

Save the
Jack Evans Boat Harbour

A report
prepared by members of the
Save the Jack Evans Boat Harbour
Committee

Date: May 22, 2016

JACK EVANS BOAT HARBOUR

SUMMARY

This article includes a brief description of Jack Evans Boat Harbour Precinct (JEBH) and presents issues that will be a significant impact on the wildlife inhabitants of this unique area.

It presents the concerns of the community as JEBH is a free open space for all the community to enjoy. Concerns over those proposals which would allow large scale tourism facilities that may not be in accordance with the community's desire for localised, low-impact and sustainable tourism ventures which our region is well known for.

To raise awareness of the issues involved, from the communities viewpoint, that the proposal to build an inflatable aquatic theme park (e.g. Aquasplash) is out of character for this area and significantly threatens the environment.

Such proposals risk our public spaces being commercialised to the extent that they can exclude the existing users.

NSW Government Planning & Environment, Draft North Coast Regional Plan-2016, on pages 18, 25, 64 & 65, discusses the importance of protecting the environment and aims to expand nature based and cultural tourism.

RECOMMENDATIONS

It is therefore recommended that activities such as described in this report are not supported in principle or by granting of any approvals, licences or permits until:

- 1. A detailed management plan for the specific future use of the Jack Evans Boat Harbour is prepared.**
- 2. An independent full environmental impact study is completed.**
- 3. Full and open community consultation has been conducted which involves all stakeholders.**

Jack Evans Boat Harbour (JEBH) is a small harbour in the Tweed River estuary. This is a tidal body of water of some 12 hectares in size and which is immediately adjoining the Tweed Heads city centre and close to the NSW/Qld border. The water body is largely bordered by public parkland, residential properties in Bay & Coral Streets and in very close proximity to some environmentally sensitive habitat.

The area is Crown Land managed by Tweed Shire Council. It is dedicated public open space suitable for passive and low impact use. Tweed Shire Council in the current *Lower Tweed Estuary Management Plan, 1991*, on pages 54, 55 & 56 recommends enhancing passive usages. The Plan mentions that the boat harbour is used as a point of disposal for storm water and that the seagrass beds provide an important habitat for juvenile fish.



Jack Evans Boat Harbour Precinct - 2005

1. ECOLOGICAL

1.1 MARINE HABITAT - SEAGRASS & MANGROVES

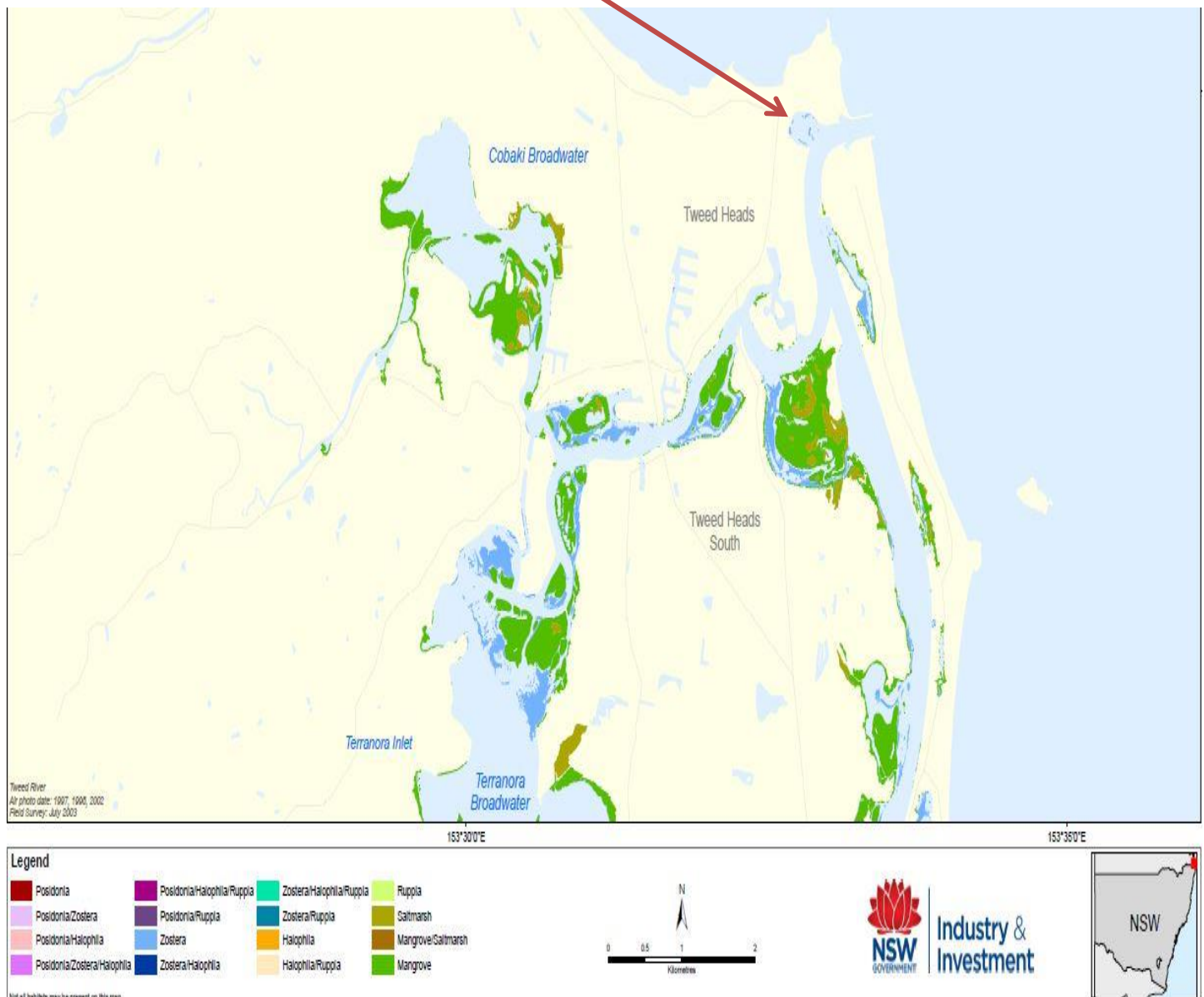
Fish habitats in NSW are protected via legislation regulating what activities can occur and where, primarily the Fisheries Management Act 1994, although other legislation may also play a role.

