Senate Standing Committee on Environment and Communications Legislation Committee Answers to questions on notice Environment and Energy portfolio

Question No:	106
Hearing:	Budget Estimates
Outcome:	Outcome 1
Program:	Environment Standards Division (ESD)
Topic:	Toondah Harbour – Wetlands Referral
Hansard Page:	101
Question Date:	22 May 2017
Question Type:	Spoken

Senator Waters asked:

Mr Barker: The advice we get from line areas is generally around the more factual matrix, if you like, of the scale of the impacts because the decision about whether there is likely to be a significant impact is then a decision for the decision maker, either the delegate or the minister. Senator WATERS: Did that advice come to a suggestion about whether the extent of the impacts was likely to be significant?

Mr Barker: From recollection, no, it was not. But I am going on recollection and so I would need to take that on notice.

Senator WATERS: If you could check on that, that would be very helpful. Are you able to provide a copy of that advice?

Mr Barker: Yes, I can. A copy of that advice has been provided under FOI and so I can provide you with a copy of the advice as it was provided under FOI.

Answer:

Attached are copies of internal advice that was released by the Department under the *Freedom of Information Act 1982*.

FOI 170405	
Document 5	

s22

Sent: To: Cc: Subject: Wednesday, 9 December 2015 10:02 AM



RE: Request for Line Area Advice on Referral EPBC 2015/7612, Toondah Harbour Project, Moreton Bay, Qld [SEC=UNCLASSIFIED]

Thanks S22

From: S22

Sent: Wednesday, 9 December 2015 10:00 AM To:S22

Subject: FW: Request for Line Area Advice on Referral EPBC 2015/7612, Toondah Harbour Project, Moreton Bay, Qld [SEC=UNCLASSIFIED]

 s22

 Director
 Marine and Freshwater Species Conservation
 Wildlife, Heritage and Marine Division.

 Department of Environment
 p. 02-6274 s22
 m s22
 f. 02-6274 2455
 GPO Box 787 CANBERRA ACT 2601

 email:
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From: S22 Sent: Wednesday, 9 December 2015 9:59 AM To: S22 Cc: Species Conservation Referrals Subject: FW: Request for Line Area Advice on Referral EPBC 2015/7612, Toondah Harbour Project, Moreton Bay, Qld [SEC=UNCLASSIFIED]

Please find Marine Species and Marine Reserves advice below. I believe Migratory Species Section is liaising with you directly on this referral

Regards s22

s22

 Director
 Marine and Freshwater Species Conservation
 Wildlife, Heritage and Marine Division.

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Marine and Freshwater Species Conservation Section Nil Response

Marine Reserves

Thank you for the opportunity to comment on the referral for the development of Toondah Harbour, Moreton Bay, Queensland (2015/7612).

We have considered the documentation and as this harbour development is not proposed to occur within or near to a Commonwealth marine reserve, we do not have any further comments.

From: S22 Sent: Wednesday, 25 November 2015 12:54 PM To: Species Conservation Referrals Cc: S22 Subject: Request for advice [SEC=UNCLASSIFIED]

Hello

I am writing to request comments on the following EPBC referral:

EPBC Number: 2015/7612

Referral Title: Toondah Harbour Project, Moreton Bay, Queensland

Project stage: Referral

Project Documentation: The referral documentation can be found on the Department's website at:

http://epbcnotices.environment.gov.au/ entity/annotation/9e90dfb5-0793-e511-b7fa-005056ba00a8/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1448414958272

Summary of the proposed action: The proposal is to construct a residential, commercial and tourism based development, ferry terminals, open space and marina at Toondah Harbour, located on the foreshore of Moreton Bay, 1.5km from Redland City's principal activity centre of Cleveland and 30km southeast of Brisbane.

The total area of the Toondah Harbour project is approximately 167.5 hectares, 138.9 hectares of which is contained within the Moreton Bay Ramsar site. The development footprint (including land reclamation) within this area will be approximately 62.2 hectares. The reclamation component is approximately 43.5 hectares.

