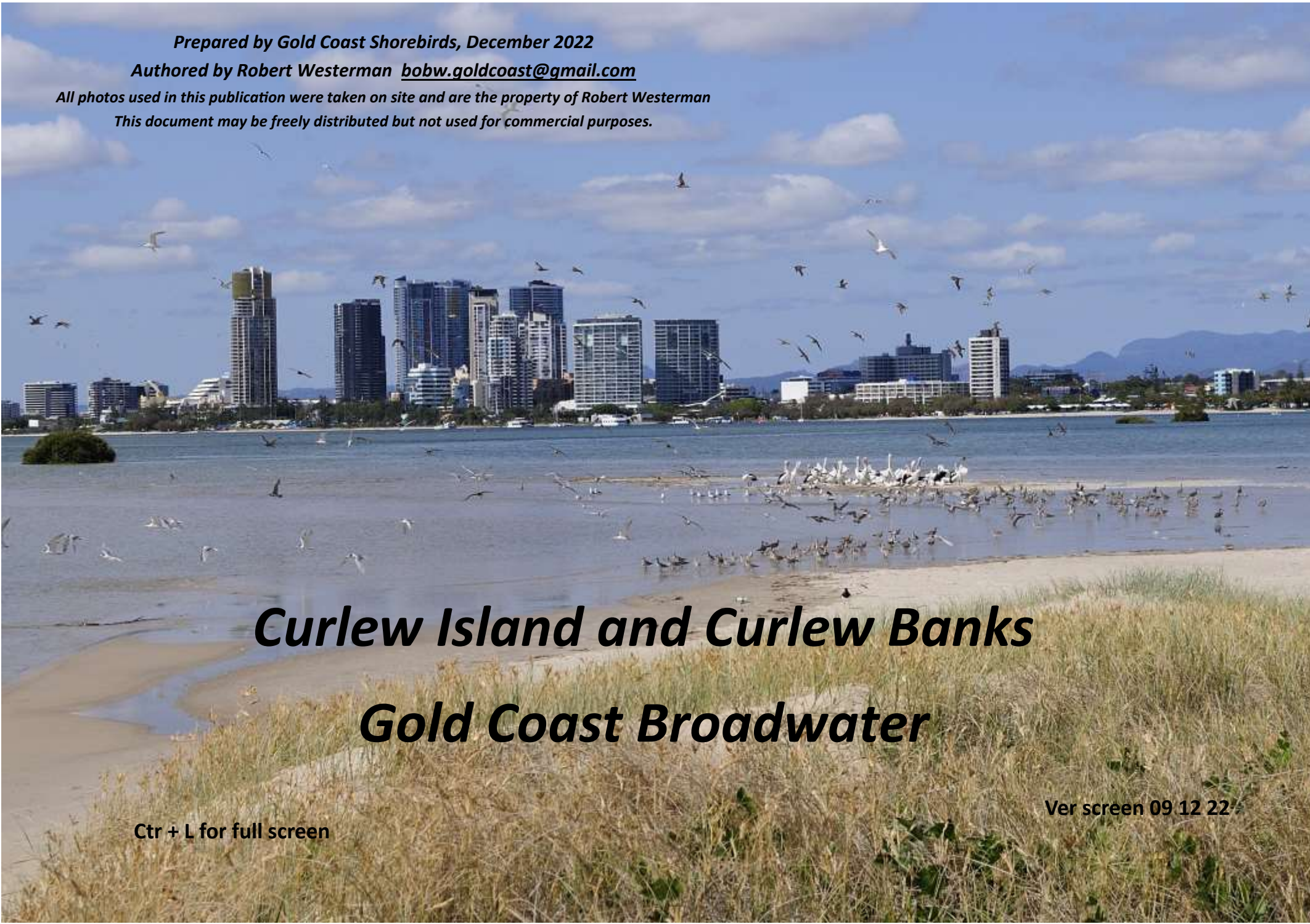


Prepared by Gold Coast Shorebirds, December 2022

Authored by Robert Westerman bobw.goldcoast@gmail.com

All photos used in this publication were taken on site and are the property of Robert Westerman

This document may be freely distributed but not used for commercial purposes.



Curlew Island and Curlew Banks

Gold Coast Broadwater

Ctr + L for full screen

Ver screen 09 12 22



Curlew Island & Curlew Banks

Curlew Island is the highest part of the chain of sandbanks in the estuary of the Nerang River. This area is also known as Gold Coast Broadwater.

These sandbanks include Carter Bank, Kuringle Flats on Wavebreak island, Curlew Banks One, Two, and Three, and the sandbanks near Fisherman's Wharf.

These banks are rich in marine life and each year they attract large numbers of birds. These include gulls, terns, wetland birds and many migratory birds. Sixty different species of birds have been recorded here.

These sandbanks are one of the largest estuary sandbank systems on the east coast of Australia. They are particularly valuable as they have no connection to the mainland. They are largely free of pests such as feral cats and dogs, snakes and rats. There is no 4WD drive access and all visitors have to come by boat. This gives the wildlife many advantages not enjoyed in other parts of Australia.