The Tweed River Domestic Structures Strategy, 2008, page 9 & 10, states:

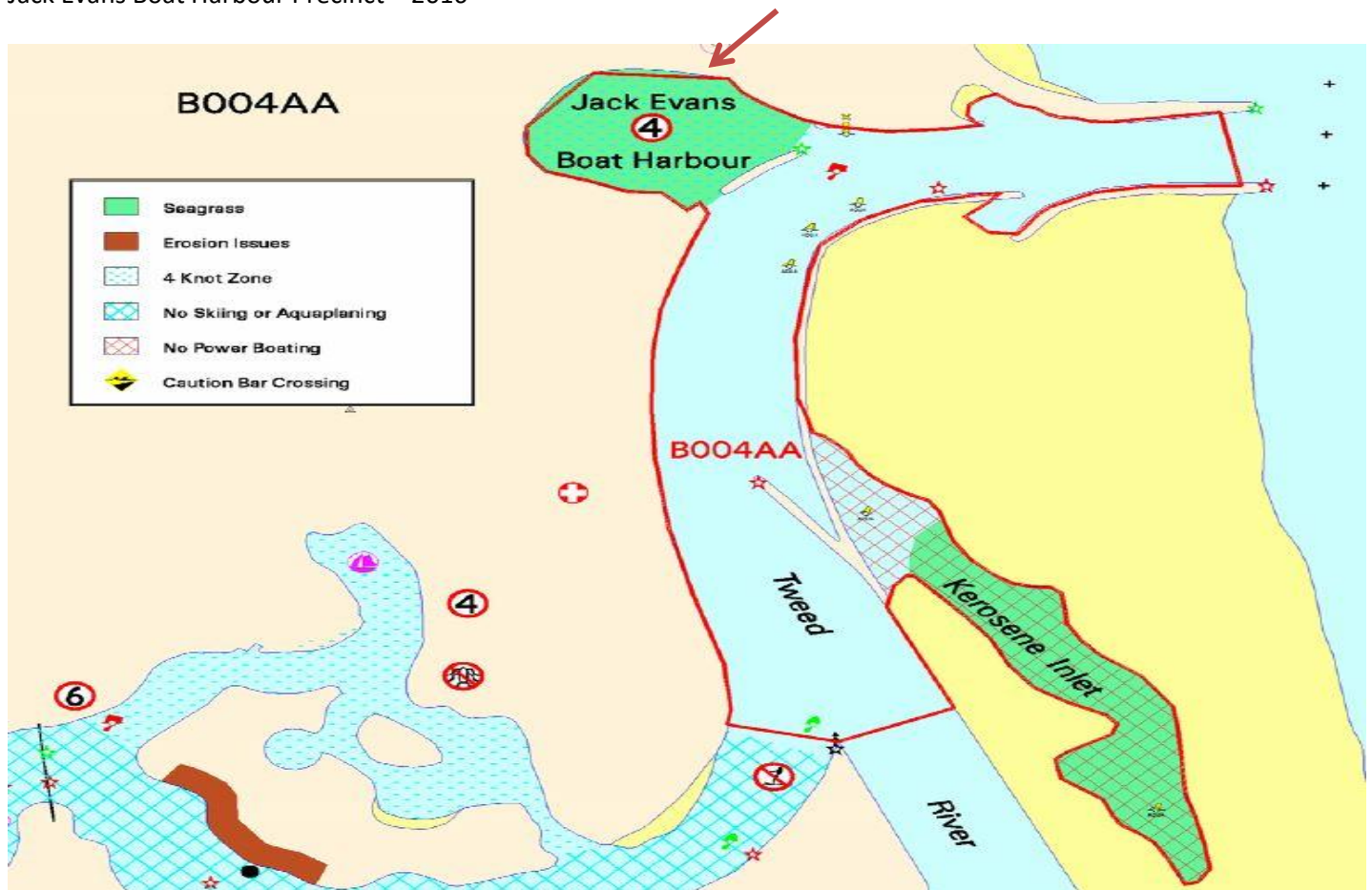
Seagrasses occur in sheltered areas and shallow waters, growing in soft sediments such as sand or mud. Seagrass beds are extremely fragile and can be easily destroyed. Seagrasses are a sensitive key fish habitat providing habitat for fish and other aquatic fauna, they help to reduce erosion, improve water quality and are a source of food for fish and other aquatic fauna.

Seagrasses are a fragile ecosystem, which are protected in NSW. A permit is required from NSW DPI to undertake works or activities that are likely to harm them. Dredging is considered a key threatening process to seagrass. Seagrass is affected by turbidity, shade, current and human interference.

The *Zostera* species of seagrass (*Zostera capricorni*) is documented by *NSW Department of Primary Industries (DPI)* growing in Jack Evans Boat Harbour as shown below on their map of estuarine habitats of the Tweed River.



NSW Maritime - Tweed Estuary Boating Plan 2006-2010 (current) No. B004AA, clearly identifies Jack Evans Boat Harbour as a Seagrass habitat. See the green shaded areas in map below.

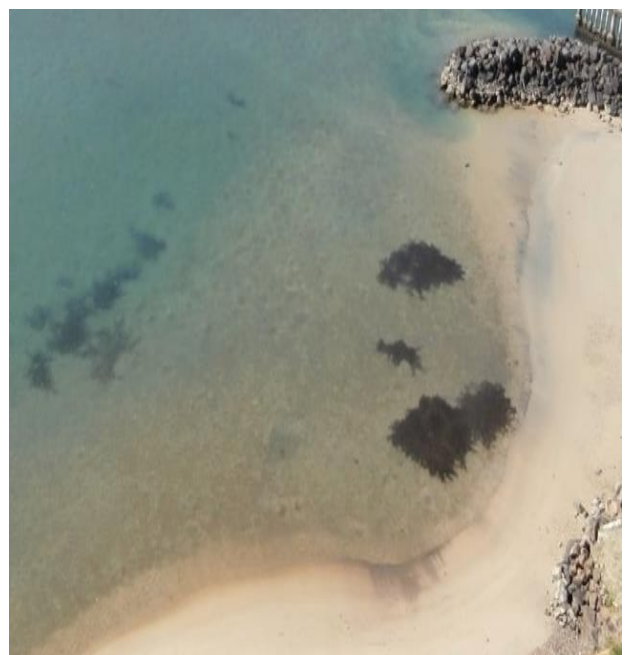


Mangroves are salt-tolerant trees and shrubs which occur on intertidal mud flats along the shores of estuaries. Mangroves provide habitat for many aquatic animals and are recognised as important nursery grounds for juvenile fish. Grey Mangrove (*Avicennia marina*) trees are growing in JEBH.