The proposal also includes the excavation of a marina and the widening, deepening and lengthening of Fison Channel, which is the existing entrance channel to Toondah Harbour and may include the disposal of dredge material at Mud Island and sand excavation at Middle Banks.

Potential Issues:

Listed threatened species

Potential impacts to the koala, grey-headed flying fox, water mouse and eastern curlew due to loss and disturbance to habitat

Migratory species

potential impacts to listed migratory shorebirds through the clearance of intertidal foraging habitat and through disturbance to adjacent roost sites through habitat change and disturbance during construction

potential impacts to migratory marine mammals (dugong, dolphins) and marine turtles as a result of increased vessel strike, human disturbance and loss of habitat, including seagrass.

Timeframe for providing advice:

Please email to the primary EAB contact officer by 9 December 2015

http://spire.environment.gov.au/spire/855732/855003/101/Forms/Agency%20Assessment%20File/docsethomepag e.aspx?ID=80887&FolderCTID=0x0120D52000970F08C636A20F4A9DB76F3BD06A4B6603005FF2AC3CE2EABC4B8FB 469139C33A9CA&List=1b6e8bc1-d125-4b73-a016-170dd339d3a8&RootFolder=%2Fspire%2F855732%2F855003%2F101%2F2015%2D7612%20Referral%2DToondah%2 0Harbour%20Project%2C%20Moreton%20Bay%2C%20Qld Please contact the assessment officer within 5 business days to advise of the appropriate Wetlands Section officer(s), dealing with this request.

Name of primary EAB contact officer: \$22 \$22 @environment.gov.au Assistant Director, Queensland Major Projects Section,

Name of secondary EAB contact officer: S22

@environment.gov.au

Kind regards

s22

Assistant Director Queensland Major Projects Environment Standards Division Australian Government Department of the Environment

s22 @environment.gov.au Ph: (07) 3037 s22

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FOI 170405 Document 6a

DEPARTMENT OF THE ENVIRONMENT

WATER REFORM DIVISION

EPBC ACT REFERRAL ADVICE FROM WETLANDS SECTION

REFERRAL: EPBC 2015/7612

DATE DUE BACK TO EACD: 9/12/2015

TOONDAH HARBOUR PROJECT, MORETON BAY, QUEENSLAND

Brief Description of Proposal

The proposed action involves the filling in of marine areas for urban development and public open space, the excavation of a marina and the widening, deepening and lengthening of Fison Channel, which is the existing entrance channel to Toondah Harbour, on the foreshore of Moreton Bay about 30km southeast of Brisbane (Figure 1). The development footprint (including land reclamation) within the referral footprint is approximately 62.2 hectares with the reclamation component approximately 43.5 hectares (Figure 2).

Issues Checklist

How far is the proposal from a Ramsar site?

The proposed action will occur immediately adjacent to and inside the Moreton Bay Ramsar site (Figure 2).

The Moreton Bay Ramsar site is located in and around Moreton Bay, east of Brisbane in Queensland and was listed in 1993 under six of the 9 Ramsar criteria:

- Criterion 1: contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.
- Criterion 2: supports vulnerable, endangered, or critically endangered species or threatened ecological communities.
- Criterion 3: supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.
- Criterion 4: supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.
- Criterion 5: regularly supports 20,000 or more waterbirds.
- Criterion 6: regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

Moreton Bay is a semi-enclosed basin bounded on its eastern side by two large sand islands. Islands in the site include all of Moreton Island, and parts of North and South Stradbroke Islands, Bribie Island and the Southern Bay Islands.

Other parts of the site include waters and tributaries of Pumicestone Passage, some intertidal and subtidal areas of the western bay, southern bay and sandy channels of the Broadwater region, marine areas and sand banks within the central and northern bay and some ocean beach habitats.

Wetlands on the site include seagrass and shoals in the eastern banks, tidal flats and associated estuarine assemblages within the Pumicestone Passage, mangroves and saltmarsh in the southern bay, coral communities of the eastern bay, freshwater wetlands and peatland habitats on the Bay Islands and ocean beaches and foredunes on Moreton Island.