Migratory shorebirds make use of this entire system but the highest level of activity is found on Curlew Island and Curlew Banks. These two features are closely integrated and work in tandem. Curlew Island is the shorebird roost site and Curlew Banks is the main foraging area. Any shorebird protection effort for the area will fail unless both parts are considered as an integrated unit.

The numbers of migratory shorebirds which come to this estuary, qualify it as a site of 'National Importance' under the EPBC Act. Though these shorebirds use the entire sandbank system, the greatest concentration is found around Curlew Island and on Curlew Banks One and Two. Curlew Island and Curlew Banks Two are each significant in their own right under the EPBC Act.

Fifteen species of migratory birds have been recorded here. The main summer species are the *Eastern Curlew*, *Bar-tailed Godwit* and *Whimbrel*. A large number of *Double-banded Plovers* from New Zealand make Curlew Banks their home during winter. This is the only east-west migration over water in the world.

Broadwater Studies.

There have been numerous studies of the Broadwater which have confirmed the ecological significance of the southern part of the Gold Coast Broadwater and drawn attention to the importance of Curlew Island and Curlew Banks.

2005	Notional Seaway Project EIS	Queensland Government	Prepared for the 2005 Cruise Ship proposal	Avoidance of shorebird area was one reason given for chosen site.
2007	Sandy Beach Ecology	Griffith University	Prepared for GCCC	Recognised the presence of Shorebirds in the Broadwater
2012	Ecological Investigations to support Broadwater Masterplan	VDM Consulting	Prepared for proposed Waterways Authority	Curlew Banks identified as an area of 'High Conservation Value'.
2012	Commonwealth Games and Major Projects Committee	Gold Coast City Council	Prepared for Cruise Ship Terminal investigations.	Curlew Banks identified as important shorebird habitat.
2013	Broadwater Marine Project	GCCC—Qld Gov for ASF China	Curlew Banks shorebirds recognised	Proposed that Curlew Banks be a Marine Park
2017	Review of known shorebird habitats, distribution and threats in Gold Coast Waterways (SRMP-013)	Griffith University	Prepared for Gold Coast Waterways Authority	Recognised the area south of Wavebreak Island as a site of 'National Significance'.
2018	Spit Masterplan Background Study Environment and Ecology	John Gaskell Planning Consultants—Qld Gov.	Prepared for Spit Masterplan consultation.	Recommended that Curlew Island be an Environmental Reserve

The databases of WildNet, Birdlife Australia, Qld Wader Study Group and Gold Coast Shorebirds all confirm the presence of shorebirds on Curlew Banks in numbers significant under the EPBC Act.





Migratory Birds on Curlew Island



Shorebirds roosting on Curlew Island.

Some of the Residents of Curlew Island and Curlew Banks

Eastern Curlew

Numenius madagascariensis



The Eastern Curlew is the world's largest shorebird. They inhabit tidal estuaries. Its distinguishing feature is its exceptionally long bill which is used to probe for invertebrates in soft mud or sand. Eastern Curlews leave Curlew Island near the end of March and return in the first week of August. They are the first migratory species to return from their migration.

They are now listed as *critically endangered*. The numbers found on Curlew Island qualify Curlew Island as a site of National Importance under the Commonwealth EPBC Act as both a '*Migratory Shorebird*', and as a '*Critically Endangered Species*'.

40 or more Eastern Curlews are always present on Curlew Island during the summer months. A small number are present during the winter months. These are young birds which have not completed a migration.

*Bar-tailed Godwit in
breeding plumage*



Bar-tailed Godwit
Limosa lapponica



The Bar-tailed Godwit forage on open sandy tidal flats. They do not roost in trees and require a roost such as Curlew Island to escape high tide.

These are the world champions for long distance flight. In 2021, a Bar-tailed Godwit which had a tracker attached to it in Alaska, arrived on the Gold Coast 12 days after leaving Alaska. It performed a non-stop flight of 12,000 kilometres. Many acquire a rusty red breeding plumage, prior to their departure in April.

Whimbrel

Numenius phaeopus



The Whimbrel is the most numerous shorebird found on the Broadwater. They forage on open silty tidal flats, often near mangroves. They prefer a sand roost but will roost in trees if one is not available.

Some breed in the sub-arctic conifer belt of Siberia and others in northern China. They often acquire dark plumage prior to their departure in April-May.

They are easily confused with the Eastern Curlew but they are a smaller bird with a shorter bill. They have a distinctive black stripe across the top of their head.

Grey-tailed Tattler

Tringa brevipes



Photographed on Pimpama River but these are a regular visitor to Curlew Island

Red-necked Stint

Calidris ruficollis

Red-capped Plover

Charadrius ruficapillus



Red Knot

Calidris canutus



Curlew Sandpiper

Calidris ferruginea



Double-banded Plover
Charadrius bicinctus



Pacific Golden Plover
Pluvialis fulva



Lesser Sandplover
Charadrius mongolus



Ruddy Turnstone
Arenaria interpres

A photograph showing a large colony of Australian Pelicans (Pelecanus conspicillatus) on a sandy beach. The adult birds are white with black wingtips and long, pinkish-red bills. Some have their bills open. In the foreground, there is a large group of small, brown, downy chicks. The background shows the ocean and a clear sky.

Australian Pelican
Pelecanus conspicillatus

Large numbers of the Australian Pelican inhabit the Gold Coast Broadwater.