Tweed Shire Council Factsheet, Mangroves, states that Mangroves are protected under the Fisheries and Oyster Farms Act 1935. A permit is required from NSW Fisheries before removal of any part of a mangrove plant. Threats to Mangroves include human activities which have contributed to the degradation and loss of mangrove habitat.



Grey Mangroves showing pneumatophores at low tide in JEBH



Seagrass at low tide in JEBH

The Lower Tweed Estuary - Developing a Plan For the Future, 1991, by Public Works, identifies Jack Evans Boat Harbour as having Mangrove & Seagrass areas in the harbour and that endangered birds were observed during their survey as shown below on pages 6, 7 & 9.

Jack Evans Boatharbour in the heart of the residential and business area is presently under-utilised. It offers opportunities for innovative facilities

such as an underwater observatory and a snorkel trail winding through seagrasses and artificial reefs. Carefully planned and attractive walkways, fishing piers and seating on the foreshore would be well used by residents and tourists.



Jack Evans Boatharbour



7

River ecology



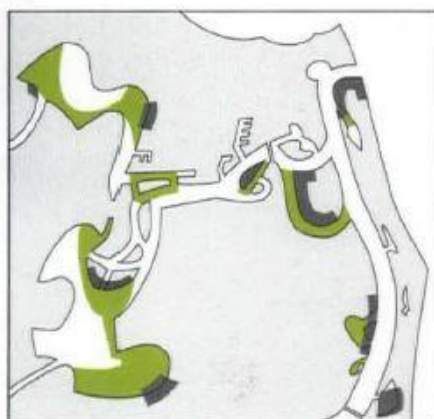
sampling the plants and animals living in the sediments of the Tweed River

Identifying the distribution of plant and animal life provides the planning tool to protect and enhance the ecology of the river.

This database showed that the Tweed River supports a shorebird population equal to those in the larger systems of the Clarence and Richmond Rivers. The richness of bird and marine life is related to the area

of mangroves and seagrasses. The Tweed has the eleventh largest mangrove coverage in NSW.

Many of the birds identified in the area are migratory and are protected by international treaties. The Little Tern is classified as 'threatened' by NSW National Parks and Wildlife Service.



bird roosting and feeding areas



mangrove and seagrass areas

JEBH



Little Tern



Osprey

Little Terns were observed in the estuary during the survey and special consideration has been given to its requirements in the possible works.



iCubed Consulting were engaged by *Multispan Australia* for Tweed Shire Council and they state in their *Construction Environmental Management Plan* that: The JEBH has a number of sensitive species including marine life and sea-grass beds.

It is therefore, well documented that both seagrass and mangroves habitats occur in JEBH.

1.2 PROTECTED AND THREATENED SPECIES AND COMMUNITIES

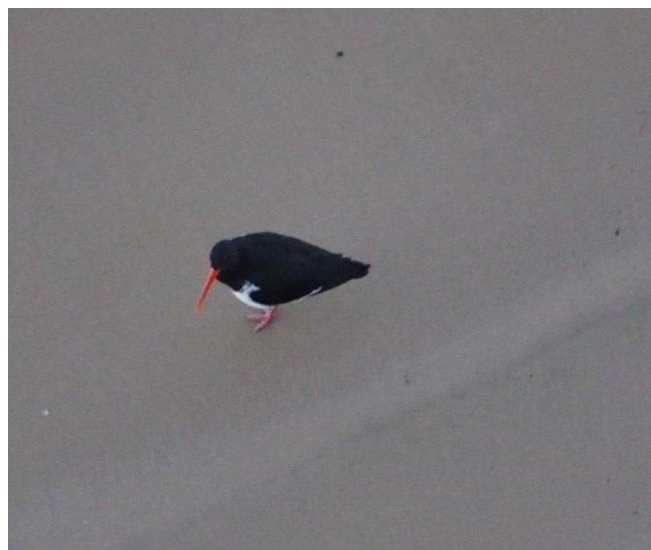
Many endangered wildlife inhabit JEBH for example, Green Turtles, Eastern Osprey, Whistling Kite, Pied Oystercatcher and Sooty Oystercatcher. See photos.

Tweed Shire Council states in their *Bush Stone Curlew Fact Sheet*, the Bush Stone Curlew (*Burhinus grallarius*) is breeding only a couple of blocks away from JEBH, less than 0.6 kms, on Greenbank near Tweed Heads Hospital and in Banks Avenue, Tweed Heads. The Bush Stone

Curlew conservation status is endangered (Threatened Species Conservation Act 1995). This endangered bird is very vulnerable to any noise or disturbance, such as by increase in traffic. They are a very shy bird and will desert their nests or territories if disturbed by people.



Bush Stone Curlew



Pied Oystercatcher on beach in front of Seascapes, JEBH

Tweed Landcare has identified five species of beach nesting birds below on the Tweed Coast, which inhabit Jack Evans Boat Harbour & surrounding area as follows within 2 Kilometres (kms):

The Australian Pied Oystercatcher, Sooty Oystercatcher, Beach Stone Curlew, Little Tern & the Red Capped Plover. They state that all of these birds are now in danger of extinction! Thus the life cycle of the species that constitutes the endangered population is likely to be disrupted such that the viability of the population is likely to be significantly compromised.

<http://tweedlandcare.org.au/wp-content/uploads/2015/09/TLI-newsletter-September-2015.pdf>

These two photographs of oystercatchers, below, are some endangered birds which inhabit JEBH.



Endangered birds foraging and feeding on site in JEBH, the Sooty Oystercatcher and the Pied Oystercatcher

Tweed Bird Observers, Birdlife Northern NSW, Byron Bird Buddies and Tweed Shire Council, all recognise the endangered beach nesting birds in this brochure below and it clearly states “their survival is in our hands”.

All five species of beach-nesting birds on the Tweed Coast are dwindling in numbers.

Australian Pied Oystercatcher

Only one or two chicks survive each year on the Tweed Coast



Little Tern

There has been only one Little Tern chick raised in the Tweed Coast since 1994.



Sooty Oystercatcher

Tweed Coast populations are declining, and chick survivorship is very low.



Red Capped Plover

No longer attempts to nest on the Tweed Coast.



Beach Stone-Curlew

No longer attempts to nest on the Tweed Coast.