The extensive Mangrove and tidal flats provide a nursery for fish and crustaceans, and also support birds and other marine life. The sandflats provide roosting sites for migratory birds.

The seagrass areas provide food and habitat for fish, crustaceans, the internationally vulnerable Dugong, and the nationally threatened Loggerhead Turtles, Hawksbill Turtle and Green Turtle. Other nationally threatened species that occupy the site include the Oxleyan Pygmy Perch and Honey Blueeye, Water Mouse and the Australia Painted Snipe.

The site supports more than 50,000 migratory waders during their non-breeding season. At least 43 species of wading birds use the intertidal habitats, including 30 migratory species listed on international conservation agreements. Moreton Bay is one of only 2 Ramsar in Australia that supports the critically endangered Eastern Curlew all year round, with juvenile birds not migrating until they are 2-3 years old.

S47C

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Advice prepared by:	s22	(ext \$22)
Other DotE areas consulted:	No	
Is OWS providing advice?	N/A	
EACD Referral Officer:	s22	(Telephone 07 3037 s22)

Cleared by: \$22 Director, Wetlands Section Signature:..... Date: 11 December 2015

Cleared by: Greg Manning, Assistant Secretary,	Wetlands, Policy and Northern Basin Branch
Signature:	
Date: 11/12/15	

Sources:

- Moreton Bay Ramsar Information Sheet
- Moreton Bay Draft Ecological Character Description
- Google Maps
- Referral Documentation







Figure 2: the boundaries of the referral area, the development footprint and Moreton Bay Ramsar site.

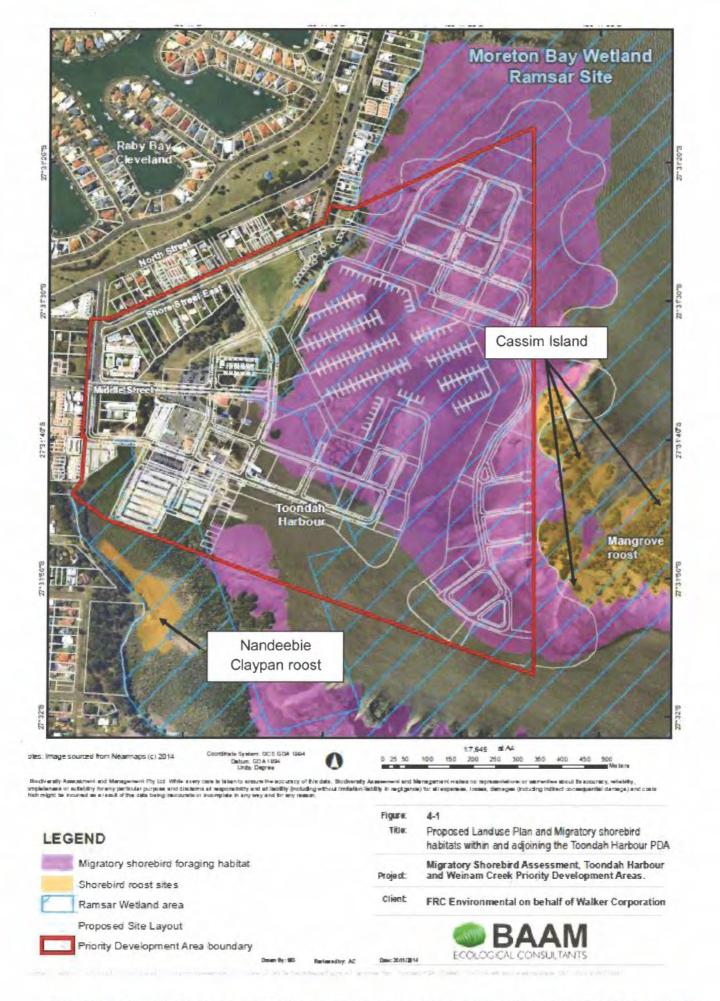


Figure 3: A schematic of development in the proposed action and the location of some of the potentially impacted shorebird and migratory bird roosting sites.