The Bar-tailed Godwit is small in comparison but they carry enough fat in their body to power them to the Arctic.

Several pairs of Australian Pied Oystercatchers are permanent residents of Curlew Island and bring out chicks each year. The mortality rate is very high, and young chicks are frequently taken by dogs.



Pied Oystercatchers
Haematopus longirostris

This is an adult pair of Beach Stone Curlews on Curlew Island with their two young.

Beach Stone Curlew

Esacus magnirostris



Black Swan
Cygnus atratus



Pied Cormorant
Phalacrocorax varius



White-faced Heron
Ardea novaehollandiae



Pied Stilt
Himantopus leucocephalus



*Little Terns, Crested Terns, Common Tern
and Caspian Tern*



Caspian Tern
Hydroprogne caspia



Silver Gull
Larus novaehollandiae



Common Tern
Sterna hirundo

Australian Tern
Gelochelidon macrotarsa



Eastern Osprey

Pandion cristatus



Whistling Kite

Haliastur sphenurus



White-bellied Sea Eagle

Haliaeetus leucogaster



Brahminy Kite

Haliastur indus





Double-banded Plovers

The Double-banded Plovers migrate to the Gold Coast from New Zealand. They are present from April to August.

Their main habitat is Curlew Banks Two, and the numbers observed here are significant under the Commonwealth EPBC Act.

How the shorebirds use the Curlew Banks environment:-

The shorebirds forage for food on all of the sandbanks of the southern Broadwater but the majority of birds use Curlew Banks One, and Two. They feed on yabbies, crabs, worms, small molluscs, insects and small fish.

At high tide they crowd on to Curlew Island to remain dry. During high spring tides, this space is limited and they are vulnerable to disturbances from people, boats and from the dogs released from boats. They usually react to disturbances by moving from one end of the island to the other but in some cases when there is human activity all over the island, they leave the island, or fly in a holding pattern above it.

A ridgeline runs through the island and the banks. Most shorebirds use the western side of this ridge line for roosting and feeding, as it is away from the busy main boat channel.

As the tide drops, the birds begin feeding, and follow the tide out. Once the tide has dropped sufficiently, they usually have space to move away from intruders if visitation to the island is small.

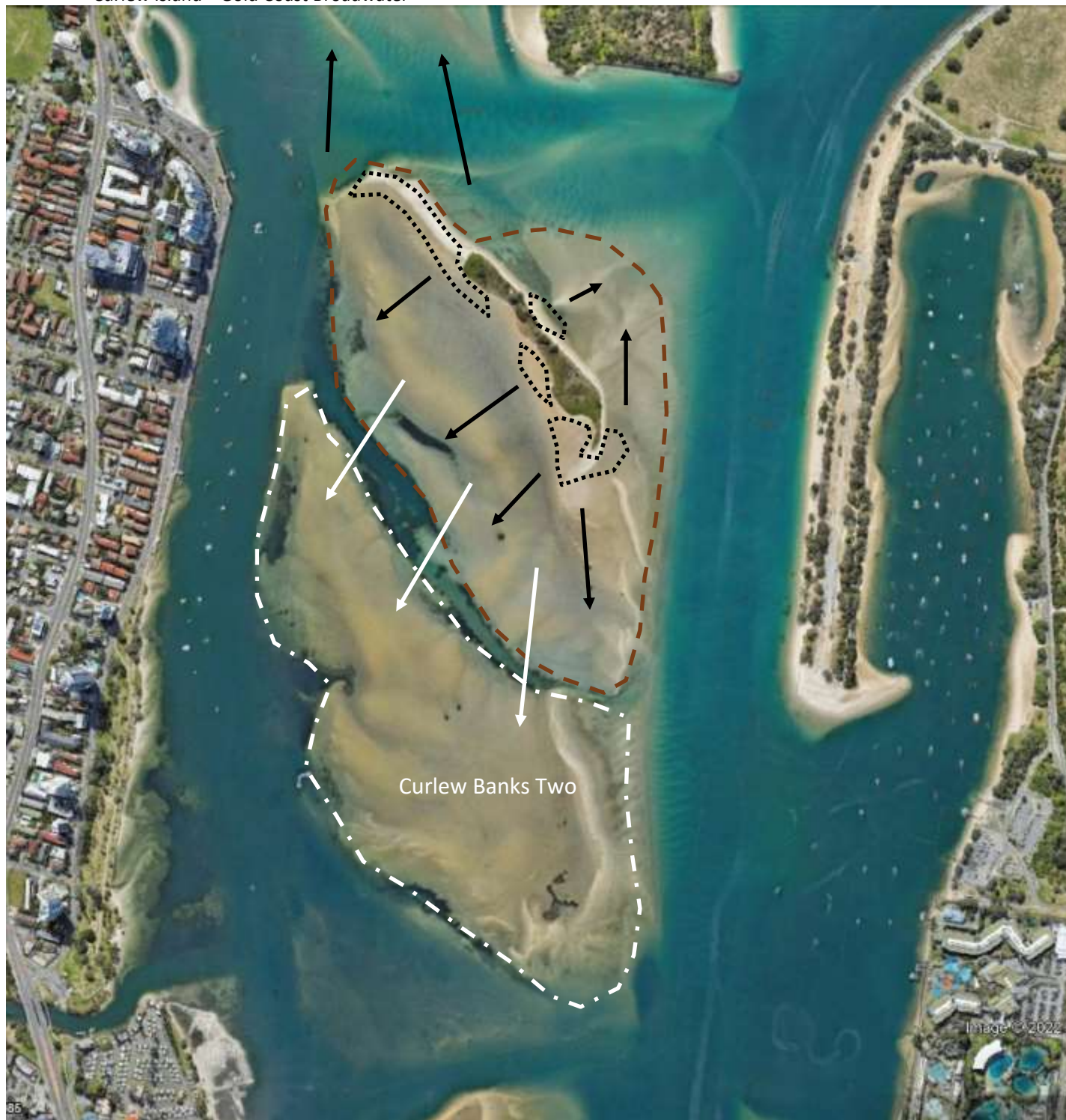
Curlew Banks Two is lower than Curlew Banks One, and the majority of birds move to it as the tide drops further. This bank has few visitors and the birds are normally able to continue feeding here with minimal disturbances.

