

s. 22(1)(a)(ii)

From: s. 22(1)(a)(ii)
Sent: Thursday, 23 November 2023 4:06 PM
To: s. 22(1)(a)(ii)
Cc: EPBC Offshore Renewables; s. 22(1)(a)(ii)
s. 22(1)(a)(ii)
Subject: FW: Input request: review of NPRD final advice on Southern Offshore Declaration Area [SEC=OFFICIAL:Sensitive]
Attachments: s. 22(1)(a)(ii) Advice: Proposed Southern Ocean Region Declaration Area [SEC=OFFICIAL]

Hi ^{s. 22(1)(a)(ii)},

Thanks for the opportunity to again review NPRD's draft brief for the NZID regarding advice on the proposed SODA for renewable energy projects. Appreciate the consideration of our earlier feedback on the brief and I note amendments have incorporated our comments to a large extent – s. 47C(1)

The attached Advice: Proposed SODA was submitted to NZID and NPRD's offshore renewable team on the 31 Aug and replaces the earlier advice that you had included in the briefing pack attached to your 21 Nov email – can you please include this version in the pack. If you could provide us a copy of the final brief that would be appreciated.

Thanks again and happy to discuss our additional comments on the attached brief.

Thanks.

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MIGRATORY SPECIES SECTION

Advice: Southern Ocean Region Preliminary Declaration Area for Offshore Renewables

1.0 Recommendations

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2.0 Key Points

2.1 *National and international legal obligations to protect marine species*

1. Established under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) the Australian Whale Sanctuary affords measures of protection for all 46 species of cetaceans in Commonwealth waters. Twenty-nine cetacean species are found within the SOR declaration area. This includes MNES:

- 4 Threatened and Migratory species including the Endangered pygmy blue whale (*Balaenoptera musculus breviceuda*), Endangered southern right whale (*Eubalaena australis*), Vulnerable sei whale (*Balaenoptera borealis*) and Vulnerable fin whale (*Balaenoptera physalus*).
- 10 additional Migratory cetacean species including the humpback whale (*Megaptera novaeangliae*).

2. The Australian Government has international obligations to protect migratory species within Commonwealth waters under the *Convention for the Conservation of Migratory Species for Wild Animals*.

3.

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4. Indigenous cultural linkages to cetaceans and other marine species should also be considered as a priority.

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3.0 Key considerations - environmental sensitivities

3.1 *Biologically Important Areas*

[Biologically Important Areas](#) (BIAs) are spatially, and temporally defined areas of the marine environment used by protected marine species (Threatened and/or Migratory MNES, Cetaceans) for carrying out critical life functions. BIAs are areas and times known or likely to be regularly or repeatedly used by individuals or aggregations of a species, stock, or population for either reproduction, feeding, migration or resting. BIAs are designated for some marine species protected under the Australian Government's regulatory framework and are used as a geospatial tool to inform decision-making and conservation planning. Importantly marine species also undertake critical life functions outside of designated BIAs, and not all species have BIAs. Impacts must still be considered whether within or external to currently designated BIAs.

Of the 29 cetacean species known to occur within, or adjacent to the SOR declaration area this includes:

- a foraging BIA for the pygmy blue whale.
- a migration BIA for both the pygmy blue whale and the southern right whale.
- a reproduction BIA/HCTS for the southern right whale in waters adjacent to the SOR declaration area boundary.

Not all species have designated BIAs within, or adjacent to, the proposed SOR declaration area due to a lack of monitoring data:

- fin whales and sei whales are known to feed in the area.
- humpback whales are known to migrate through and forage in the area.
- pygmy right whales, sperm whales, killer whales and other cetaceans are likely to hunt and forage in the area.

The SOR declaration area also occurs within the International Union for the Conservation of Nature (IUCN) Southeast Australian and Tasmanian Shelf Waters Important Marine Mammal Area (IMMA), which identifies this region as supporting a high diversity of cetaceans. The region supports valuable commercial fisheries and large populations of marine birds and mammals and is regarded as biogeographically distinct because of its unique cool-temperate flora and fauna (Gill et al 2015).

3.2 *The Bonney Coast Upwelling System*

The Bonney Coast Upwelling is part of the Great Southern Australian Coastal Upwelling System and stretches from Portland, Victoria westwards to Kangaroo Island, South Australia. The Bonney Coast Upwelling is the largest and most predictable area of surface upwelling in the Great Southern Australian Coastal Upwelling System and is considered Australia's most intense and productive upwelling (Butler et. al. 2002) providing a feeding resource for protected cetaceans, migratory shorebird and seabirds. The Bonney Coast Upwelling is a regionally significant upwelling that brings cold nutrient rich water to the sea surface supporting high species diversity. Such upwellings typically support high densities of marine fauna and high cetacean diversity, and the area probably aggregates cetacean prey species to a degree not found around most of the Australian continent (Gill et al 2015). The proposed SOR declaration area overlaps the regionally significant Bonney Coast Upwelling KEF and adjacent waters.