Department of the Environment

Wildlife Heritage and Marine Division

EPBC Act Referral Advice from the Migratory Species Section

Toondah Harbour Project, QLD (EPBC 2015/7612)

Proposed action

The proposal is to construct a residential, commercial and tourism based development, ferry terminals, open space and marina at Toondah Harbour, located on the foreshore of Moreton Bay, 1.5km from Redland City's principal activity centre of Cleveland and 30km southeast of Brisbane.

The total area of the Toondah Harbour project is approximately 167.5 hectares, of which 138.9 hectares is within the Moreton Bay Ramsar site. The development footprint (including land reclamation) is approximately 62.2 hectares. The reclamation component is approximately 43.5 hectares.

The proposal also includes the excavation of a marina and the widening, deepening and lengthening of Fison Channel, which is the existing entrance channel to Toondah Harbour. The proposal intends on using dredged material for their reclamation, but may be required to dispose of the dredge material at Mud Island and sand excavation at Middle Banks.

The project footprint contains intertidal and shallow subtidal habitats including: mangrove forests; intertidal and subtidal unvegetated mudflats and sand banks; seagrass meadows; and subtropical coastal saltmarsh community.

Migratory Birds

Moreton Bay supports more than 50,000 migratory waterbirds during their non-breeding season. At least 43 species of waterbirds use the intertidal habitats, including 30 migratory species listed on international conservation agreements. Moreton Bay is one of only two Ramsar sites in Australia that supports the critically endangered Eastern Curlew <u>all year round</u>, with juvenile birds not migrating until they are 2-3 years old. This means that the juveniles are residents in Moreton Bay until they reach maturity and are ready to migrate.

Migratory shorebirds need to maintain an energy intake greater than their energy expenditure to recover from the southward migration, and to build fat reserves in preparation for the northward migration. Relative amounts of time spent feeding and resting, and the distances between their feeding and roosting areas, are important factors in the energy budgets of individual shorebirds.

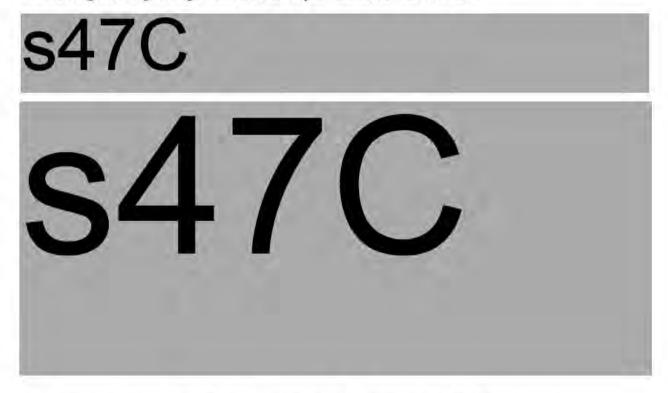
The Moreton Bay Ramsar site provides an important network of foraging and roosting habitats. Shorebirds move within these areas depending on the time of day, availability of resources, levels of disturbance and environmental conditions. Some habitats are important refuges during extreme high tides or when weather conditions prohibit occupancy of more commonly used habitats.

Because migratory shorebirds mostly feed on intertidal mudflats, they require safe roosting areas to rest during high tide periods. The high energy demands on migratory shorebirds resulting from their migratory lifecycle means that resting is critical when not breeding. Generally, migratory shorebirds prefer roosting areas in open habitat on slightly elevated ground so they can watch for potential predators.

Eastern Curlew (Numenius madagascariensis) (EPBC Act Critically endangered; migratory)

Usually, Eastern curlews feed singly or in loose flocks. Occasionally, this species is seen in large feeding flocks of hundreds (Marchant & Higgins, 1993). Moreton Bay Ramsar site is one of the most important areas for Eastern Curlew in Australia (maximum count 3,500 individuals on 1 January 1996). It remains internationally important all year round because of the high number of juvenile birds during the Austral winter.

