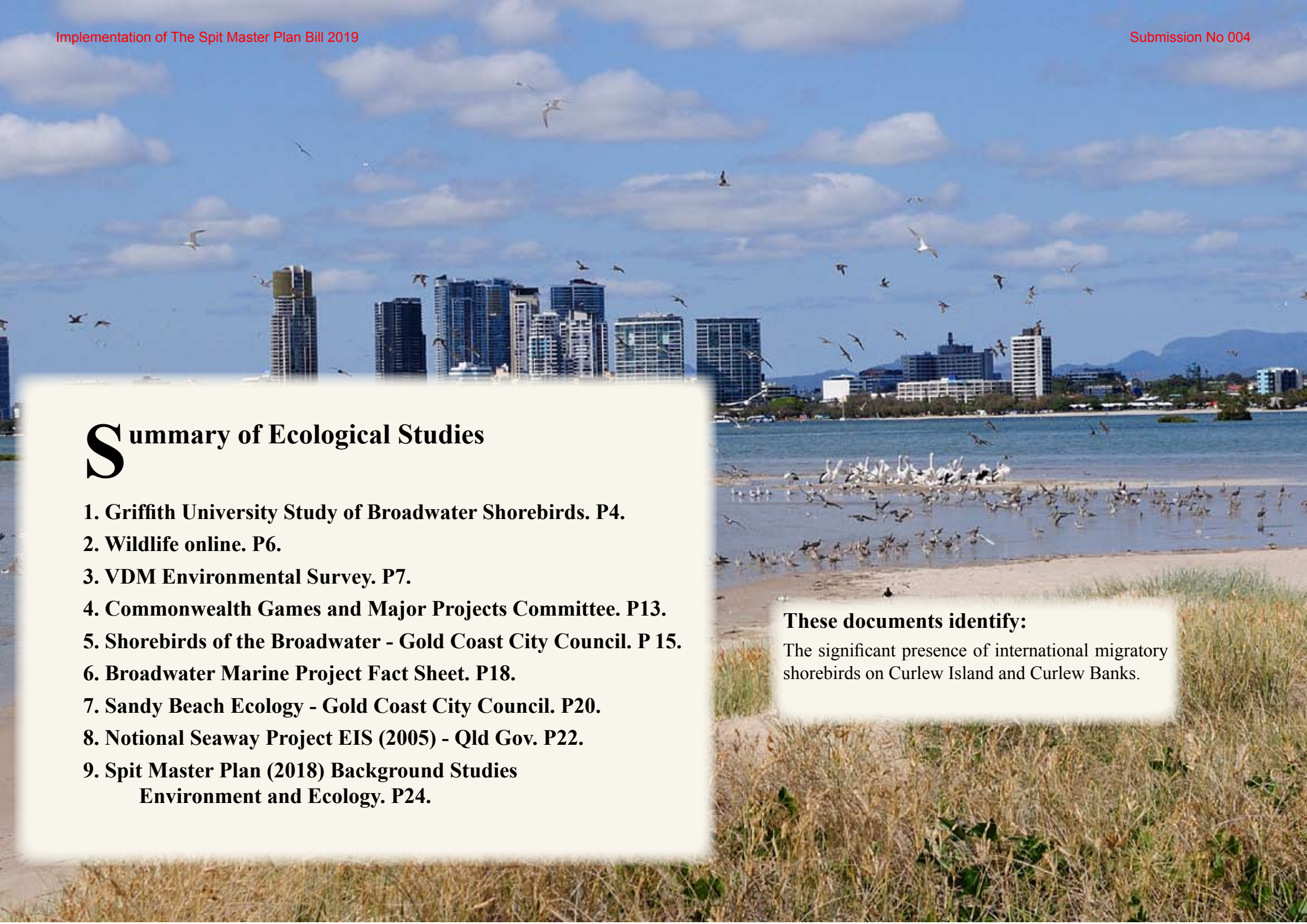
The decision for the zoning of Curlew Island was the task of the Gold Coast City Council, Qld Government and Gold Coast Waterways Authority. Sufficient time has elapsed for this determination to have been made but that determination has not been published. If that decision has been made it may be implemented through this Act in accordance with the purpose of the Act as in Part 1, Section 2.

*Concern*: **The zoning of Curlew Island**, which is directly south of Wavebreak Island, and within the Master Plan, and which will require consideration under the Lands Act 1994. It has not been considered by this Bill.

It would appear that the purpose of this Bill is to clear legal hurdles associated with the implementation of the Spit Master Plan. There are significant legal issues associated with the implementation of The Spit Master Plan recommendation for 'Curlew Island'. These issues may require consideration by parliament in terms of the Lands Act 1994. If the purpose of this Bill is to be fulfilled as stated in Part 1, Sect 2, the recommendation for Curlew Island under 'The Spit Master Plan' should be addressed. This Bill appears to be the appropriate instrument to address this matter.

*Recommendation* That a clause be inserted in this Act which will address the land status of Curlew Island and facilitate the implementation of The Spit Master Plan recommendation for this island.

Robert Westerman
Convenor, Gold coast Shorebirds Group.
13/12/2019



# Summary of Ecological Studies



**These documents identify:**

The significant presence of international migratory shorebirds on Curlew Island and Curlew Banks.

There are two major sites on the Broadwater where there are concentrations of birdlife of international significance. They occur at either end the Broadwater around the entrances to the Pacific Ocean - Jumpinpin Bar and the Gold Coast Seaway (Nerang River mouth).

This is confirmed by 'Wildlife Online' and the study:-

*'Review of known shorebird habitats, distribution and threats in Gold Coast Waterways'.*

*Published by Griffith University in May 2017, and commissioned by the Gold Coast Waterways Authority.*

The most important part of the southern site is the sandbank system just south of the Nerang River entrance and Wavebreak Island. This area has the official names of *Curlew Island* and *Curlew Banks*. Both major areas have important shorebird (or migratory wader) roosts and the VDM Report shows that these areas are significant for other types of marine animals such as fish, turtles, dugong and dolphins.

The importance of Curlew Island and Curlew Banks is supported by detailed investigations, counts and EIS statements. Investigations have been carried out here for many years as well as by Gold Coast City Council under the Ron Clark administration, 2004-2012.

It is surprising that the boundary for the Moreton Bay Marine Park and the RAMSAR zone excluded the southern part of the Broadwater, given its known value at that time. Did political considerations of the day influence where the boundary was drawn?

**There have been some major consequences for the southern Broadwater caused by this decision.**

*1.There has been a perception by the general public, some officials, some elected members and potential developers that this area is of minor ecological value.*

The reverse is true. A review of scientific literature would show that the southern Broadwater is of much higher ecological value than many of the areas inside the Marine Park boundary.

The area easily meets the criteria to bring it within the ambit of the EPBC Act but this does not assist with daily management.

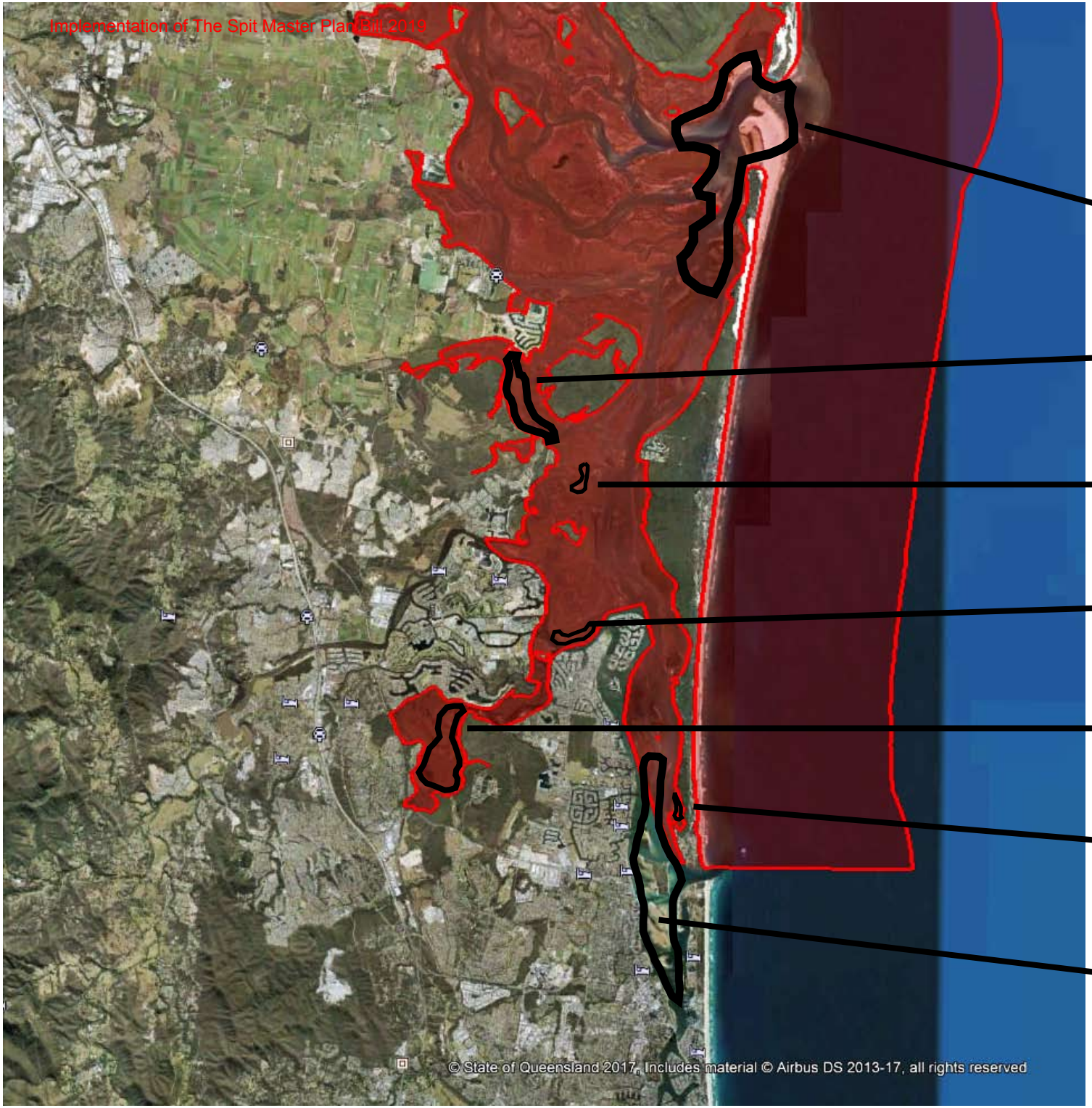
*2. The second consequence has been that the southern Broadwater has no protection and no form of daily management allowing environmental offenders to behave as they please.*

Birdlife Australia wished to remedy the abuses occurring on Curlew Island but found there was no agency able to assist.