**Are you too close?
If beach-nesting birds become agitated
or take flight when you approach,
you are too close.**



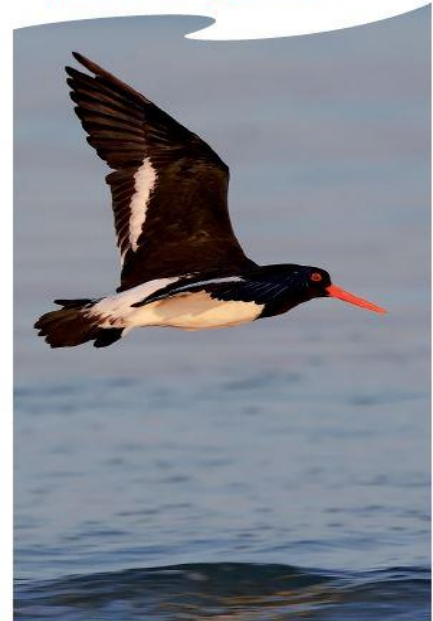
**Call Tweed Shire Council on
(02) 6670 2400 if you see a beach-nesting
bird with eggs or chicks.**

They may need protection.

Photographs supplied by:

Reid Waters, Roy Moynihan, Glenn Ehmkie,
L. Tonnochy and Donna Linton-Keane.

Beach-nesting birds on the Tweed Coast



Their survival is in our hands

Tweed Bird Observers state in the brochure, *Birds of the Tweed Valley* the following birds are in the Tweed River entrance adjacent to Jack Evans Boat Harbour, and 0.5 kms away: Darter, Australian Pelican, Eastern Reef Egret (grey morph), Osprey, Brahminy Kite, Whistling Kite, Bar-tailed Godwit, Whimbrel, Eastern Curlew, Grey-tailed Tattler, Red-necked Stint, Beach Stone-curlew, Pied Oystercatcher, Sooty Oystercatcher, Pacific Golden Plover, Masked Lapwing, Crested Tern and Caspian Tern.

Tweed Bird Observers also state in this brochure that in the Ukerebagh Nature Reserve which is less than 2 kilometres away the birds seen here include: Great Egret, Striated Heron, Buff-banded Rail, Rose-crowned Fruit-Dove, Fan-tailed Cuckoo, Tawny Frogmouth, Superb Fairy-wren, Variegated Fairy-wren, Red-backed Fairy-wren, Large-billed Scrubwren, Mangrove Gerygone, Striped, Lewin's, Brown, White-cheeked and Scarlet Honeyeaters and Golden Whistler.

Tweed Daily News reports that rare endangered fauna species are sighted at Fingal (0.5kms away) and they include: Bush Stone-Curlew, Sooty Oystercatcher, Eastern Osprey, Mangrove Honeyeater, White-eared Monarch, Powerful Owl, Rose-crowned Fruit-dove, Superb Fruit-dove and Grey-headed Flying Fox.

<http://www.tweeddailynews.com.au/news/rare-birds-sighted-at-fingal-head/1223155/>

Cook Island Aquatic Reserve, a protected area rich in marine biodiversity is about 4.0 kms away. Fingal Head is 0.5 kms away from JEBH. These sites are significant sites for seabirds, sharks, fish, green turtles, loggerhead turtles and other migratory birds and marine species, etc. Cook Island Aquatic Reserve has seven fauna species recorded in the reserve which are listed under the TSC Act and the reserve provides habitat for twelve migratory bird species listed in international treaties. Several threatened species live in these reserves and the surrounding area, and they frequent Jack Evans Boat Harbour to feed. These species are protected by international treaties.

Endangered Green Turtles from Cook Island Aquatic Reserve are regularly seen by local residents swimming and feeding on seagrass in Jack Evans Boat Harbour. They breed in the area and lay their eggs across the Tweed River on Letitia Spit.

The diagram below shows adjacent areas to JEBH showing endangered and critically endangered species habitat and breeding grounds.



The *IUCN Red List of Threatened Species* founded in 1964, is the world's most comprehensive inventory of the global conservation status of biological species. The International Union for the Conservation of Nature (IUCN) is the world's main authority on the conservation status of species.

The *ICUN states* that all marine turtle species are experiencing serious threats to their survival. The main threats are pollution and changes to important turtle habitats, especially seagrass beds, mangrove forests and nesting beaches. There are only a few large nesting populations of the green and loggerhead turtles left in the world. Australia has some of the largest marine turtle nesting areas in the Indo-Pacific region.

<http://www.iucnredlist.org/details/4615/0>

The Green Turtle population is decreasing states the ICUN Red List hence action needs to be taken now. The uncontrolled development of coastal and marine habitats threatens to destroy the supporting ecosystems of long-lived green turtles.

<https://www.environment.gov.au/marine/marine-species/marine-turtles>

Regarding Fingal Headland and the estuarine ecologies the *Tweed Local Environmental Plan, 2000* states “Developments adjoining water bodies must aim to protect and enhance scenic quality, water quality, aquatic ecosystems bio-diversity and wildlife habitat and corridors.”

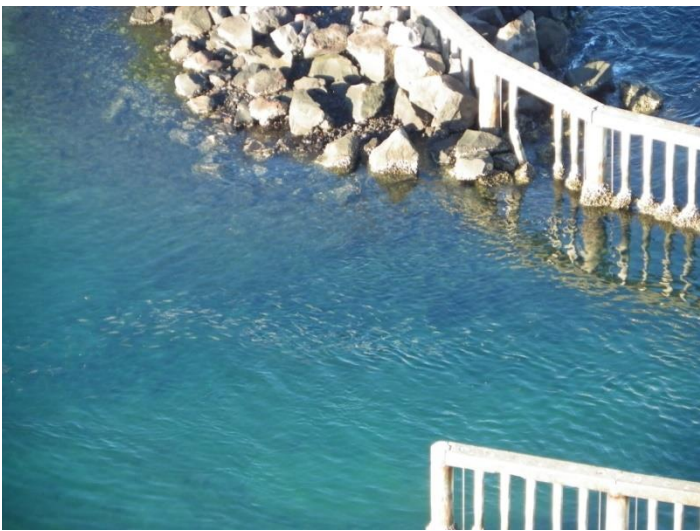
Protected and threatened species are identified in Jack Evans Boat Harbour and adjacent area and these are listed under the Fisheries Management Act, Threatened Species Conservation Act, National Parks and Wildlife Act or Environment Protection and Biodiversity Conservation Act which may be affected by the fisheries.