Eastern Curlew's are sensitive to certain development activities due to their high site fidelity, tendency to aggregate, very high energy demands, and need for habitat networks containing both roosting and foraging sites (DotE 2015). The Eastern Curlew is extremely wary and will take flight at the first sign of danger, long before other nearby shorebirds become nervous.



Migratory shorebirds (Whimbrel, Grey-tailed Tattler, Bar-tailed Godwit)

The proposed development is in an area of nationally important habitat for migratory shorebirds. At this site, >0.1% of the flyway population of Whimbrel, Grey-tailed Tattler and Bar-tailed Godwit occur, particularly at Nandeebie claypan and the offshore roosting sites (see EPBC Act Policy Statement 3.21).



Marine turtle

Moreton Bay supports important foraging populations of green, hawksbill and loggerhead turtles and is close to the southern-most extent of their range. The area is considered a significant feeding ground for the green turtle (Australian Wetlands Database).

Green turtle (EPBC Act Vulnerable; Migratory)

- Green turtles that occur in Moreton Bay are part of the Southern Great Barrier Reef breeding stock (Limpus 2008). Important nesting sites for this stock generally occur from the Fraser Coast area north to the Capricornia Bunker Islands, however very low density nesting may occur on beaches in the Moreton Bay area.
- Green turtles can be found in shallow waters where they forage principally on seagrass, algae
 and mangrove fruits, and living in coral and rocky reefs, seagrass beds and algal mats. The *Marine Bioregional Plan for the Temperate East Marine Region* (2012) identifies Moreton
 Bay as being biologically important for foraging green turtles. The referral states that
 extensive areas of intertidal seagrass beds occur within and adjacent to the project footprint.
- Known threats to green turtle in Australia include disturbance (e.g. light disturbance) and habitat loss due to coastal development, by-catch from fisheries and shark control measures; predation on nests; boat strikes; entanglement and ingestion of marine debris (SPRAT).



Loggerhead turtle (EPBC Act Endangered; Migratory)

 Loggerhead turtles that occur in Moreton Bay are part of the East Australian breeding stock (Limpus 2008). Adults and large juvenile loggerhead turtles inhabit environments with both hard and soft substrata, including rocky and coral reefs, muddy bays, sand flats, estuaries and seagrass meadows (*Marine Bioregional Plan for the Temperate East Marine Region* (2012)). The Plan also states that large concentrations of foraging loggerhead turtles have been found in Moreton Bay. Minor breeding aggregations occur in Moreton Bay including Moreton Island and Stradbroke Island (Limpus 2008). The *Marine Bioregional Plan for the Temperate East Marine Region* (2012) identifies the waters between Bustard Head QLD and Ballina in NSW as being biologically important for nesting loggerhead turtles.

- Loggerhead turtles are carnivorous, feeding primarily on benthic invertebrates including gastropod molluscs, clams and small amounts of jellyfish, starfish, corals, crabs and fish (SPRAT). In Moreton Bay Loggerhead turtle inhabit seagrass beds and often found resting in channels. Moreton Bay forms the southern extent of their foraging range making this foraging population an important population.
- The East Australian Loggerhead breeding stock forms part of a genetically discrete stock of
 loggerhead turtle whose range includes much of the South Pacific Ocean. This stock is
 currently facing numerous threats throughout its range and the Australian Government led the
 development of the Convention on the Conservation of Migratory Species (CMS) Single
 Species Action Plan for Loggerhead Turtles (Caretta caretta) in the Pacific Ocean. The
 Loggerhead Single Species Action Plan (the Plan) was unanimously adopted by the CMS
 Convention of the Parties in 2014 and calls on Australia to address threats to this population.
 The Plan identifies dredging and marina construction within foraging areas as a threat to the
 stock. In accordance with Australia's international obligations impacts to important
 loggerhead habitat in Moreton Bay should be minimised.
- Known threats to loggerhead turtles in Australia include recreational fishing, coastal infrastructure and development (including residential and tourism) (SPRAT).