- The area was not *Marine Park*, *National Park* or *Regional Park* so the Qld Government had little power to act. In practical terms these agencies have no boats here and few personnel to carry out enforcement.
- The area was not an *Environmental Park* under the Local Government Act so Council was not involved.
- The Gold Coast Waterways Authority under its Act has a duty to promote tourism but has no authority to protect or manage natural assets such as wildlife.
- Water Police are not involved in environmental enforcement unless that power is delegated to them.
- Part two of the 'Nature Conservation Act' only applies in extreme situations -eg taking of wildlife.

# Moreton Bay Marine Park and Shorebird Habitats

*Park Zone shown in Red*




**Jumpinpin**

***Prime Habitat***

Pimpama R - Mccoys Ck

*Important secondary Habitat*

North Branch Coomera River
Important secondary Habitat

South Coomera Island

*Important secondary Habitat*

Coombabah Lake and Creek

*Very Important secondary Habitat*

Brown Island

*Important secondary Habitat*

**Wavebreak Island/ Southport**

***Prime Habitat***

# 1. Griffith University Study of Broadwater Shorebirds.

This study was commissioned by the Gold Coast Waterways Authority and it was produced by Griffith University. This study confirms the importance of Curlew Island and Curlew Banks.

Extracts from the report are shown below.

Curlew Island and Curlew Banks form part of the Wavebreak Island / Southport region described in this document.

## 1. Executive Summary

Gold Coast Waterways Authority (GCWA) has a responsibility to strategically plan for, promote and manage the sustainable use of Gold Coast waterways under the *Gold Coast Waterways Authority Act 2012* (GCWA Act). These waterways contain a variety of ecosystems of environmental importance, including mangroves, seagrass meadows, inland waters and tidal flats. These ecosystems provide important habitat for many species, including populations of resident and migratory shorebirds.

This project reviewed existing information (i.e. literature and available data) on known shorebird habitats, distributions and threats in Gold Coast waterways under the following broad objectives:

- Identify the important shorebird populations, communities and habitats in Gold Coast waterways.
- Assess the relative importance of shorebird populations, communities and habitats in Gold Coast waterways on a local, regional, national and global scale.
- Assess the important shorebird populations, communities and habitats in Gold Coast waterways for their resilience and sensitivity to current and future threats.

# Review of known shorebird habitats, distribution and threats in Gold Coast waterways (SRMP-013)

**Gold Coast Waterways Authority**

**Scientific Research and Management Program**

**May 2017**

**Rochelle Steven**

**David Milton**

**Rod Connolly**

**Guy Castley**

*Page 81*

## 8. Summary

The key findings from this report are summarised in the list below and should be considered in the broader context of the preceding text.

- 30 shorebird species were identified at 40 sites within Gold Coast waterways:
  - 8 are resident species and 22 are migratory species
  - 8[7] species are listed as threatened—
    - 5 species 'Critically Endangered'
    - 1 species 'Endangered'
    - 3 species 'Vulnerable'
  - 5 species met the criteria for recognising areas of Gold Coast waterways as nationally important habitat for migratory shorebirds.
- Based on the 6 broad regional shorebird areas of Gold Coast waterways:
  - 2 were identified as important for threatened species—
    - Jumpinpin (3 species)
    - Southport Wavebreak (2 species)
  - 3 met the criteria for recognition as nationally important habitat for migratory shorebirds—
    - Jumpinpin (4 species)
    - Southport Wavebreak (3 species)
    - Southern South Stradbroke (1 species)
  - 1 is not within the boundary of a protected area, such as the Moreton Bay Marine Park (*i.e.* Southport Wavebreak).
- Monitoring data contained insufficient detail to:
  - discriminate among foraging, roosting or nesting sites and identify those that were important for shorebirds
  - spatially identify the geographical extent of important habitat areas to enable their mapping.
- Information on the nature and extent of many of the potential threats to shorebirds in Gold Coast waterways is extremely limited.
- The identified information gaps should be addressed through additional research, such as:
  - validation of existing data and potential identification of additional sites and/or species
  - quantifying the spatial extent of key foraging, nesting and roosting sites
  - assessing the nature and extent of potential threats, as well as responses by shorebirds.

**Wildlife online** is the official database of Queensland species and their status. It is prepared by the Queensland Department of Environment and Heritage Protection and is used by companies preparing EIS statements.

Public access and record retrieval is available through the EHP website.

The Eastern Curlew is listed as *Critically Endangered* under the EPBC Act. The Bar-tailed Godwit is listed as *Vulnerable*.

The table below is compiled from records extracted on 12/07/ 2016. Records for the **Eastern Curlew** and **Bar-tailed Godwit** were extracted from this database for each of the sites below. These sites are the recognised sites within the Gold Coast Broadwater where significant numbers of shorebirds are found.

**These figures illustrate the importance of the unprotected 'Curlew Island and Curlew Banks, and the natural areas of Coombabah Creek and Coombabah Lake' as a role in the future conservation of the Eastern Curlew and Bar-tailed Godwit.**

**Personal surveys of the Jumpinpin site this year indicate that this site may have collapsed due to unmanaged tourist pressure. This makes Curlew Island even more vital in the conservation of these species.**

***Wildlife online records 12/07 2016***

| Location | Latitude | Longitude | Records from | Record Range | Eastern Curlew | Bar-tailed Godwit |
|---|---|---|---|---|---|---|
| Swan Bay | -27.720 | 153.441 | 1980 | 1.5 klm | 27 | 28 |
| Jumpinpin | -27.747 | 153.441 | 1980 | 2 klm | 157 | 155 |
| Brown Island | -27.882 | 153.418 | 1980 | 2 klm | 57 | 45 |
| McCoy Ck | -27.820 | 153.379 | 1980 | 2.5 klm | 9 | 14 |
| Coombabah Lakes | -27.892 | 153.358 | 1980 | 3 klm | 88 | 65 |
| Steiglitz (mangrove area) | -27.7441 | 153.3537 | 1980 | 3 klm | 8 | 0 |
| Curlew Island | -27.945 | 153.417 | 1980 | 2 klm | 144 | 144 |


# 3. VDM Environmental Survey

Prior to the election of the Campbell Newman Liberal - National Party Government in 2012, a steering committee was established to implement a port authority for the Gold Coast.

This committee commissioned an environmental study of the Gold Coast Broadwater which resulted in the VDM Environmental Survey.

The report highlights the environmental value of the Curlew Island and Curlew Banks.

**Extract from the Conclusion of the VDM survey, P149**

*"A number of shorebirds of conservation significance were recorded during the surveys in the project area. These migratory species are protected under international agreements (i.e. Bonn, CAMBA, GAMBA, JAMBA and ROKAMBA) and the Commonwealth Environment Protection and Biodiversity Conservation Act 1999. Additionally, three (3) of the shorebird species are identified as identified as Endangered, Vulnerable and Near Threatened under Queensland and Commonwealth legislation –*
*Numenius madagascariensis (eastern curlew), Sternula albifrons (little tern) and Esacus magnirostris (beach stone-curlew). These species were all recorded on and/or within the vicinity of Wavebreak Island. This area was identified as highly significant for shorebirds."*

The following pages are extracts from this report.