This proposed tourist fun park activity is likely to have a very significant affect, directly or indirectly, by the human disturbance and foreshore development, to the nearby endangered species and their habitat and to the fragile environment thus could be identified as a major threat.

An independent Environmental Impact Assessment Study is likely to be required.

1.3 AQUATIC SPECIES - FISH & INVERTEBRATES, ETC.

Numerous fish species are seen and caught in JEBH, as recreational fishing is very popular pastime in the harbour. They report such fish found in JEBH as whiting, trevally, bream, flathead and Blubberlip Bream, etc. Healthy fish are easily visible at multiple locations around the harbour, as well as turtles. Significant quantities of crabs sighted at low tides in the intertidal zones and also significant burrowing activity is seen.



School of fish visible in JEBH



Fishing is popular in JEBH

Fishing magazines regularly mention JEBH as a good fishing destination, having plenty of fish in the harbour, see list below:

<http://fishingmonthly.com.au/Articles/Display/10233-Jack-OClock>

<http://fishingmonthly.net.au/Articles/Display/1664-Late-summer-a-good-thing-for-fishos>

<http://ifishaustralia.com.au/fishing-the-tweed-2/>

www.fishhunt.com.au

Living on the rock walls around JEBH are rock pool oysters, limpets, mulberry oyster borers, honeycomb barnacles and much more.



Rocky habitat in JEBH

Divers see a huge array of marine life in the harbour as diving is a popular activity in JEBH. Regularly spotted by divers near the rock walls of JEBH are, moray eels, pineapple fish, all sorts of sting rays, lion fish, shrimp and prawns, crays, octopus, eels, catfish and the regular schooling fish: i.e. bream, tailor, whiting, sweet lip and bait ball cat fish, etc. not to mention the dolphins and the green turtles as well.



Diving activities in JEBH

Due to the wide array of marine life seen in JEBH diving is highly recommended by local the diving schools as well as many others such as those shown on the following websites: Dive-Oz and MK Dive Adventures.

<http://www.diveoz.com.au/index.php/australian-scuba-dive-site-directory/australian-boat-and-shore-dive-directory/australian-dive-sites-new-south-wales/998-.html>

DIVE-OZ
47,000KMS OF COASTLINE
AND ONLY ONE DIVESITE!

- Home
- Reset Your Password
- Login / Register Account
- Discussion Forums
- Dive Site Directory
 - Boat & Shore Dives
 - New South Wales
 - Northern Territory
 - Queensland
 - South Australia
 - Tasmania
 - Victoria
 - Western Australia
- World Scuba News
- Dive-Oz Classifieds
- Dive-Oz Online Store
- Scuba Articles & Stories
- Learning To Dive
- Scuba Emergency!
- Grey Nurse Sharks
- About Dive-Oz
- Advertise on Dive-Oz
- Contact Dive-Oz
- Instant Messaging
- Site Terms & Conditions
- The Future Of Dive-Oz...
- What's New?

Advertise Here

Tweed Heads Rivers

Location: Tweed Heads
State: NSW
Diver Qualifications: Open Water
Average Depth: 8
Max Depth: 14

Directions: Pacific Highway onto Boundary Round onto Coral Street. The parking lot on the right just before the Air Sea rescue Building is the place to park. Access to the water is via either the little beach just south of Duran Bar Beach and alternatively via the concrete "stairs" beside the floating Air Sea Rescue mooring at the start of the car park.

Description: The Tweed River makes a final bend before exiting to the sea over the Tweed Bar. This final bend has two openings for the Jack Evans Boatharbour with the stairs being on the edge of the northern opening. The bend, lined by man made rock walls, continues further to the opening of the small beach and the bar 25m further on. The Tweed River needs to be dived as close to slack tide as possible, with the high tide being the best for visibility. Enter via the beach for a long drift dive on the incoming which will carry you along the wall, past the stairs, the Jack Evans Boat Harbour and down to the hospital. Enter via the stairs for a shorter dive along the Boatharbour wall and down to the hospital. If you time the tide right you can enter via the beach or stairs with only a slight incoming current which can carry you gently along the wall and after a short pause will deliver you back to the stairs or beach on the strengthening outgoing tide. The Tweed River can be relied upon to surprise you. Regularly spotted are, moray eels, pineapple fish, all sorts of rays, lion fish, shrimp and prawns, crays, octopus, eel tail catfish and the regular schooling fish i.e. bream, tailor, whiting, sweet lip and bait ball cat fish not to mention the dolphins and turtles that occasionally come to visit. This is an excellent night dive venue. With the help of reasonable visibility you can easily navigate back and forth along the wall and marvel at the diversity and activity that darkness brings. There are several dive stores in the vicinity for sales, spares and advice not to mention the regular (resident) DiveOzians that frequent the site on the weekend high tides.

Access Type: SHORE
Average Visibility: 9

Advertise Here

A photograph showing a rocky shoreline with two wooden fences. The fences are made of vertical wooden posts connected by horizontal rails. A small white sign with the number '10' is attached to the upper fence. The water is calm and has a greenish tint. The rocks are dark and jagged. The sky is not visible in the image.

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Dolphins in proposed aquatic fun park area, JEBH



Dolphins in JEBH



Dolphins regularly play and feed on fish in JEBH as shown in photos taken in front of Seascape Apartments



JEBH is teeming with marine life which regularly swims and feeds on the fish in Jack Evans Boat Harbour such as families of Bottle Nose Dolphins, sting rays, Green Sea Turtles, etc. which are seen constantly by many of the local community.

1.4 BIRDS & OTHER SPECIES

Numerous birds can be seen daily in JEBH and surrounding parkland, such as: welcome swallow, masked plover, magpie, peewee, pied butcher bird, pied currawong, torresian crow, kookaburra, brush turkey, rainbow lorikeet, scaly breasted lorikeet, galah, little corella, noisy miner, blue faced honeyeater, noisy friar bird, willie wagtail, white ibis, pelican, silver gull, mangrove heron, crested tern, black cormorant, pied cormorant, sooty oystercatcher, pied oystercatcher, eastern osprey, whistling kite, brahmny kite, whistling kite and more. Plentiful butterflies, moths and many other insects are also seen.

Photos of some of the birds that inhabit JEBH precinct, below.