The principal shorebird found here is the *Eastern Curlew*. This bird is listed as *critically endangered* and it is now scarce in most parts of Australia, but it is locally common here. The Curlew Island flock is very faithful to this site. While the numbers of other species which come here, fluctuates considerably, Eastern Curlew numbers are constant between counts.

This is a perfect home for them if they are able to be protected from human originated disturbances. They walk up to their roost as the tide rises and then walk down to their feeding areas as it drops. Most of them never leave Curlew island or Curlew Banks.

The island is surrounded by shallow waters which helps to prevent large vessels from visiting the island.

This site is capable of being fully protected, but unfortunately Australia has little influence on the protection of their overseas habitats, and their numbers are predicted to steadily drop as these habitats are lost. However the presence of other migratory species is increasing. The Eastern Common Tern and Little Tern are often present here in their hundreds during February and March.



 Roost Areas around Curlew

 Curlew Banks 1 foraging area.

At high tide, migratory birds gather together at the roost areas around Curlew Island to remain dry. Fifteen species of migratory birds have been recorded on Curlew island but the main species which come here are Eastern Curlews, Bar-tailed Godwits and Whimbrels. They are usually accompanied by terns, pelicans, oystercatchers and cormorants.

As the tide drops, the waders cease resting and begin to feed at the edge of the retreating tide. At this time the numbers of terns here often increases dramatically as they return from fishing.

As the tide drops further, Curlew Banks Two becomes exposed and groups move to this location. Some groups also leave the area and travel in the direction of Wavebreak Island.

While most species numbers fluctuate from day to day, Eastern Curlew numbers remain constant which indicates that there is a group which only uses this location.

Curlew Island and Curlew Banks is one dynamic unit which needs management and protection as a whole. Partial protection of the system or loss of part of the system will impact on its viability as a habitat.

An Administration Vacuum

Curlew Banks has no environmental management and suffers severely from neglect. There are no long term management plans to ensure its viability. There is no day to day management. There is no agency responsible for its supervision. There is no legal framework which may be used to prevent current abuses.

Curlew Banks and Curlew Island is suffering from high levels of abuse such as unrestrained dogs attacking the birds and people walking through or near roosting flocks.

An emerging threat is the increasing number of boats being permanently 'parked' over foraging areas and near roost sites. This could be managed by existing anchoring regulations.

This is an extreme problem at high tide with visitors coming to the site when many birds are roosting close together and space on the island is limited.

There is no remedy to prevent this behaviour.

- Curlew Banks is not part of the Gold Coast City Administrative area so Council by-laws cannot be applied to this area nor do their officers have any jurisdiction here.
- Gold Coast Waterways Authority does not have any environmental powers in marine administration.
- It is not a 'National Park' or a 'Marine Park' so these agencies have no administrative powers here.
- 'Taking' of wildlife is covered in the general powers of the Nature Conservation Act but disturbance is not.

Curlew Island Resilience

Curlew Island has some natural protection factors

- It is not connected to the mainland so this reduces visitation and it is free of feral pests.
- The shallow waters surrounding the island are unattractive to large vessels.
- The western side of Curlew Banks is silty which is unattractive to many people.
- At low and mid-tide the birds have space to avoid intruders.
- The critical situation occurs when high tides coincide with high levels of human visitation. There are many days when this does not happen. However an unrestrained dog will quickly clear a bank of its birdlife.

The Effects of disturbance.

Shorebirds spend most of their time building up their fat reserves. This is the energy for their flight.

Disturbance interrupts their feeding while foraging, or at roost time when they are resting and digesting their food.

Birds use up some of this energy with every disturbance.

Constant disturbance may cause shorebirds to avoid an area or leave them underprepared for their flight.

An underprepared bird will be unable to complete its migration journey and perish.

This dog completely cleared Curlew Island of all of its birds in a few minutes as it ran from one end of the island to the other. Pied Oystercatchers breed here but dogs have been seen taking their chicks.

Disturbance by dogs and people are the largest problems to overcome in managing Curlew Island and Curlew Banks

These beach walkers are about to disturb a group of resting Double-banded Plovers.





Curlew Island just before a boat arrives.