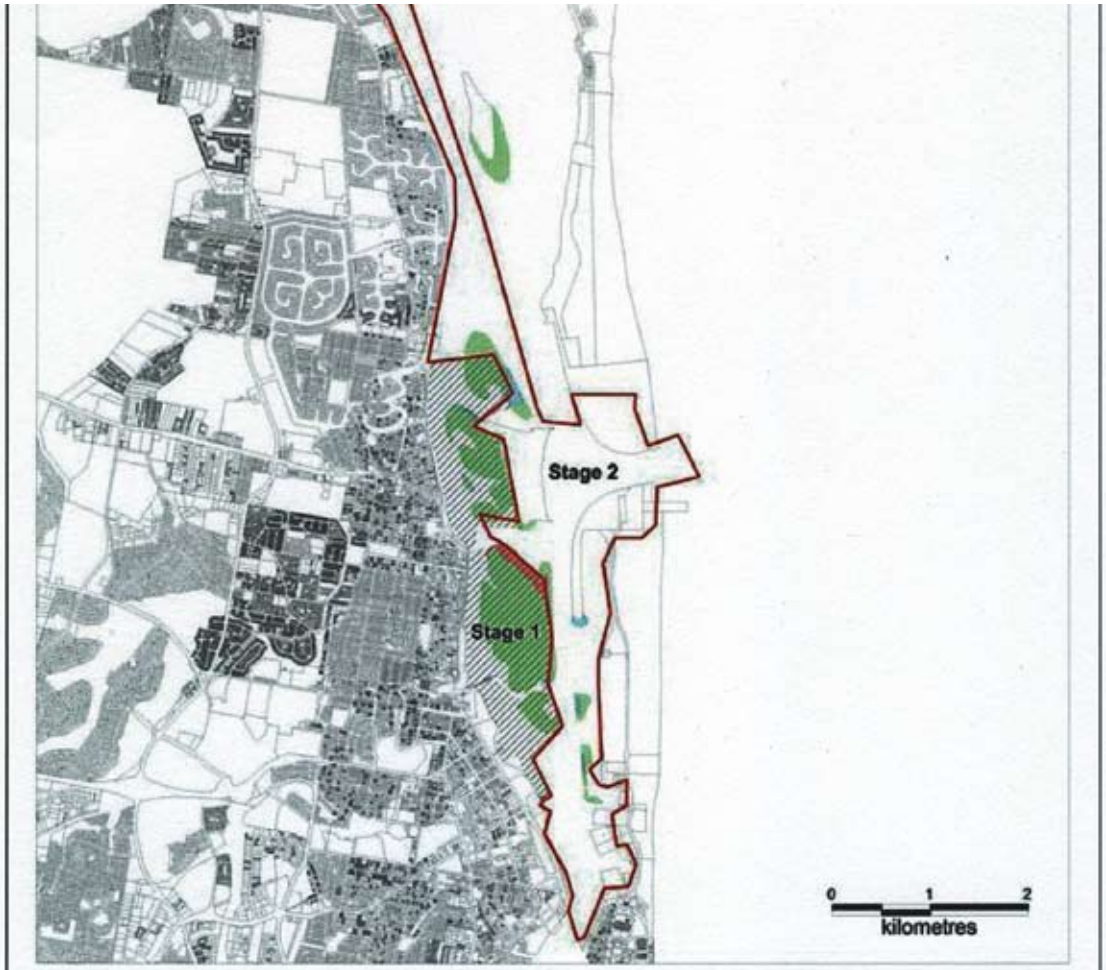


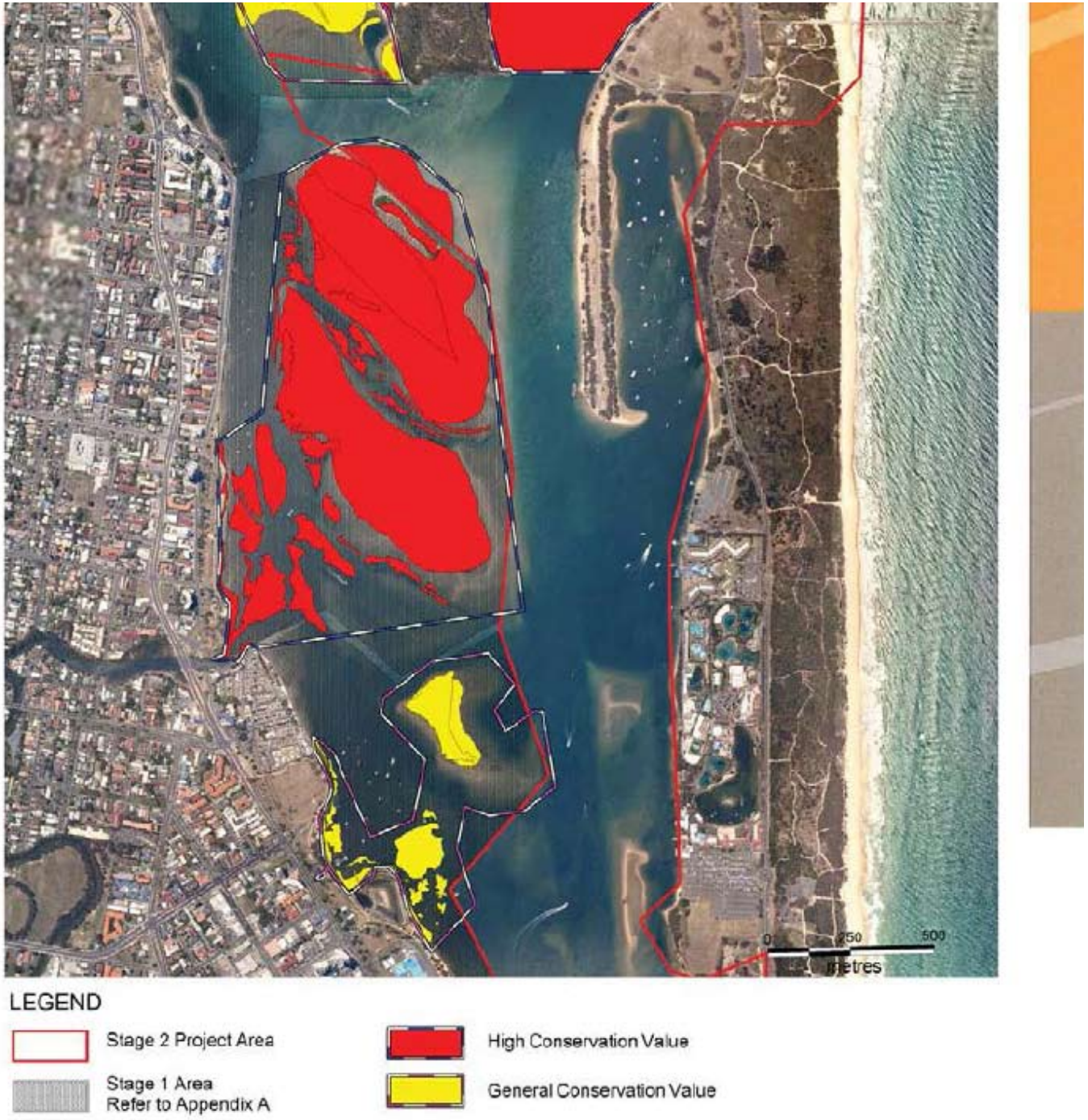

Figure 4.1 Shorebird Foraging and Roosting Sites in Project Area

Client: Gold Coast City Council Page 73

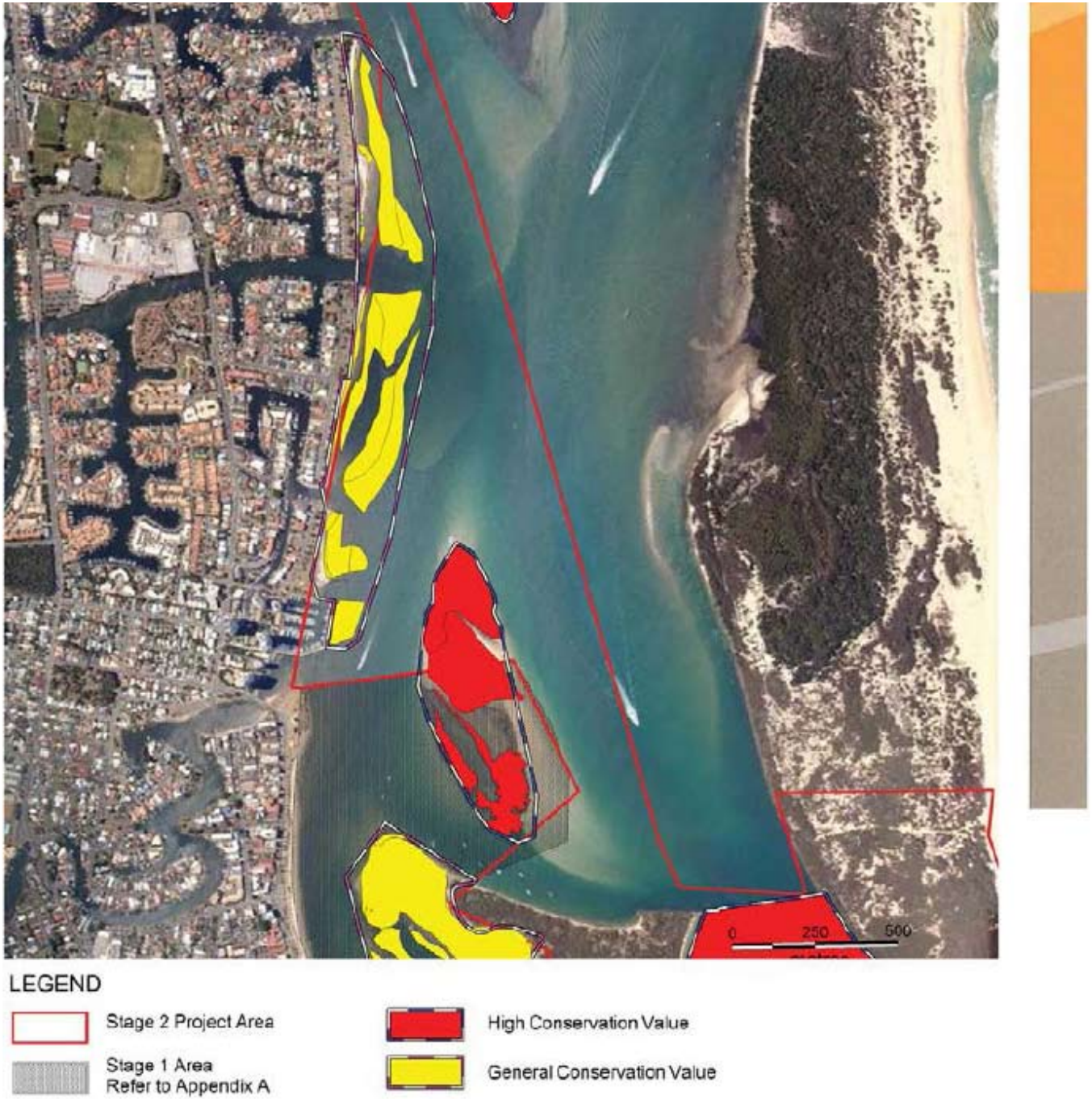
**Shorebird Foraging and Roosting Sites.**

This map shows the foraging areas for shorebirds include 'Curlew Banks', the western shores of Wavebreak Island and Carter Bank.