Birds that inhabit JEBH Precinct



Pelican



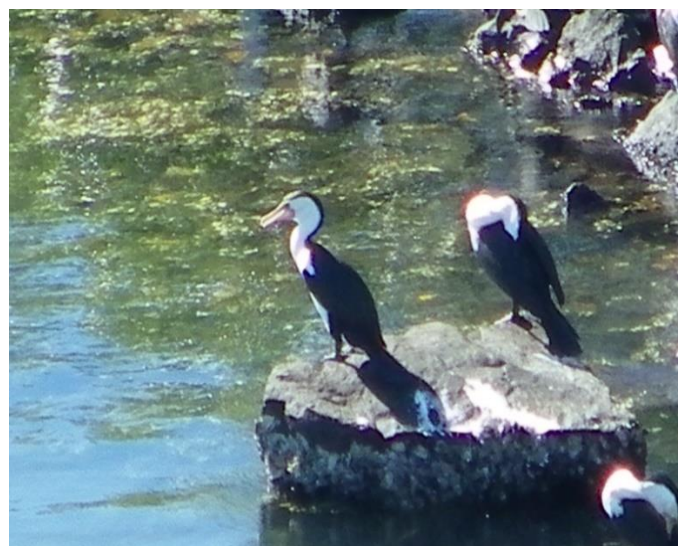
Crested tern



Pair of threatened Eastern Osprey flying over JEBH in search of food



Black Cormorant



Pied Cormorant

2. THE BIOPHYSICAL ENVIRONMENT

2.1 NOISE AND LIGHT REGIMES

Loud noise generated by screaming, squealing, yelling of tourists, the noise of all the staff blowing whistles hourly to alert the end of every 50 minute session, and use of air compressors which are likely to be used to pump up floating inflatables as well as the possibility of extra artificial light sources with the proposed opening hours expected to be from 7.00am to 8.00pm daily, seven days/week is a significant factor.

Several residential buildings in the surrounding streets will most likely be affected by the constant noise and /or light as the JEBH is an amphitheatre for sound.

The increased traffic from cars and buses will generate significant rise in noise levels.

All the wildlife in JEBH will be adversely affected by this noise. Bird (e.g. roosting, feeding and migratory birds - such as the Australian Pied Oystercatcher, Sooty Oystercatcher, Beach Stone Curlew, Bush Stone Curlew, Little Tern & the Red Capped Plover and other wildlife including turtles, dolphins and sting rays), and animal behaviour are well documented to cause a significantly or permanently modified response to the noise and or light that these tourist activities generate and some, the critically endangered, are at high risk of facing extinction.

An independent Acoustic Report is likely to be required.

2.2 TRAFFIC AND INFRASTRUCTURE

Cars and bus traffic is likely to increase, thus parking and road maintenance will be a significant issue. A Traffic Analysis is likely to be required.

Public toilets, showers, change rooms, seating and shade structures are likely to be required and maintained by Council.

3. SOCIAL ISSUES

3.1 INDIGENOUS PEOPLES

Despite its current usage, and its status as Crown Land, Jack Evans Boat Harbour and parkland, both the land and sea surrounding it remain significant sites within the country of an Australian Aboriginal clan, the Nganduwal, of the Bundjalung Nation. It is within the area of the Tweed Byron Local Aboriginal Land Council (LALC). The site has become a green and serene place that is special to the Indigenous community.

The Indigenous community are stakeholders in Jack Evans Boat Harbour. Jack Evans Boat Harbour and parklands signify a place of cultural and educational significance.

The impact of a Gold Coast style commercial tourist aqua fun park facility would bring to the site is not in keeping with this serene place and its indigenous history.

Consultation is likely to be required between Tweed Shire Council and the Aboriginal Advisory Committee.

3.2 COMMUNITY CONCERNS

There has been no community consultation. At the Ordinary Council meeting, Thursday May 19th 2016, the recommendation from the Tweed River Committee was adopted by the full council as follows: *GB1.Jack Evans Boat Harbor – Facilities (aquaSplash)*

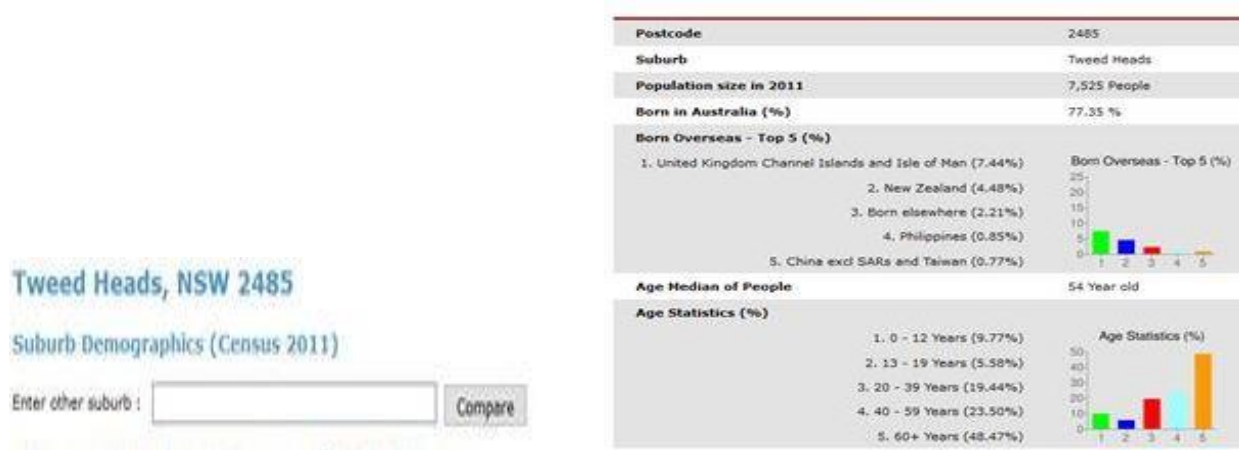
“That Council notes that the Tweed River Committee meeting does not support Council providing a letter of support to aquaSplash for the aquatic fun park proposal, prior to there being full community consultation on the matter.”

The local residential and business community view Jack Evans Boat Harbour as a peaceful place to relax and unwind.

Tweed Shire Council, *Revitalising Tweed City Centre Plan*, pages 32 - 35 states clearly that “Tweed’s population is projected to skew further toward the older age groups, with the number of persons aged over 65 years projected to more than double to 41,000 persons by 2031”.