Curlew Island, 5 minutes later. The crested Terns remained but everything else left.

Little Black Cormorant

Phalacrocorax sulcirostris



Frequent visitor to Curlew Banks and Curlew Island in flocks of 400 or more.

Crested Tern

Thalasseus bergii



The Crested Tern is an Australian specie. They are the most common bird on Curlew Island. Flocks of up to 500 have been recorded.



The Broadwater is important for its shorebirds but it is important for many other reasons.

The sandbank system of the Broadwater is a geological treasure and one of the largest estuary sandbank systems on the east coast of Australia.

There are extensive seagrass beds around the margins of all the sandbanks. Dolphins are plentiful and Dugongs have been sighted.

Australian Pelicans, Crested Terns, Common Terns, Little Terns, Silver Gulls, Little Black Cormorants and Pied Cormorants are normally present in large numbers. These birds catch fish. They eat everything from small to medium sized prey. Their presence indicates that the Broadwater is valuable fish habitat. Raptors which have a marine diet, such as Ospreys, White-bellied Sea Eagles, Whistling Kites and Brahminy Kites are a common sight.

The greatest concentration of Pied Cormorants on the Broadwater is found on the sandbanks near Fisherman's wharf.

The abundant marine life in the Seaway makes it an important dive site. Other popular dive sites are the wreck of the Scottish Prince and the numerous sand reefs adjacent to Gold Coast beaches.

Curlew Island and Curlew Banks Timeline

- 1986 Gold Coast Seaway completed.
- 1992 ‘Moreton Bay Marine Park’ established omitting the southern part of the Gold Coast Broadwater.
- 2005 EIS for the 2005 proposed ‘Cruise Ship Terminal’ identified the Curlew Banks shorebird areas.
- 2010 Gold Coast Shorebirds commence regular surveys of the then un-named Curlew Island.
- 2012 Application lodged under ‘Place Names Act’ to name ‘Curlew Island and Curlew Banks’
- 2012 VDM Report identifies the Curlew Banks area as a site of ‘High Environmental Significance’.
- 2013 Broadwater Marine Project (Wavebreak Is Casino/Cruise Ship Terminal) proposes that Curlew Banks and Curlew Island be a Marine Park.
- 2015 Broadwater Marine Project cancelled.
- 2016 ‘Curlew Island’ and ‘Curlew Banks’ officially named under the ‘Qld Place Names Act’.
- 2017 ‘Review of known shorebird habitats, distribution and threats in Gold Coast Waterways (SRMP-013)’ report, sponsored by Gold Coast Waterways Authority recognises that ‘Curlew Island’ is a significant site under the EPBC Act.
- 2018 ‘Spit Master Plan’ consultation commenced.
- 2018 ‘Spit Masterplan Background Study, Environment and Ecology’ identifies Curlew Island as an area of high environmental significance
- 2019 ‘Spit Master Plan Report’ recommended that ‘Curlew Island’ be made an Environmental Reserve under the ‘Lands Act’ and be managed by a trustee.
- 2020 Curlew Island mapped and gazetted as an Environment Reserve, Trustee to be appointed.
- 2020 Review of ‘Moreton Bay Marine Park’ deferred until review of ‘Great Sandy Marine Park’ review completed. The review (when it takes place) will be an opportunity to change park boundaries and include the remainder of the Broadwater and Gold Coast beaches in the ‘Moreton Bay Marine Park’ This would enable these areas to enjoy environmental management.
- 2022 As of June 2022, a trustee for Curlew Island has not been appointed. Until a trustee is appointed the island is unable to be managed.

There are about 9700 species of birds on Earth, and they inhabit nearly every part of the globe. Most of the birds that we are familiar with, spend their lives around land. Some seabirds such as the Albatross, roam the oceans and only come ashore to breed. Other birds such as gulls and terns inhabit coastlines and use the land and the sea.

Many species are migratory and move from place to place, searching for food, avoiding the seasons, or travelling to breeding grounds. Some of these migrations are short, while others are very long.

One group of birds known as *migratory shorebirds*, undertake extreme journeys which cross the globe, before and after their breeding season. These are true international birds and there are treaties which have been set up between different countries to protect them. Australia is party to a number of these international agreements. Australia administers its national and international obligations through the 'Environment, Protection, Biodiversity and Conservation Act'. (EPBC Act)

The EPBC Act takes precedence over state laws.

About 50 species of migratory birds visit Australia each year. The Eastern Curlew, Bar-tailed Godwit and Whimbrel are the most common shorebirds found on the Gold Coast. They feed on the invertebrates found in the bays and the tidal flats of river estuaries along Australia's shoreline.

Even though large numbers of migratory shorebirds visit Australia each year, few Australians are aware of their presence. They are shy, avoid human contact, blend in with their environment and generally inhabit remote areas.

Many of these former remote areas are now surrounded by urban development and the poorly managed interaction with humans is threatening the survival of these shorebirds.

Curlew Island and Curlew Banks is an example of this situation.

About Shorebirds



Eastern Curlew

Numenius madagascariensis

The Migration

During March, April and May the migratory shorebirds leave for their breeding grounds in the polar and sub-polar lands around the Arctic. They take advantage of the explosion of life which takes place in the short Arctic summer and the food that this provides.