Hawksbill turtle (EPBC Act Vulnerable; Migratory)

Moreton Bay represents the southernmost extent of hawksbill distribution. Hawksbills forage
in seagrass beds and coral reefs and as such may utilise areas within the proposed
development. Hawksbills foraging in SE Queensland may be part of the north Queensland
genetic stock, or may come from stocks nesting in other areas throughout the Pacific.



Dugong (EPBC Act Migratory)

- In Australia, dugongs occur from Shark Bay in Western Australia across the northern coastline to Moreton Bay in Queensland (Marsh, H., et al. (2011)).
- In Moreton Bay, the eastern Amity Banks, Moreton Banks and areas adjacent to these sandbanks are considered the most important habitats with Rous Channel and east of South Passage also important in cooler months (SPRAT).
- An assessment by Marsh et al (2011) on the status of the 'urban coast of Queensland' (Cooktown to Moreton Bay) dugong population indicates that this population meets the IUCN criteria for Critically Endangered. Delisle et al (2014) states that if the urban coast population is to recover it is essential that all anthropogenic sources of direct dugong mortality be minimised.
- Dugongs are seagrass community specialists and the range of the dugong is broadly coincident with the distribution of seagrasses. There is also evidence that dugongs use specialised habitats for various activities, such as avoiding shark attack by resting on the edge of sandbanks (SPRAT).

- Dugong have traits that make them susceptible to threats, including being long-lived with low reproductive potential, delayed sexual maturity, high female investment in each offspring, and a reliance on inshore habitats (GBRMPA 2014).
- The Dugong Vulnerability Assessment for the GBR (GBRMPA 2014) identifies the following threats to the 'urban coast dugong management unit':
 - o Incidental drowning in nets used by commercial fishing.
 - Cumulative pressures to their primary food, seagrasses, from habitat loss and degradation as a result of extreme weather events (i.e. floods), coastal development (ports/mariners/harbours development and land reclamation), reduced water quality due to coastal development (ports/mariners/harbours operations and dredging).
 - Increased occurrence of boat strike and disturbance.
 - Ingestion of and entanglement in marine debris.
 - Dugong face a variety of pressures that may reduce their resilience to current and future impacts of climate change and impede their capacity to adapt including, accelerated rates of climate change, depleted population, cumulative impacts of human related threats and a reduction of alternative habitats for foraging along the developing urban coast.



Cetaceans

Humpback whale (EPBC Act Vulnerable; Migratory)

- Humpback whales are frequent visitors to Moreton Bay as they migrate from the southern
 feeding grounds to breed in warmer waters. The Marine Bioregional Plan for the Temperate
 East Marine Region (2012) identifies Moreton Bay as being biologically important for
 migration (northbound migration peaking in June–July and southbound migration peaking in
 August– mid-October), and for resting during (northbound June–July) and for resting females
 and calves (southbound August–October).
- Threats identified in the Humpback Whale Conservation Advice (2015) include:
 - Noise Interference e.g. industrial noise (pile driving, some forms of dredging, use of explosives, blasting and drilling) and shipping noise;
 - o Habitat degradation including coastal development and port expansion; and
 - Vessel disturbance and strike.
- The referral lacks sufficient information to understand the expected increase of vessel traffic and how this might impacts on migrating or resting Humpback whales. There is also insufficient information on the expected level of noise in the marine environment.



Southern Right Whale (EPBC Act Endangered; Migratory)

• The core range of Southern-right Whale includes the coastal waters of southern Australia from Sydney to Perth, however they are known to occur further north with the extremities of their range recorded as far north as Hervey Bay in QLD (Conservation Management Plan for the Southern Right Whale), and are known to visit Moreton Bay (Department of National Parks, Sport and Racing). Within their range they generally occur within two km off shore.