It shows 'Curlew Island' as a major shorebird roosting site.

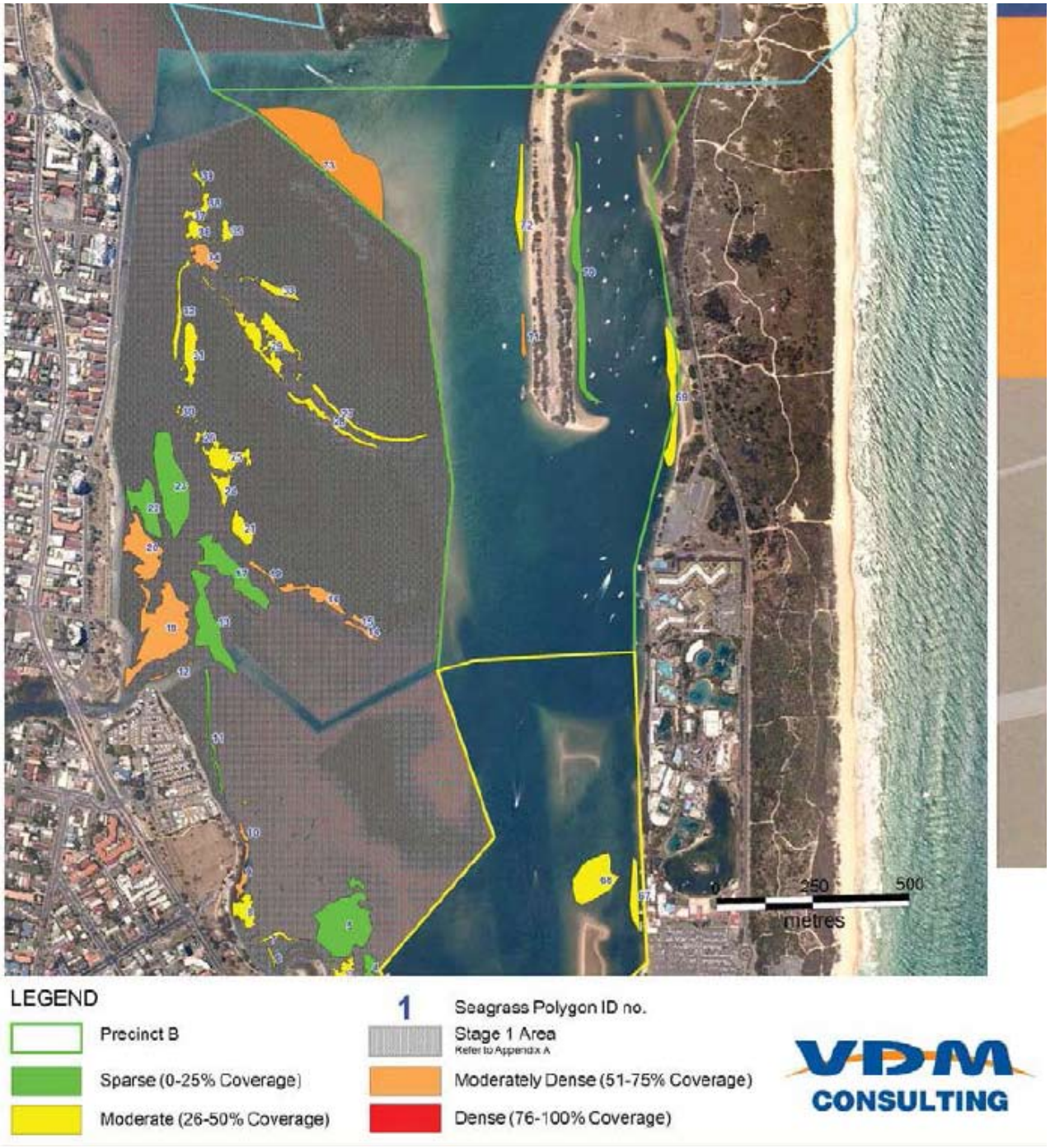



**Curlew Banks is identified as an area of high conservation**




**Conservation Areas**

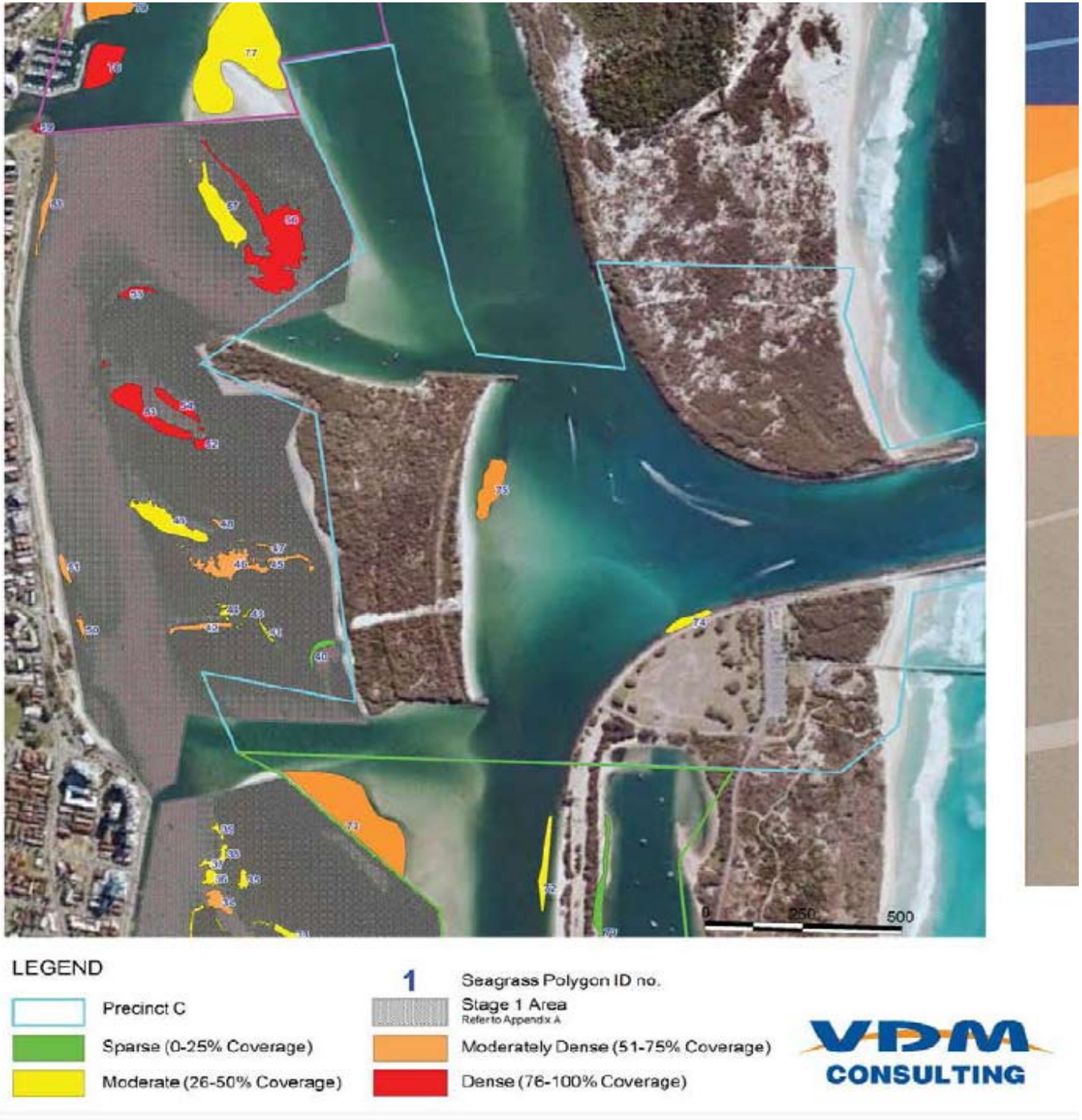
This diagram identifies 'Carter Bank' as an area of high conservation value.