Their journeys to the Arctic are between 10,000 and 15,000 kilometres in length. They fly this in a few weeks or as little as eight days. Some species fly non-stop.

Energy for the Journey!

They return to Australia in August and September, just ahead of the Arctic winter.

While they are in Australia, which is most of the time, they feed furiously to put on condition for the next migration. Repeated disturbances interfere with this, and it may cost them their life by leaving them unprepared for their journey.

They need to be in prime condition when they leave Australia to survive their migration.

These birds are shy!

Along their migration route they are hunted for food by humans and at their breeding grounds they are preyed on by wolves and foxes. They are very sensitive to people and dogs. The mere smell of a dog is sufficient to make them move from a roost or feeding area. Dogs and people are a major problem on Curlew Island

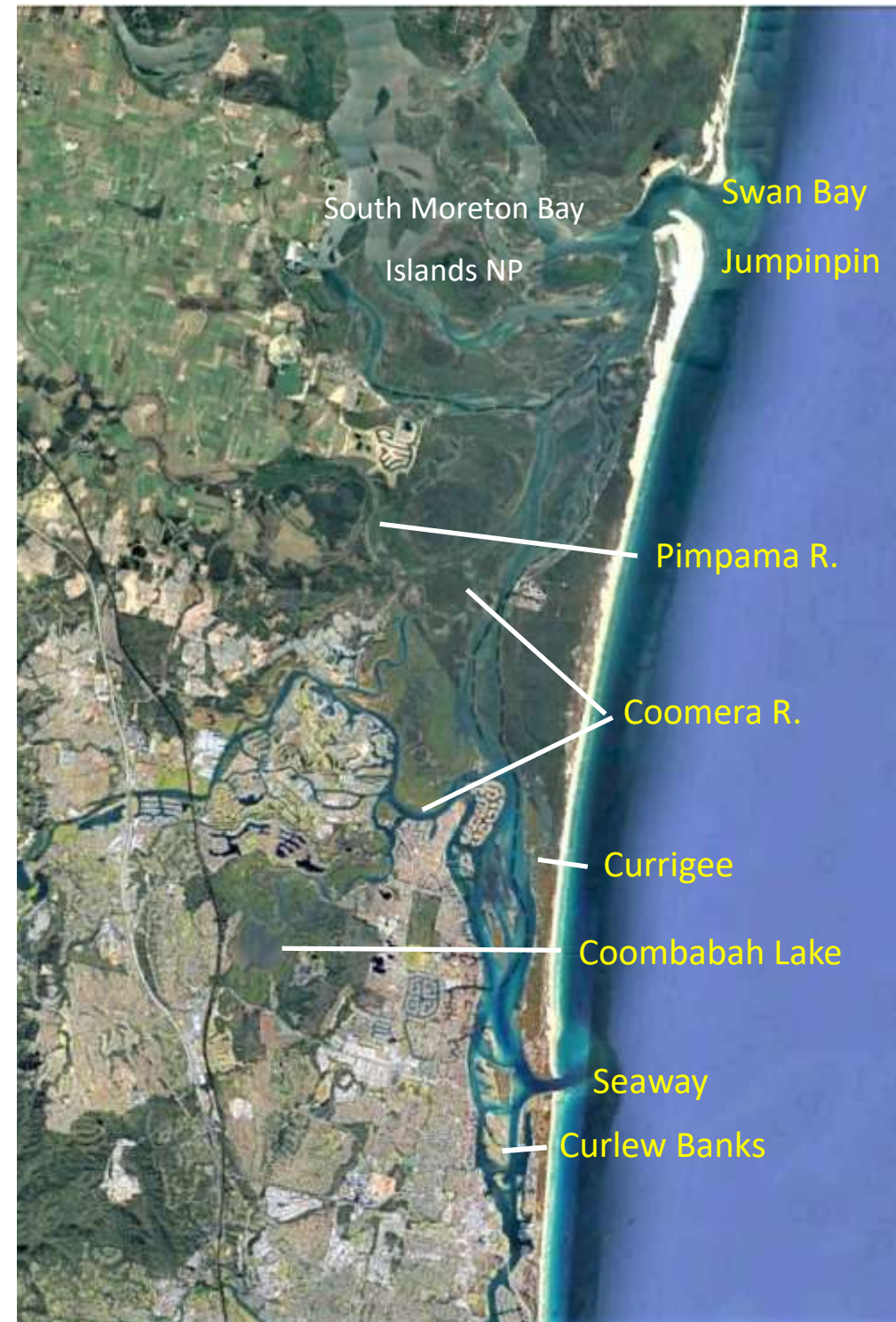


Shorebird Sites on Gold Coast Waterways

Shorebirds may turn up almost anywhere on a Gold Coast waterway but they tend to be found where their needs are met. They have three basic needs:-