- Preliminary data suggests that the south-eastern and south-western Australian whales may
 represent distinct genetic stocks. Southern-right Whales in south-western Australia appear to
 be increasing at the maximum biological rate, however there is limited evidence of increase in
 south-eastern waters (Conservation Management Plan for the Southern Right Whale).
- Threats identified in the Conservation Management Plan include:
 - o Vessel disturbance, including collision or disrupting animal behaviour.
 - Noise interference loud noise or long exposure may lead to avoidance of important habitat areas. Potential forms of noise interference include industrial noise such as pile driving and dredging, and vessel noise.
 - Habitat modification through the development of infrastructure such as ports and marinas could lead to the displacement of whales from preferred habitat or disruption to behaviour.
- Southern right whales appear to be the primary whales species involved in vessel collision in the southern hemisphere (Van Waerebeek et al, 2007). According to media reports (http://www.abc.net.au/news/2014-08-17/whale-washes-up-in-moreton-bay-with-propellercuts-to-head/5676732) a Southern right whale was killed in 2014 when it was struck by a ferry travelling between the existing Toondah harbour and Stradbroke Island.
- There is insufficient information in the referral to understand the potential threats to this species, especially the risks associated with increased vessel traffic.

Dolphin

Indo-Pacific Humpback Dolphin (EPBC listed Migratory)

- Indo-Pacific Humpback Dolphins are found in coastal and estuarine areas of Queensland and New South Wales, generally at depths less than 20 m, including inshore reefs, tidal and dredged channels, mangroves and river mouths (SPRAT).
- The Marine Bioregional Plan for the Temperate East Marine Region (2012) identifies the waters off Cooloola National Park to the New South Wales border (including Moreton Bay) within the 20 m depth contour as being biologically important for foraging and breeding Indo-Pacific Humpback Dolphins.
- The Plan states that pressures of concern for inshore dolphins in this region include physical habitat modification while pressures of potential concern include noise pollution and collision with vessels.
- The referral lacks sufficient information to determine the presence of this species in the local and greater region and the potential impacts.

Australian Snubfin Dolphin (EPBC listed Migratory) Dusky Dolphin (EPBC listed Migratory)

- The Australian Snubfin Dolphin occur in coastal water off the northern half of Australia, including as far south as the Brisbane River on the east coast. This species shares similar habitat preferences as the Indo-Pacific Humpback Dolphins (SPRAT). While the Dusky dolphin may occur in Moreton Bay, it is primarily found in temperate and sub-Antarctic waters. \$47C
- The referral lacks sufficient information to determine the presence of these species in the local and greater region and the potential impacts.

Advice prepared by:s22

Cleared by: S22 Acting Director Migratory Species Section

Cleared by: Geoff Richardson, Assistant Secretary Protected Species and Communities Branch.

Signature: Jecober 205 Date:

References

- Australian Wetlands Database- Moreton Bay RAMSAR Site https://www.environment.gov.au/cgi-bin/wetlands/ramsardetails.pl?refcode=41
- Conservation Management Plan for the Southern Right Whale A Recovery Plan under the Environment Protection and Biodiversity Conservation Act 1999 – (2011-2021).
- Department of National Parks, Sport and Racing (QLD) http://www.nprsr.qld.gov.au/parks/moreton-bay/culture.html
- Humpback Whale Conservation Advice (2015) <u>http://www.environment.gov.au/biodiversity/threatened/species/pubs/38-conservation-advice-10102015.pdf</u>
- Marine Bioregional Plan for the Temperate East Marine Region (2012)
- Marsh, H., et al. (2011). *Ecology and Conservation of the Sirenia*. *Dugong and Sirenia* Cambridge, University Press.
- Species Profile and Threat Database (SPRAT)
- Van Waerebeek et al (2007) Vessel collision s with small cetaceans worldwide and large whales in the Southern Hemisphere, and initial assessment, Latin American Journal of Aquatic Mammals.
- Great Barrier Reef Marne Park Authority: Vulnerability Assessment for the GBR Dugong (2014)

http://elibrary.gbrmpa.gov.au/jspui/bitstream/11017/2867/1/gbrmpa_VA_Dugong_15%20Sep tember%202014_final.pdf