**Seagrass Beds - Curlew Island**

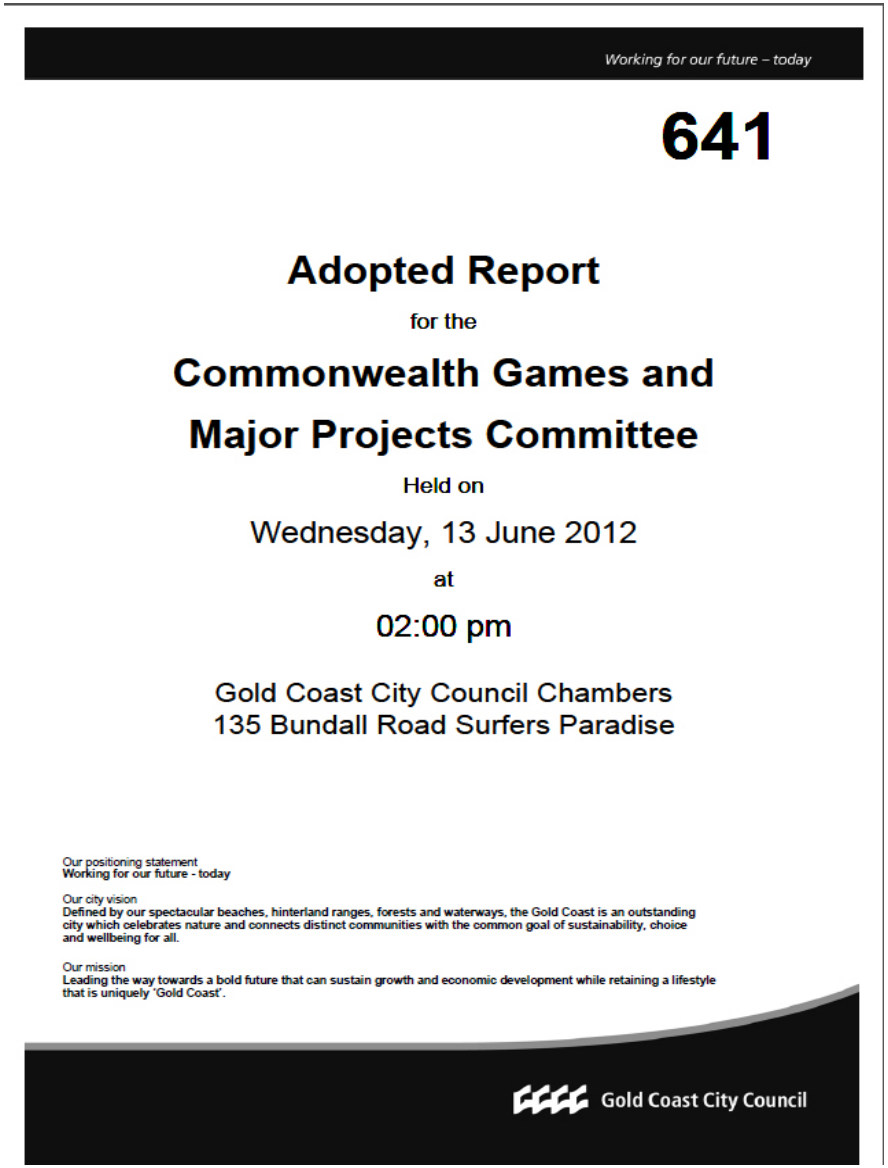
This diagram illustrates a large area of moderate density seagrass on the eastern side of 'Curlew Island' where dredging activities are planned. It identifies areas of moderate seagrass cover in the channel areas surrounding 'Curlew Banks'.

The significance of the seagrass beds is that this provides habitat for a whole range of marine life.




**Seagrass Beds**

This diagram identifies areas of dense seagrass on Carter Bank and Wavebreak Island and areas of moderate seagrass cover on Wavebreak Island and Carter Bank. The seagrass beds which are found on Carter Bank are regarded as among the healthiest beds on the Gold Coast Broadwater.


Working for our future – today

641

Adopted Report

for the

Commonwealth Games and

Major Projects Committee

Held on

Wednesday, 13 June 2012

at

02:00 pm

Gold Coast City Council Chambers
135 Bundall Road Surfers Paradise

Our positioning statement
Working for our future - today

Our city vision
Defined by our spectacular beaches, hinterland ranges, forests and waterways, the Gold Coast is an outstanding city which celebrates nature and connects distinct communities with the common goal of sustainability, choice and wellbeing for all.

Our mission
Leading the way towards a bold future that can sustain growth and economic development while retaining a lifestyle that is uniquely 'Gold Coast'.

Gold Coast City Council

## *4. Adopted Report for the Commonwealth Games and Major Projects Committee*

**Wednesday, 13 June 2012**

This is a Gold Coast City Council report. It examined the impact of various options for siting a Cruise Ship Terminal on the Gold Coast Broadwater. One of the impacts examined is how the siting of the terminal would affect the 'Migratory Birds' found on the Gold Coast Broadwater.

It provides a description of the birds and three matters which influence their habitat - 1. Seagrass beds, 2. Roost area and 3. Foraging Areas.

*Quotation from P13*

**Wader birds – Migratory Species**

> "Migratory birds are found in the site area with the Broadwater location being one of four areas in Queensland where migratory birds roost and feed on flight paths. The recent Broadwater Master Plan study area notes **the highest area of significance for shorebirds is the sandy cay, (Curlew Island) south of Wavebreak Island**."


*Illustration of Migratory Wader area P49 of report.*

# Keep the Broadwater alive and friendly for birds

The Gold Coast Broadwater has a large population of migratory waders. These birds make long annual migrations between Australia and the northern hemisphere.

Putting these birds to flight just before migration time causes them to waste valuable energy that they require for their journey.

The migratory waders seen on the Gold Coast Broadwater, span the globe with their migration journeys.

They leave during March and April and fly to northern polar lands where they breed. They return to the Broadwater in September and October.

During the Australian summer they recover and rebuild themselves for the next journey. Their round trip is a journey of between 16,000 and 20,000 kilometres.

## We can work together for the survival of these birds.

- Dog owners are encouraged to use Council's designated off leash areas. Allow these unique birds to roost without being disturbed. A roost such as the one in the centre of the Broadwater is the only place a wader can wait out the high tide.
- Do not disturb birds which are feeding.
- If you visit the sandbanks of the Broadwater avoid going near a roost.
- Fish in areas away from bird roosts.
- Please take your litter, plastic bags, used fishing lines and tackle home with you.

## More information

SEQ Catchments

EQ Catchments **seqcatchments.com.au**

Queensland Wader Study Group **waders.org.au**

birdlife

BirdLife Australia **birdlife.org.au**

Friends of Federation Walk

Federation Walk **federation walk.org**

CITY OF GOLDCOAST.

Environmental Planning and Conservation
**goldcoastcity.com.au/environment**

Some photos supplied by Bob Westerman.
Email broadwaterbirds@gmail.com or visit broadwaterbirds.com

GC9480

# Shorebirds of the Broadwater

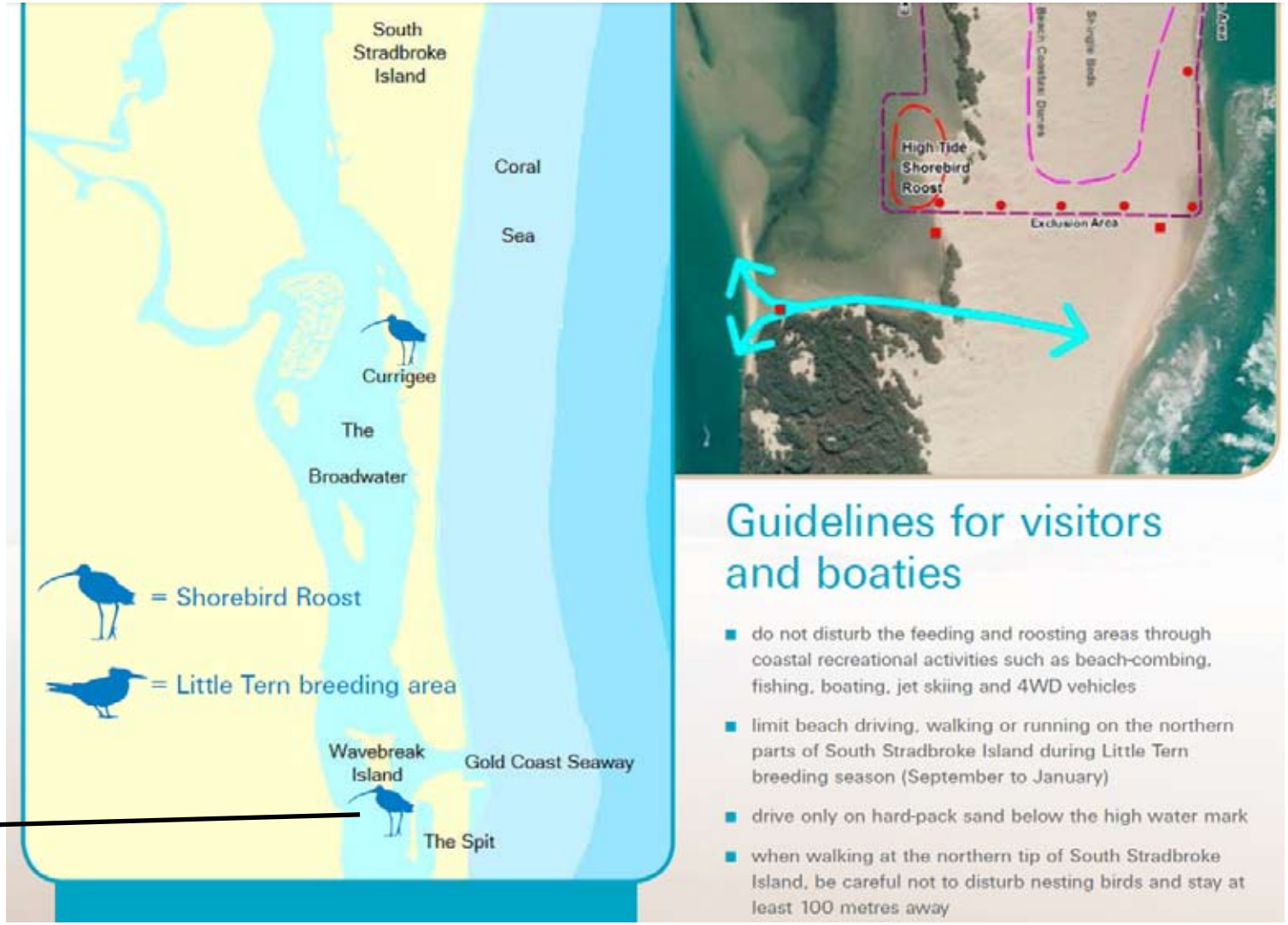
## The Living Broadwater

SEQ Catchments

CITY OF GOLDCOAST.

***5 Information Brochure***
***Gold Coast City Council***

*Curlew Island Roost Site*



## Where are shorebirds found on the Gold Coast?

Places where you are most likely to see lots of shorebirds on the Gold Coast include:

- Wave Break Island
- South Stradbroke Island (particularly at The Pin, where there is a breeding colony of Little Tern)
- Horseshoe Bay
- Currigee Inlet

Shorebirds can also be found in smaller numbers along rivers and creeks, such as the Coomera River, Coombabah Creek and Currumbin Creek. Our sandy beaches are used for roosting and/or feeding (e.g. terns, stints and plovers), as well as nesting (i.e. Pied Oystercatchers).