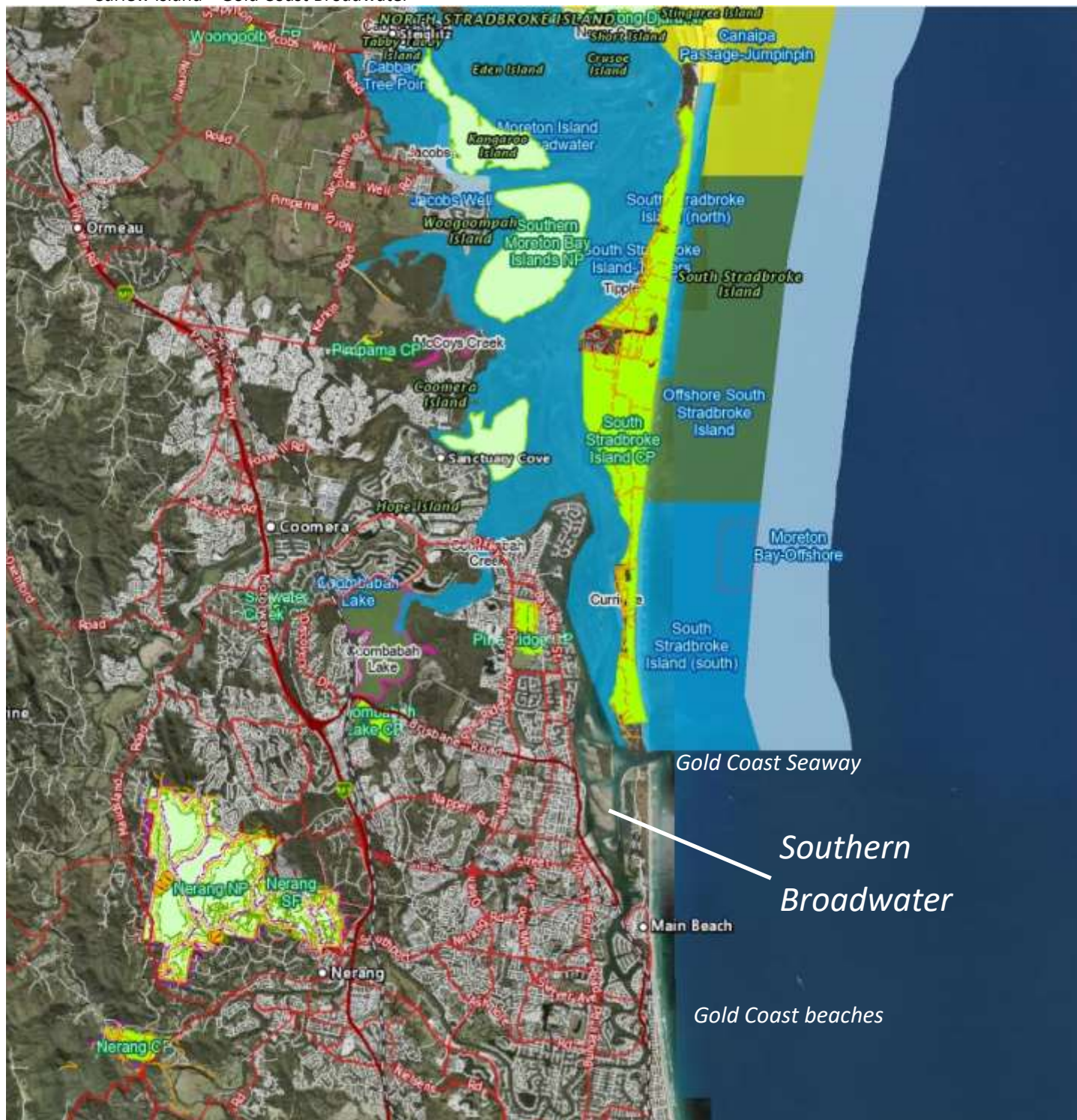
1. *A productive foraging area.* Shorebirds feed on worms, insects and crustaceans found on tidal banks. This prey depends on the presence of microorganisms and minerals and the prey is usually found on broad gently sloping tidal banks. Not all tidal banks are rich in nutrient and shorebirds are generally found in clusters where there is sufficient prey.
2. *A roost.* Shorebirds are land birds adapted to the marine environment. They do not have webbed feet or waterproof wings for swimming and need roost sites where they are able to remain dry as the tide rises. Some species roost in trees but most prefer an open sandbank where they can see approaching danger. Roost sites depend on tide levels. There are a number of roost sites scattered through out the Broadwater which are available depending on the tide level. Curlew Island is one of the more important ones. Many of these sites become inundated on very high spring tides. Some of these roost sites also experience levels of disturbance which the birds are unable to tolerate. In these situations the birds use locations on the main beach of north and south Stradbroke islands as a roost of last resort. If these sites are populated by people such as fishermen or have beach traffic, the birds will fly in holding patterns until they find a roost site.
Curlew Island and Curlew Banks is one of the few sites in the Broadwater where a major roost site and a major foraging area are adjacent to each other.
3. *Security.* Shorebirds like open areas where they are able to see approaching threats and are able to take flight. Shorebirds don't tolerate a close approach by people or dogs. They are hunted for food in Asia and preyed on by wolves and foxes in their Arctic breeding grounds. They will abandon good foraging and roost areas where there is persistent disturbance by people and dog.

There are numerous small sites where shorebirds are found on the Broadwater but the three major sites are Swan Bay/Jumpinpin, Curlew Banks and Coombabah Lake. Smaller sites are found on the North and South Branch of the Coomera River, Currigee, Pimpama River, and in the 'Southern Moreton Bay Islands National Park' near Jacobs Well.