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The Bonney Coast Upwelling is a known critical foraging area (BIA) for the pygmy blue whale (DCCEEW, 2015) supported by both acoustic and observational survey data. Worldwide, only 12 feeding sites for blue whales have been identified, two of which are in Australian waters - the Bonney Coast Upwelling and the Perth Canyon Upwelling (refer [Assessment of the Conservation Values of the Bonney Upwelling](#)). The KEF does not cover the entire oceanographic upwelling feature that is highly variable spatially and temporally and reliant on seasonal spring-summer winds. Therefore, the KEF does not accurately capture all foraging areas used by the pygmy blue whale, as high primary and secondary productivity areas extend beyond the designated KEF boundary limits and are driven by changing environmental conditions.

The currently designated boundary of the KEF and the pygmy blue whale foraging BIA do not align because the whales are not responding to the location of the upwelling, rather the prey generated by the upwelling system. Pygmy blue whale sighting data indicates that waters surrounding the KEF out to the 1000m depth contour and east to Cape Otway are also part of the Bonney Coast Upwelling and utilised as important foraging areas (Gill et al. 2013, McCauley et al. 2018, Blue Whale Study).

3.3 Cetaceans

Cetaceans are highly mobile marine animals and are known to have spatial and temporal variability, both intra- and inter-annually in the consistent use of specific areas across and adjacent to the SOR declaration area. This may be the result of normal seasonal migratory and movement patterns and breeding cycles as well as changes in prey availability arising from short and long-term oceanographic influences such as weather and climate change. In addition to the pygmy blue whale, other cetacean species (29 in total) including sei whales, fin whales, humpback whales, sperm whales, pygmy right whales and dolphins have also been recorded feeding in the Bonney Coast Upwelling (Gill et al 2015).

It is expected that there will be cetaceans present at all times of the year within and adjacent to the SOR declaration area. Given the temporal overlap between southern right whales and pygmy blue whales there is no period of time during any year that one of these two Endangered MNES may not be present within or near the SOR declaration area. For example:

- Southern right whales are present within the area of the Bonney Coast Upwelling and along the Victorian coast annually between April and October.
- Pygmy blue whales are present in the Bonney Coast Upwelling annually between November and May.
- Additionally, an estimated 45,000 humpback whales migrate annually along the east coast of Australia between April and November, and have been observed foraging within the SOR declaration area.

3.3.1 Pygmy blue whale (Endangered, Migratory, Cetacean)

The Bonney Upwelling in the SOR declaration area provides critical foraging habitat for pygmy blue whales between around November to May annually. The distribution of approximately 1,600 blue whale sightings gathered by the Blue Whale Study between 1998-2016 is shown in figure 1. Oceanographic features and prey availability are dynamic processes that may change from year to year, affecting the spatial and temporal use of the BIA by pygmy blue whales. Although the Bonney upwelling is considered the largest and most predictable area of surface upwelling in the Great Southern Australian Coastal Upwelling System, there is considerable seasonal variation in the location, timing, magnitude, and extent of upwelling.

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Given that a known foraging BIA for the pygmy blue whale exists across the proposed SOR declaration area, [s. 47C\(1\)](#)

In the [Blue Whale Conservation Management Plan](#), a statutory recovery plan under the EPBC Act, 'Action Area A.2.3 requires that 'Anthropogenic noise in Biologically Important Areas will be managed such that any blue whale continues to utilise the area without injury, and is not displaced from a foraging area'.