### Common shorebirds of South Straddie

- Crested Tern (*Sterna bergii*)
- Little Tern (*Sterna albifrons*)
- Caspian Tern (*Sterna caspia*)
- Red-Necked Stint (*Calidris ruficollis*)
- Red-Capped Plover (*Charadrius ruficapillus*)
- Eastern Curlew (*Numenius madagascariensis*)
- Bar-Tailed Godwit (*Limosa lapponica*)
- Pied Oystercatcher (*Haematopus longirostris*)
- Whimbrel (*Numenius phaeopus*)

Several coastal birds of prey call Gold Coast home, including Whistling Kite, Ospreys, Brahminy Kites and White Bellied Sea Eagles. They can be seen soaring over the Broadwater, fishing and hunting.

## Top tips for minimising disturbance

- Do not approach when nesting, feeding or resting
- Keep domestic animals under control
- Vacate near-shore areas during high tide, where shorebirds are known to roost

## Migration

Most migrants are summer visitors from the northern hemisphere who make a return journey of about 20,000–30,000 kilometres annually along the East Asian–Australian Flyaway (see Figure 1). Long, pointed wings are a special adaptation for flying long distances. Shorebird navigation continues to be a topic of research. It is thought that landscape recognition, the Earth's magnetic field, or the position of the moon and sun may play roles in migratory shorebird navigation (Ford 2007).

Some shorebird species can fly for several days without rest, travelling over 11,000 kilometres!

Figure 1. The East Asian–Australian Flyaway. Blue dots indicate important sites for migratory shorebirds and red dots indicate sites in the Flyaway Site Network. (Source: Partnership for East Asian–Australian Flyaway, 2008)

## Disturbance

Most disturbance is human-induced and can have profound effects on the preparedness of migrant shorebirds for their annual journey. For instance, it is known that the energy consumed in an alarm fight (as a result of disturbance) is about four times that used in steady flight and over twenty times that used when foraging for food (Ford 2007).

Reference:
Ford, T. (2007) *Shorebirds, gulls and terns of coastal South East Queensland: An identification guide* http://shorebirds.org.au/shorebirds_WORDPRESS/7%20Resources/Brochures%20&%20Fact%20sheets/Trevor-Ford-SEQ-shorebirds-guide.pdf


## *6. Broadwater Marine Project Fact Sheet.*

*Extract:*

**Environmental values of the southern Broadwater**

The southern Broadwater is home to a variety of marine flora and fauna species that use the sheltered waterway for breeding, spawning, juvenile to adult growth, refuge and feeding.

The relatively shallow intertidal areas and stable sand banks of the southern Broadwater support areas of established and mobile seagrass, yabbies, worms, molluscs and soldier crabs.

***Sand banks within the Broadwater are also recognised feeding and roosting grounds for migratory wader birds.***

Fringing coastal land at The Spit, commonly known as Federation Walk, has been subject to a concerted and ongoing revegetation effort by the community. This natural open space area provides environmental habitat and outdoor recreational value to residents and visitors.

**Studies and assessments**

The Broadwater has been subject to recent environmental baseline study to inform future waterways planning. This study included detailed evaluation of the current environmental values of the Broadwater.

## **Proposal considerations** (from Broadwater Marine Project Fact sheet)

Proposals for the project must respect the environmental qualities of the Broadwater.

**A balanced approach must be taken to fostering city-wide economic opportunity while responsibly managing environmental impacts**.

As the extent of the proposals will be a key factor in determining potential environmental impacts, a flexible framework is supported to enable innovative responses, subject to proposals addressing a range of matters including:

• Protecting RAMSAR* sites and Broadwater environmental values by mitigating impacts on significant habitat areas with local offsets prioritised in the Broadwater
• Establishing strict protocols to ensure no cruise ship discharge into the Broadwater and emergency management procedures for sewage/spills • Positively addressing environmental considerations
• Adopting best practice water management measures

**Protecting environmental values**

Due to the Broadwater's ecological significance, environmental matters will be rigorously assessed when proposals for the project are considered. In addition, as part of statutory approval processes for the project, advice from federal, state and local governments will be required.

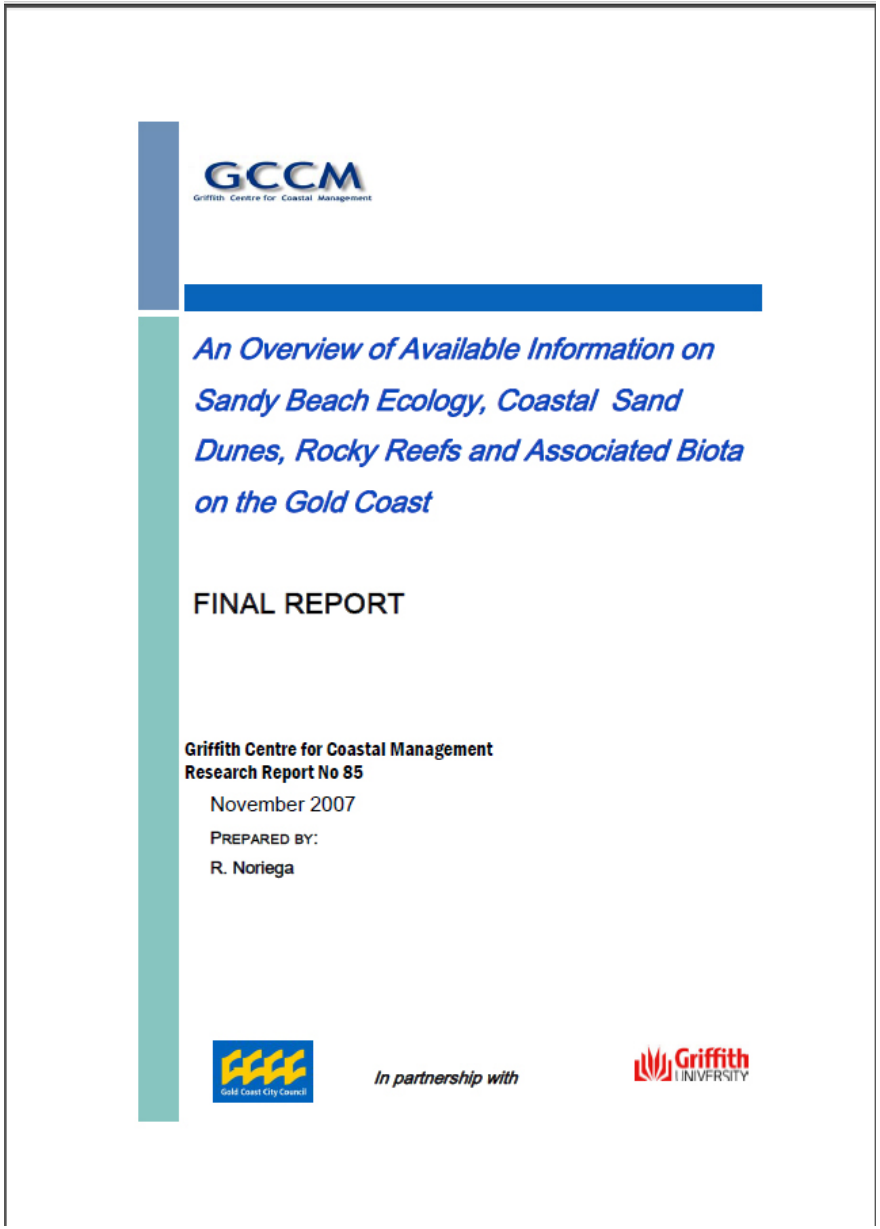
*One environmental aspect to the Broadwater is the presence of migratory birds recognised nationally and internationally as having significant environmental values. As a result, any preferred consortia identified during the Request for Detailed Proposals stage may have their proposal referred to the Federal Government under the Environmental Protection and Biodiversity Conservation Act 1999.*
*Under these circumstances the community can make submissions to the assessing authority regarding the proposal and how adequately environmental matters have been considered. These submissions must be taken into account when considering whether to ultimately approve the project.*

# *7. Sandy Beach Ecology*

This a general review of the physical aspects of the Gold Coast Broadwater. It also lists the fauna found in this area.
The quote below notes the disturbance factors shorebirds face.
It also draws attention to the lack of fauna management of the area.

*Quote from Introduction Page III*

> "Several groups of vertebrates make use of sandy beaches for foraging, nesting, and breeding (McLachlan and Brown, 2006). Birds are the most important vertebrates commonly encountered on sandy beaches, both in terms of abundance and diversity and their role in beach ecosystems (McLachlan and Brown, 2006). Shorebirds need food and protection from predators and human disturbances in order to recuperate from long migrations and for breeding (EPA and QPWS, 2006). The information presented in this review suggests that inadequate intertidal resources (a result of constant beach nourishment practices), constant human disturbance, lack of suitable habitat for roosting and general habitat loss and degradation could be the main threats to shorebirds on Gold Coast beaches. Hence there is an urgent need to refine the available knowledge on factors such as seasonal distribution, degree of human disturbances, population number of resident communities, feeding and roosting grounds, nesting sites and distribution and abundance of intertidal resources. In addition there is also a need to develop scientifically based management actions in order to protect feeding and roosting grounds as well as nesting sites from human made disturbances and other."