Protection



- National Park
- Conservation Parks
- Marine Park Zones**
- General Use Zone
- Habitat Protection Zone
- Conservation Park Zone
- Marine National Park Zone

The Gold Coast Broadwater is not in a marine park. It should have been part of the Moreton Bay Marine Park when it was created in 1992 as it is a logical part of the Moreton Bay system.



Queensland Marine Parks

Queensland has three Marine Parks:

1. Great Barrier Reef Coast Marine Park
2. Great Sandy Marine Park
3. Moreton Bay Marine Park

These three parks cover almost all of Queensland's eastern coastline, including bays, inlets and estuaries, but there are exceptions:

There are small areas around some port entrances such as Lucinda, Townsville, Abbot Point, Mackay, Gladstone and Bundaberg, which are not in a Marine Park.

The two significant omissions are:

1. 'The Sunshine Coast' and:
2. 'Gold Coast', (including the southern part of the Gold Coast Broadwater).

The Gold Coast is the only site on the east coast of Queensland, with significant marine natural assets, which is not managed by a Marine Park!

Summary

It is a long-accepted principle, that where there are competing interests for an area, the interface between man and nature needs to be managed to enable its natural assets to be maintained. This is done through appropriate legislation.

There is no environmental management of the southern part of the Gold Coast Broadwater to protect its significant natural assets and its wildlife is at risk of being severely impacted or lost.

Curlew Island and Curlew Banks is a very important shorebird site, and it meets the EPBC tests of National Significance on multiple criteria. The accumulated data held in various databanks and the numerous detailed studies which have been carried out here, confirm this.

Gold Coast Shorebirds have been monitoring the main locations where shorebirds are found on the Gold Coast Broadwater for many years now. They have carried out surveys on 40 different sites and have compiled a database of about 2500 records.

Though shorebirds perform extreme migrations they are unable to swim. Some species such as the Eastern Curlew, require a high tide roost where they may remain dry. These surveys have indicated that there are only a few good roost sites within the Broadwater system. On extreme tides, shorebirds have been observed using the ocean beach areas of South Stradbroke Island where they are sometimes forced to fly in holding patterns above a roost site, to avoid beach users, 4wd vehicles and dogs.

Disturbance is a serious concern for shorebirds as it requires them to use up precious fat stores to avoid the threat. These fat stores are required for their long migrations over the oceans. They are unable to swim and if they fail to make landfall through exhaustion, they

perish. Continued disturbance can result in a bird unprepared for its long migration.

Sadly, most sites within the Broadwater have disturbance problems, but Curlew Island is the site in the Broadwater, most affected by this threat. This is because the threatening issues such as unmanaged human visitation, people disturbing flocks, and unrestrained dogs, are unable to be addressed, because of the management vacuum which exists here.

There is also very little public information or education about the environmental qualities of this part of the Broadwater.

The Gold Coast Broadwater has one of the largest estuary sandbank systems on the south-eastern coast of Australia. These banks are rich in marine life and because there is no connection to the mainland, human disturbance to foraging shorebirds is greatly reduced. These banks support important populations of shorebirds. The features of this sandbank system, make practical conservation of its wildlife populations, in a highly urbanised area, possible.

Since 1988, when the Gold Coast Seaway project was completed, the sandbank which is now Curlew Island, has grown into a stable island and has become the main shorebird roost for the surrounding sandbanks. The high tide roost areas on Curlew Island are very limited. The shorebirds are sometimes forced to leave the island due to severe disturbances by people, and the dogs which have been brought there.

When the 'Moreton Bay Marine Park' was created in 1992 the southern part of the Gold Coast Broadwater was omitted from this marine park. This means that this area has never had any environmental management and there are no controls over public behaviour towards its wildlife.

Queensland has several Acts directed at land management and only one for marine management. The principal Acts for land usage are the 'Lands Act' and the 'Qld Nature Conservation Act'.

The 'Marine Parks Act' covers marine areas. Though all acts have provisions to cover both land and water it is normal to administer land and water separately.

The two land areas in the Broadwater are Wavebreak Island and Curlew Island. Wavebreak Island is managed by the Gold Coast Waterways Authority but Curlew Island has no management.

Curlew Island was gazetted as an 'Environmental Reserve' under the 'Lands Act' in 2022, as a result of the Spit Master Plan consultation. This designation requires that it have a 'trustee' for management purposes, and as yet, no trustee has been appointed.

Until the trustee organisation is appointed there is no official body to:-

1. Place signs on the island showing that it is important habitat and an Environmental Reserve.
2. Place signs on the island requesting the public to avoid roosting flocks of shorebirds and to not bring dogs on to the island.
3. Commence a public education program.

Curlew Island and Curlew Banks need to be protected as a unit as they depend on each other.

Management of Curlew Island is only a partial solution to the management vacuum which exists here.

It is hoped that this will alleviate some of the poor public behaviour happening here but the trustee will have few actual enforcement powers for the shorebirds, as they are found on the sandbanks and marine areas outside the boundary of Curlew Island.

The management and the protection of the shorebirds, as well as the multitude of other problems which plague the Broadwater, are only capable of being addressed if this marine area is in a Marine Park.