The demographic of Tweed Heads does not suit a commercial venture of a Gold Coast style aqua fun theme park. Over 50% of the population in Tweed Heads have an average age over 60 years, seen in below graph taken from 2011 Census.

<http://myboot.com.au/2485/Tweed%20Heads/demographics.aspx>



Jack Evans Boat Harbour Parkland Usage and Event Guidelines by Tweed Shire Council describe it as open public space. It outlines guidelines for low impact and passive use.

Areas kept purely as open spaces to be enjoyed for walking, nature trails, swimming, fishing, canoeing, picnics, etc. and just to take a moment of ‘down time’, play an equally important role in improving the overall wellbeing of a community.

Tweed Shire Council’s *Lower Tweed Estuary Management Plan, 1991*, recommendation for Jack Evans Boat Harbour is to enhance passive usages and develop the area as a precinct focus for Tourism. Threats are recognised in this document as stormwater discharges, overdevelopment, conflict between boating and swimming.

Dana Spence, President of Parks and Leisure Australia NSW/ACT, says that open spaces falling under the ‘passive recreation’ banner allow people to reconnect with the environment and “have an intrinsic calming effect on our communities”.

Passive recreational areas provide value to a community on several levels, beyond just making a social impact. Visionary open spaces can also add value to surrounding property, contribute to tourism, aid biodiversity and provide an educational resource for stimulating ideas on art and natural science.

Councils are required to provide dynamic recreational areas that encourage communities back into the great outdoors in the face of rising obesity rates, demanding work hours, and children becoming increasingly fixated by their computer screens.

The vast majority of the community are likely to see a commercial tourist inflatable fun park attraction as having an adverse effect that will significantly change their environment. It is not in harmony with community desires and does not suit the demographic of the Tweed Heads area.

The Tweed Heads' natural setting of JEBH precinct promotes a distinctive visual character and provides public amenity and is valuable social space for all members of the community. It would be beneficial to protect and enhance the natural environment and its ecological values within public open space of the existing Crown Reserve, Jack Evans Boat Harbour.

JEBH is enjoyed by the whole community; swimming, walking, jogging, picnics, walking the dog, paddle boarding, nippers training, and dragon boat racing, to name a few. It is also a popular venue for numerous events, Tweed River Festival, fireworks, weddings, markets, and so on.

The footprint of the proposed aqua fun park is likely to expand over time and eventually be significantly larger than the now proposed 3.3% of the harbour requested.



aquaSplash showing proposed position in JEBH



The Southport aquaSplash superimposed into JEBH

Tweed Coast Regional Crown Reserve Plan of Management states on page 59 that the Land and Property Management Authority "LPMA and the management Trust(s) will actively seek meaningful involvement of reserve users, neighbours, and other affected stakeholders, relevant Government Departments and agencies and interested community members in the development of precinct or reserve management plans, expressions of interest, master plans and development that may flow from this Plan".

Communication, community involvement and consultation with the community are required.

Property values in the area are likely to decrease.

An independent Visual Amenity Assessment is likely to be required.

3.3 HEALTH AND SAFETY

Tweed Shire Council has erected signage at several points to alert the community to the dangers of the harbour. The signs warn people of the risk of warn of diving in shallow waters, slippery surfaces, shallow water, submerged rocks, sharp objects, such as oysters, etc.

There appears to be significant natural tidal movement of sand that occurs around the harbour. This element is likely to be natural seasonal variation and would need to be monitored.

Water turbidity caused by disturbance of sand and debris in and around the aqua fun park is likely to cause a significant issue. Stormwater drains, erosion and water quality are likely to be an issue.

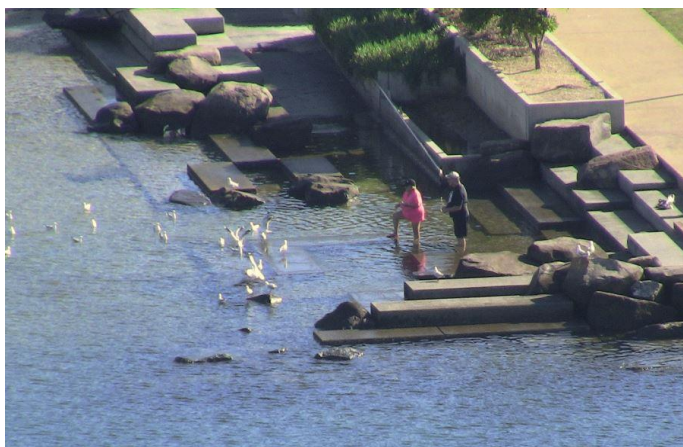


Warning signs erected by Tweed Shire Council in JEBH

An independent Depth Analysis is likely to be required.

Critical to the Central Beach Precinct is the 'all abilities' beach access ramp which allows people of all abilities to reach water at any tidal level. The ramp provides the potential for special needs groups to access the harbour and ensures that safe and equitable access is provided to all.

The potential site and position indicated for the inflatable fun park is likely to obstruct access to the harbour for members of the community.



JEBH Central Beach Precinct showing the all abilities access ramp and swimmers & boats using beach

The Uninet Enclosure System is used by aquaSplash to surround and fully enclose the proposed aquatic fun park and is likely to be potentially hazardous to the many birds, fish and all marine life using the harbour.

Uninet Enclosure Systems use concrete anchor blocks dug into the seabed floor as anchors and use chains along the bottom of the seabed floor, these chains are likely to stir up all the sediment.

They state the following information on their website at: <http://www.uninet.com.au/products.html>

“The netting acts as the physical and deterrent barrier to the Box Jellyfish which are good swimmers and avoid obstacles and entrapment wherever possible. The air inflated boom provides the support and a continuous chain along the lower edge keeps it in contact with the seabed. The different lengths of the enclosures provide a swimming area up to 100 metres along the beach and up to 100 metres out to sea. Flat beach profiles and larger tidal ranges require the longer nets. Very popular sites require the wider nets.

The fixed system has a net which is installed in a fixed position. An anchor is attached at each corner and ground anchors are attached to the ends on the beach at high water level. The fixed systems are usually in continuous operation for the entire season.

The full system uses the same net and anchors but incorporates an electrically powered hydraulic winch unit which is used to adjust the position of the net during the tidal cycle each day.

The winch unit also enables rapid and easy removal of the net for rough weather, cyclones, cleaning and service. This system allows for use on beaches which are calm enough most of the time, but where net removal becomes necessary during strong winds or flooding”.