GCCM
Griffith Centre for Coastal Management

*An Overview of Available Information on Sandy Beach Ecology, Coastal Sand Dunes, Rocky Reefs and Associated Biota on the Gold Coast*

FINAL REPORT

**Griffith Centre for Coastal Management**
**Research Report No 85**
November 2007
PREPARED BY:
R. Noriega

Gold Coast City Council
*In partnership with*
Griffith UNIVERSITY

# Shorebirds of the Gold Coast

## What are shorebirds?

Shorebirds, also known as waders, comprise approximately 10 per cent of Australia's bird species. They range in size from the Eastern Curlew to the Red-Necked Stint, and are found in inter-tidal areas. Shorebirds are often described as either:

- Locals (live out their lifecycle in Australia)
- Migrants (migrate annually in pursuit of more abundant food and warmer weather)
- Vagrants (sometimes found in Australia, at random)

There are 36 migratory species of shorebirds listed under the *Environment Protection and Biodiversity Conservation Act 1999* that regularly visit Australia, and about 15 species that are considered locals (Ford 2007).

## What do shorebirds eat?

Shorebirds generally feed on intertidal mudflats, seagrass beds, sandy foreshores, mangrove swamps and inland water bodies. They eat an assortment of insects, worms, small crustaceans and fish, depending on the species. Generally, shorebirds feed at low tide. During high tide, shorebirds retire to nearby roost sites, where they rest, preen and digest their food.

## Types of feeders

The coexistence of different species of shorebirds on the Gold Coast illustrates the concept of an ecological niche. Although they occupy the same area geographically, variations across species in bill length and size allow shorebirds to occupy different ecological niches. For example, longer bills (probe feeders) can probe deeper into the substrate, whereas shorter ones (surface feeders) can be used to quickly nip at smaller prey on the surface.

### Fast Fact:

Gulls and terns are mainly diurnal, that is, they feed during the day and sleep at night. Further, those shorebirds which feed out at sea often require rest during the day; therefore, it is important that we disturb these shorebirds as little as possible.

# *8. Notional Seaway Project EIS (2005)*

In 2005 the Queensland Government proposed to build a ship terminal in the Gold Coast Broadwater. This proposal sited a ship dock beside Doug Jennings Park in the Gold Coast Seaway and proposed to convert Marine Stadium into a marina. Wavebreak Island, Carter Bank and the sandbanks south of Wavebreak Island were largely unaffected by the proposal.

An EIS was produced to support the proposal. This EIS recognised the presence of migratory birds on the Gold Coast Broadwater.

**Extracts from the Notional EIS**

**1.4 Environmental Impact Assessment Process**
**1.4.1 Overview of Legislative Processes**

On 17 October 2005, the Project was declared a 'significant project' pursuant to Section 26 of the State Development and Public Works Organisation Act 1971 (SDPWOA). The declaration initiates the statutory environmental impact assessment procedure of Part 4 of this Act, which requires the proponent to prepare an Environmental Impact Statement (EIS) for the project.

The Project was determined to be a 'controlled action' under the EPBC Act on 9 December 2005 and the controlling provisions being wetlands of international importance (sections 16 and 17B), listed threatened species and communities (sections 18 and 18A), listed migratory species (sections 20 and 20A) and marine environment (sections 23 and 24A).

**Part C - 16 Nature Conservation**
**16.1.1.1 Environmentally Significant Areas -**
**The Broadwater**

"..... In the vicinity of the study area there are several large intertidal sand flats and exposed sand bars that are provided habitat for migratory and seabirds. The largest are located to the west and south of Wavebreak Island (Figure 16-1)"

**12.2.1.6**

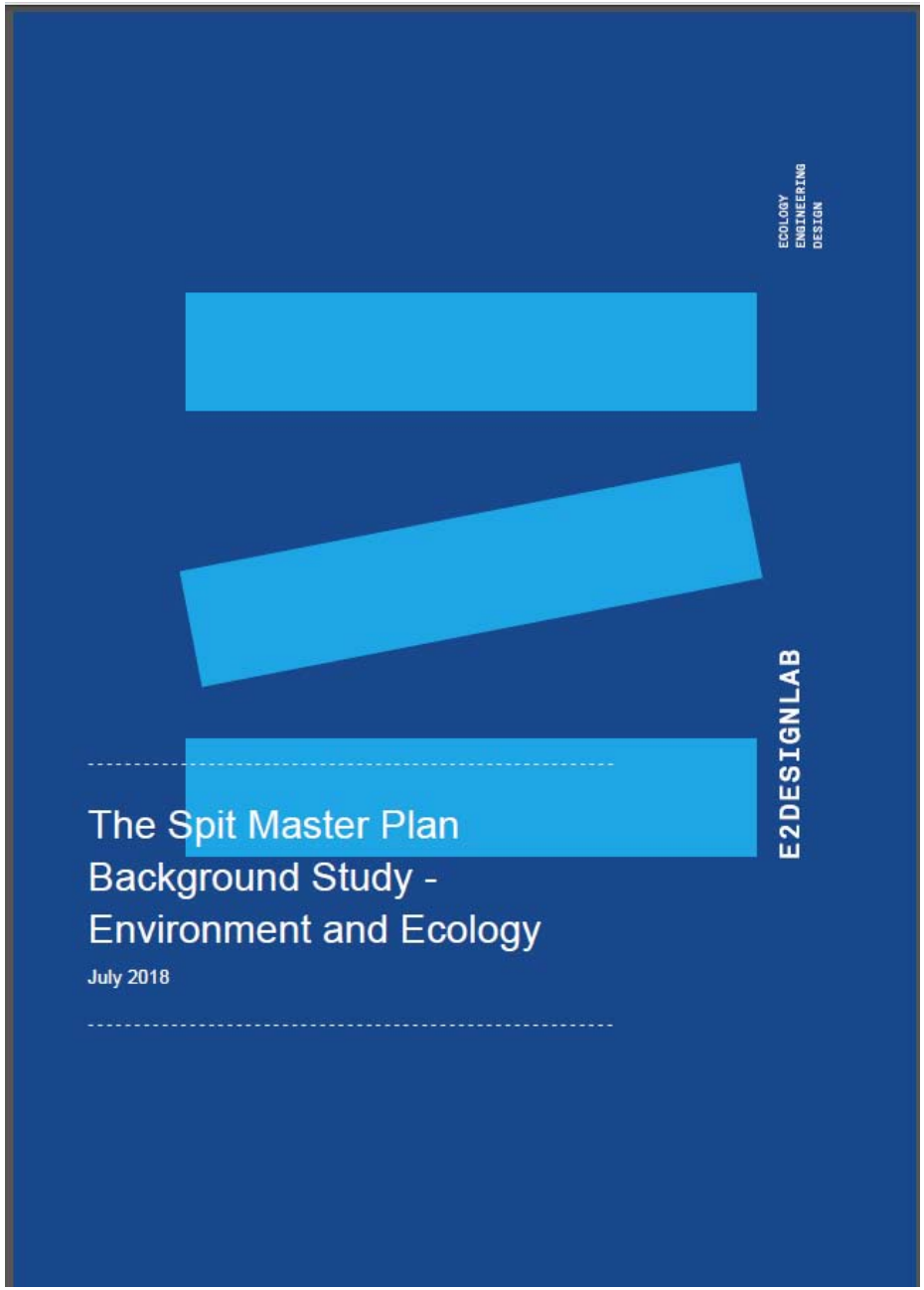
(This project proposed to construct facilities in the vicinity of the Gold Coast Seaway and this quote notes how impacts on other parts of the Broadwater has been avoided.)

"The project does avoid impacting on large intertidal sands flats within the Broadwater that are providing feeding and roosting resources for migratory and seabirds."

**'Appendix N Flora and Fauna Database Searches'** contains an extensive list of birdlife found in the Gold Coast Broadwater. This includes the intertidal areas directly south of Wavebreak Island.


Environmental Impact Statement

Figure 16-1. Environmentally Significant Areas




# 9. Spit Master Plan Background Study – Ecosystems and Ecology

(Available on the Spit Master Plan website)

This study is one of several reports which were prepared to to give participants in the 2018 Spit Mast Masterplan to give participants background knowledge of the Spit and its associated areas.

The study makes frequent references to the Curlew Island and Curlew Banks area and **recommends that the shorebird foraging areas be protected in perpetuity**.

Extracts from this report:-

## Executive Summary (V)

"The study area, which encompasses The Spit, Wave Break Island, Curlew Island and the Broadwater, contains habitats and species of National, State and Local Significance, including the critically endangered eastern curlew, endangered lesser/greater sand plover and the vulnerable bar-tailed godwit. There have been more than 500 records of shorebirds found on Wave Break Island.

The sand cays within the Broadwater and sand banks associated with Curlew Island provide foraging habitat and high tide roosting sites for threatened migratory shorebirds. Curlew Island is also nesting habitat for the vulnerable beach stone-curlew. The eastern side of The Spit provides nesting sites for threatened sea turtles and the waters around The Spit are habitat for marine fauna such as dugongs and sea turtles".

## 1.1 Subject Study Area (P1)

"Key sites of environmental and ecological interest in this background study are Federation Walk, the Marine Stadium, Southport Seaway, Wave Break Island and Curlew Island."

## 2.2 Ecosystems (P11)

"Wave Break Island, similarly to The Spit, has also been significantly influenced by human intervention. It shows greater signs of ecological maturity and is marked as a locally environmentally significant biodiversity area, although is also overgrown with weed infestations.

The recently named Curlew Island, south of Wave Break Island is also environmentally significant, in providing both foraging opportunities and high-tide refuge for resident and migratory shorebirds, and nesting opportunities for the endangered Beach Stone Curlew".