Example picture of the Uninet Enclosure System



The aquaSplash at Southport, Qld

A winch is likely to be permanently set up on the beach. The air inflated boom provides the support and a continuous chain along the lower edge keeps it in contact with the seabed.

The netting system, similar to the photos, is likely to cause sand & debris build up around the net and is likely to interrupt the flow of the current in the harbour and potentially pollute the harbour.



The Uninet Enclosure System, winch on beach

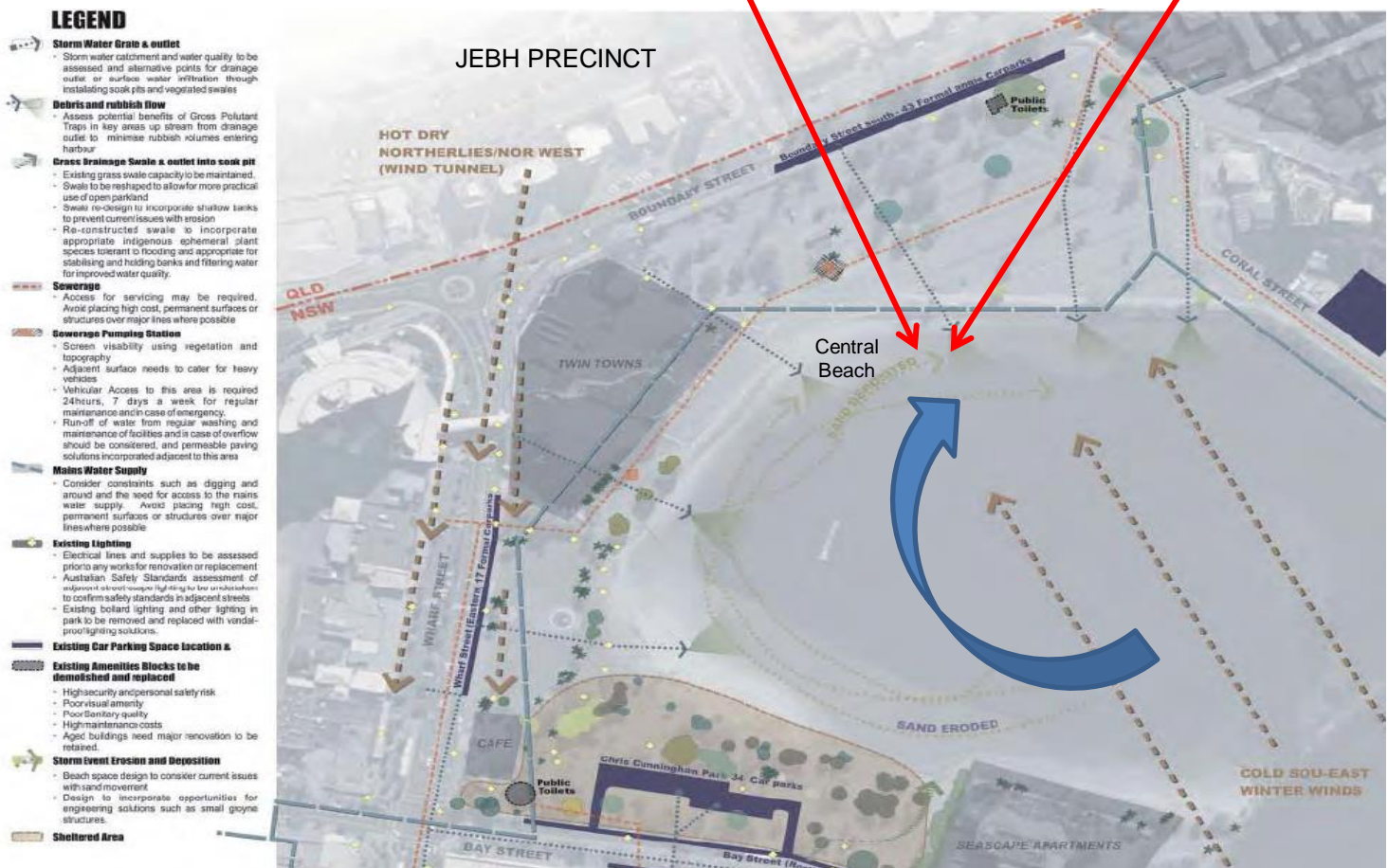


Aqua Fun Park at Twin Waters, staff with whistle



Uninet Enclosure Systems showing the anchor blocks and transporting of anchors

Site Analysis of sand movement in JEBH is likely to be required. Similar to the one described in the diagram below from *Being There...Pinning Something Down*, page 54, by G. Wright, Landscape Architect, showing sand eroded in front of Seascape Apartments and sand deposited at the Central Beach area (red arrow below). This sand is likely to build up around the proposed aqua fun park enclosure netting in the harbour.



The sand and ocean current in JEBH travels in a clockwise motion around the harbour.

JEBH is Zoned 6(a) and 6(b) which, under the Local Government Act, 1993, requires consent from Tweed Shire Council for recreation facilities to be conducted in those Zones.

In the Tweed Shire Council *Reserves Trust JEBH Minutes*, dated 21 April 2016, it states regarding the aquaSplash Fun Park proposal that “It is noted that the proposed activity requires development consent from Tweed Shire Council”.

A Development Application (DA) is required to be submitted and approved by Tweed Shire Council prior to commencement of the activity (aquaSplash).

CONCLUSION:

The values of JEBH precinct must be protected, conserved, enhanced and maintained in order to meet the expectations of all the community, and be managed sustainably to meet the needs of future generations.

Exclusive use of any area for a commercial aquatic fun park is out of character for the JEBH precinct. JEBH precinct is passive use, low impact open space for everybody to enjoy.

The environmental values of the JEBH as part of the Crown Reserve need conservation and active management to ensure that these values are retained in perpetuity for future generations to enjoy.

These natural environmental and ecological values need to be enhanced, and would include such things as:

biodiversity and ecosystem health; terrestrial flora and fauna and their habitats; aquatic species and habitat including fish and invertebrates (crabs, prawns, oysters, etc.); wetlands (seagrass and mangrove habitats); threatened species, populations and communities and endangered ecological communities; internationally significant shore and waterbird species and their habitats.

References and further information:

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Environment Protection and Biodiversity Conservation Act 1999
National Parks and Wildlife Act
The Coastal Protection Act 1979 (NSW)
Local Government Act, 1993