## 2.3.2 Biodiversity and Conservation Values (P12, 13)

"The Spit study area includes areas of State and Regional biodiversity significance. The biodiversity values are associated with high tide roosting sites for threatened shorebird taxa including the eastern curlew (Numenius madagascariensis), eastern curlew (Numenius madagascariensis), bar-tailed godwit (Limosa lapponica), red knot (Calidris canutus), curlew sandpiper (C. ferruginea), great knot (C. tenuirostris), greater sand plover (Charadrius leschenaultia), lesser sand plover (C. mongolus) and beach stone-curlew (Esacus magnirostris). These areas of significance are associated with Curlew Island and Moondarewa Spit."

## 2.3.3 Environmental Significance (P13, 14)

### Wetlands and Waterways

"Natural wetlands that are considered MSES and are classified as 'High Ecological Significance' (HES) on the Map of Referable Wetlands are present within the study area. These mapped wetlands align with known high tide roosting sites for threatened shorebirds (Figure 5)."

## 2.3.4 EPBC Protected Matters (P16, 17)

"The EPBC Act is a Commonwealth legislation that provides a framework for the protection and management of nationally and internationally important flora, fauna and ecological communities and heritage places, which are defined in the Act as Matters of National Environment Significance.

The EPBC Protected Matters search identified one wetland of international importance (Moreton Bay), two threatened ecological communities, 65 threatened species and 77 migratory species."

(The wetland of International Importance may be identified on the map as Curlew Island)

## 2.5.2 Shorebirds (P 30-33)

Pages 27 to 33 deal with shorebirds in detail and highlight the importance of the Curlew Island Curlew Banks system.

"The area of highest significance to shorebirds is Curlew Island (Westerman 2018; VDM Consulting, 2012). This area provides both foraging and high-tide roosting habitat for migrant and resident waders. It was identified as the only major high-tide roost in the Broadwater Masterplan study area, contains protective vegetation cover (though at early successional stage), with reasonable protection from anthropogenic threats (relative to other potential feeding areas in the project area) and pest animals, and is located within close proximity to significant foraging resources (VDM Consulting, 2012). Curlew Island also provides nesting habitat for the Beach Stonecurlew (Esacus magnirostris) and the sand banks surrounding Curlew Island provide important feeding grounds for migratory and resident waders (Westerman 2018).

In January 2018, a combined wader count recorded 995 shorebirds from 11 species including 3 migratory species namely Eastern Curlews (Numenius madagascariensis), Bar-tailed Godwits (Limosa lapponica) and Whimbrels (Numenius phaeopus) (Westerman, 2018). Bird counts taken at Curlew Island over the past three years (2016 – 2018) show that it has a permanent population of between 40 and 80 Eastern Curlews (Numenius madagascariensis) (critically endangered) and a similar number of Bar-tailed Godwits (Limosa lapponica) (Vulnerable) (Westerman, 2018). Anthropogenic threats to shorebirds in the area include a high level of disturbance by recreational users of the Broadwater (jet skis, boats, dogs off lead). Whilst migratory birds are listed under the EPBC Act, the wildlife has little protection because this habitat area (i.e. Curlew Island and surrounding sand banks) falls outside the Moreton Bay Marine Park. Apart from reference to the EPBC Act there are few enforceable environmental guidelines for management and planning of this area.

### 3.1.1 Key Environmental values (P 37)

"The environment and ecology of The Spit and surrounding waters is unique and holds great environmental value, as summarised below and mapped in Appendix B:

• Shorebirds, seabirds and beach-stone curlew - nationally significant and protected under national and international legislation.

• Wave Break Island and Curlew Island, including associated sand banks, are the most significant areas of environmental value to shorebirds within the study area.

• Shorebird habitat on Curlew Island, Wave Break Island and associated sand banks. Apart from reference to the EPBC Act, there are few environmental guidelines for management and planning of these areas."

### 3.1.3 Aquatic ecology issues (P 39)

"The Broadwater and coast line of The Spit are highly valued by visitors and support a high diversity of marine fauna including threatened species. Protecting marine species and maintaining water quality requires a coordinated approach. The master plan will not be able to manage all potential environmental risks and impacts. Many are managed under legislation and statutory planning instruments. The key issues for management generally (including those outside the scope of the master plan) are summarised below:

• Water quality in Marine Stadium. Water quality is highly variable (an on-off problem). The data suggests the occasional high microbial counts are site related, rather than catchment related (i.e. not necessarily following large rainfall events). Further investigations are required to understand why water quality varies and what is impacting water quality. CoGC have advised they are undertaking further investigations.

• Seagrass extent and cover. Seagrasses are threatened by: dredging; damage by vessels; foreshore development encroachment; nutrient enrichment; sedimentation and inter-species competition

• Management and protection of identified nesting turtles

• Fishing line entanglement and turtle and marine mammal boat-strikes

• Management of aquarium trade fish collections from the Seaway

• Management and protection of shorebird foraging habitat"

### 3.2.1 Improving terrestrial ecology (P 39)

• Manage any proposed public access and use of Wave Break Island in consideration of risks to shorebirds. The shorebird habitat on Wave Break Island and the adjacent sand cay (Curlew Island) must be protected.

• Manage impacts of human disturbance to roosting, foraging and nesting shorebirds (e.g. jet skis, recreational boating community, dogs off-lead etc.)

• Minimise the footprint of any new development to protect natural assets.

### 4. Conclusions (P43)

The Spit landform, through both colonisation and restoration, now contains important habitat and supports a high diversity of species. Likewise, the surrounding shorelines and marine environment, particularly within the Broadwater, contain high value ecosystems and support species of national and international importance. **The seagrass beds and shorebird foraging sites are particularly important habitats to protect in perpetuity.**

The map in Appendix carries this comment:

Protect shorebird habitat on Wave Break Island and Curlew Island.

Any proposed public acce


Protect shorebird habitat on Wave Break Island and Curlew Island. Any proposed public access should carefully consider risks to the shcrebird population.
Reuse of recycled water to improve the health/condition of terrestrial vegetation.
Potential for local on-site sewerage treatment and disposal via irrigation.
Opportunity to create a diversity of vegetation community including littoral rainforest
Supplementary inter-age (staged) planting of tree species to create a mixed age community and transition existing pockets of Casuarina glauca itno recognised coastal swamp oak community thus supporting this endangered vegetation community.
Incorporate aquatic vegetation communities replicating inter-dunal swales to increase habitat and species diversity.
Seagrass beds (throughout

# Some Protection Options

The southern Broadwater is comprised of **Seabed** and **Land.** Different legislation applies to each situation. While small seabed areas have been protected under the 'Nature Conservation Act' the 'Marine Parks Act' is normally used for this purpose.

It is important to protect the both the roost - 'Curlew Island' and the surrounding feeding areas -'Curlew Banks' to enable wildlife to survive here.

**Seabed**

The 'Marine Parks Act 2004' is the normal instrument used to regulate nature protection, conservation, recreation, commercial use, sea farming, extractive industries and general use of areas covered by the sea' or any area in a seashore or ocean environment that is not permanent land. Protection of Curlew Banks and other marine areas could be achieved by altering the boundaries of the 'Moreton Bay Marine Park' to include the southern Broadwater.

Bribie Island, Beachmere, Brisbane, Wynnum, Manly, Lota, Cleveland, Victoria Point and Redland Bay are all integrated with the Moreton Bay Marine Park – Why is the Gold Coast different?

The port authority for the southern Broadwater is the Gold Coast Waterways Authority. Under its Act this Authority has few environmental powers. One solution could be to expand its powers so that it is able to plan and manage sensitive areas.

**Land**

Curlew Island is well vegetated and permanently above sea level but it is not described as a registered land parcel. This prevents something as simple as an authorised conservation sign being placed on the island.

The first step in any conservation measure is for it to be described by a land parcel registration such as 'Unallocated land'. Once Curlew Island is gazetted as 'land' some options are:-

1. Under the *'Qld Nature Conservation Act, 1992'* could become one of the following:-

**National Park** as an addition to the *Southern Moreton Bay Islands' National Park.*

**Regional Park** managed by the Qld State government.

**Regional Park** managed by a **Trustee** such as:-
Gold Coast City Council
Gold Coast Waterways Authority
A non profit organisation or university

2. Under the **Lands Act, 1994**, it could be gazetted as a 'Reserve for Environmental Purposes'. This could administered by the Gold Coast City Council or by a Trustee such as the Gold Coast Waterways Authority, or another body dedicated to conservation of the island.

3. **Allocated to Gold Coast Waterways Authority** under a lease arrangement similar to Wavebreak Island, Dough Jennings Park and the southern tip of Stradbroke Island.

## The Importance of Curlew Island and Curlew Banks

Curlew Banks is not only an important feeding area for shorebirds but it is also an extensive habitat for many marine creatures. The large number of Cormorants, Terns, Gulls and Pelicans which visit or reside here indicates that it is also important for fish stocks.

Curlew Island is a perfect roost for shorebirds as it does not have a land bridge which gives access to vermin and predators. It has no equal in the entire Broadwater system.

Curlew Island appears to have a base population of about 35 Eastern Curlews as this is the number seen when they first arrive in early August. However counts of 80 Eastern Curlews have been recorded recently which indicates the Island is also used as a roost by birds from other areas.

Many species of birds use the island and counts of between 500-900 birds are often recorded.

There is no capacity for the remainder of the Broadwater to absorb a loss of Curlew Banks and Curlew Island as every other site is under threat :-

**Jumpinpin** may be at the point of collapse due to unmanaged tourist traffic and natural erosion.

The **Pimpama River** site is threatened by upstream urban development.

**North Branch of the Coomera** is beside a busy boat channel.

**South Coomera Island** is beside a busy boat channel.

**Coombabah Creek and Coombabah Lake** are threatened by urban encroachment.

The **Brown Island** roost has been eroded by natural causes.

**Wavebreak Island** and **Carter Bank** do not have high tide roosting areas and suffer from a high level of disturbance from boating traffic.