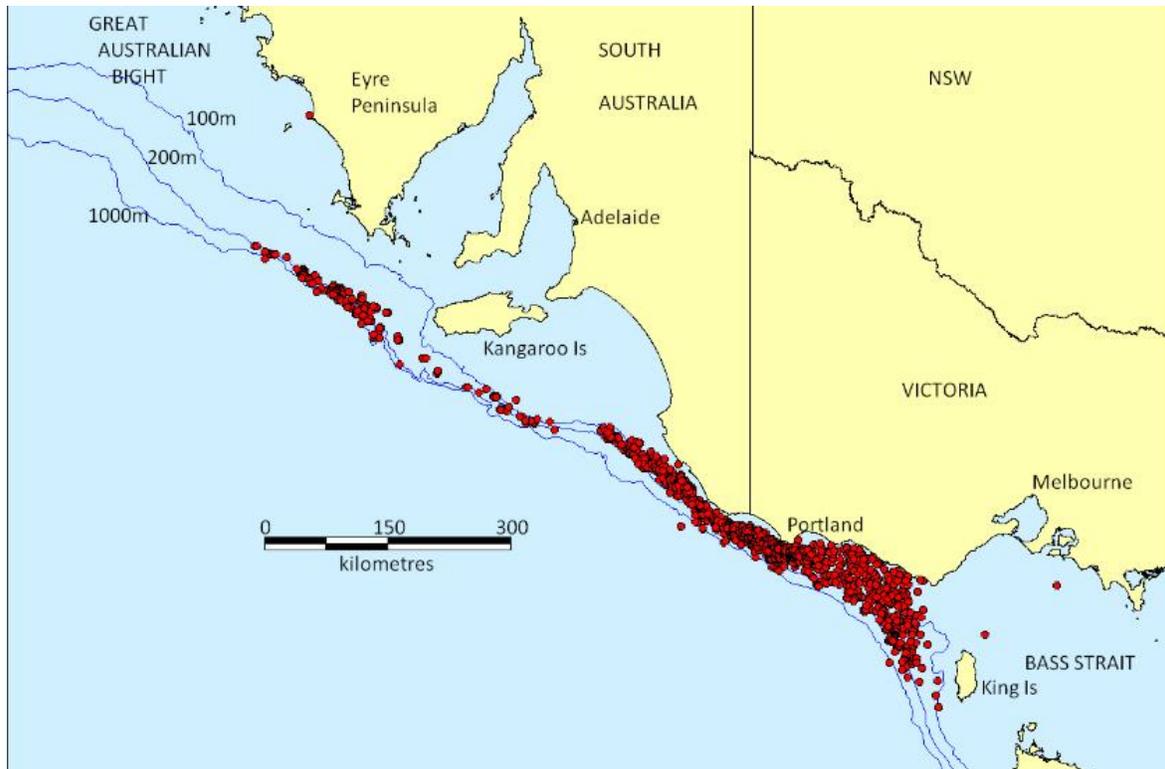


Figure 1. Pygmy blue whale distribution 1998-2016 (source: <http://bluewhalestudy.org/the-bonney-upwelling>)

3.3.2 Southern right whale (*Eubalaena australis*, Endangered, Migratory, Cetacean)

There are two genetically distinct populations of southern right whale within Australian waters, an east Australian population, and a west Australian population (Carroll et al 2011). The eastern subpopulation currently has only one established calving ground; Logans Beach at Warrnambool in south-west Victoria (Watson et al, 2021). The eastern population of southern right whales is of particular conservation concern because it exhibits slow recovery from past whaling and abundance remains very low with an estimated 268 whales (Stamation et al. 2021, Watson et al 2021).

Southern right whales migrate annually between offshore foraging areas south of Australia and coastal breeding areas. The Southern Ocean Declaration Area is located within the migration BIA for the southern right whale and adjacent to the reproduction BIA (HCTS). The east Australian southern right whale population breeds along the Victorian, Tasmanian, and New South Wales coastlines with the highest densities of cow:calf pairs in Victoria recorded in western between Warrnambool and Portland (Watson pers comm). Pregnant females and females with young calves likely migrate through the SOR declaration area to and from these coastal breeding grounds. The first sightings of southern right whales in Victoria each season generally occur around Portland and photoidentification data suggests that this area is an important arrival point for southern right whales migrating westwards (Watson et al. 2021).

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Connectivity with coastal habitat is critically important for migrating southern right whales. Females have high fidelity to particular breeding sites, and anthropogenic activities must not disconnect females from regular coastal breeding habitat. [s. 47C\(1\)](#)

The potential for impacts from anthropogenic underwater noise is of particular concern in areas within or close to HCTS for southern right whales i.e., the reproduction BIAs (DCCEEW 2022) where whales are resident for long periods (e.g., weeks to months) of time, and pregnant and nursing females and calves are present. In the draft new Recovery Plan for the Southern Right Whale a reproduction BIA (HCTS) is designated along the Victorian coast (see figure 2). [s. 47C\(1\)](#)

The draft Southern Right Whale Recovery Plan Action Area 5(1) states that 'Actions within and adjacent to southern right whale BIAs and Habitat Critical to Survival should demonstrate that they do not prevent any southern right whale from utilising the area or cause injury (Temporary Threshold Shift and Permanent Threshold Shift) and/or disturbance. Actions near BIAs should demonstrate that they do not prevent any southern right whale from utilising the area without injury or disturbance'. Public comment on the new [draft Southern Right Whale Recovery Plan 2023 – 2033](#) closed on the 21 April 2023 and the range States will shortly be invited to jointly make the Recovery Plan by the Minister for Environment and Water.

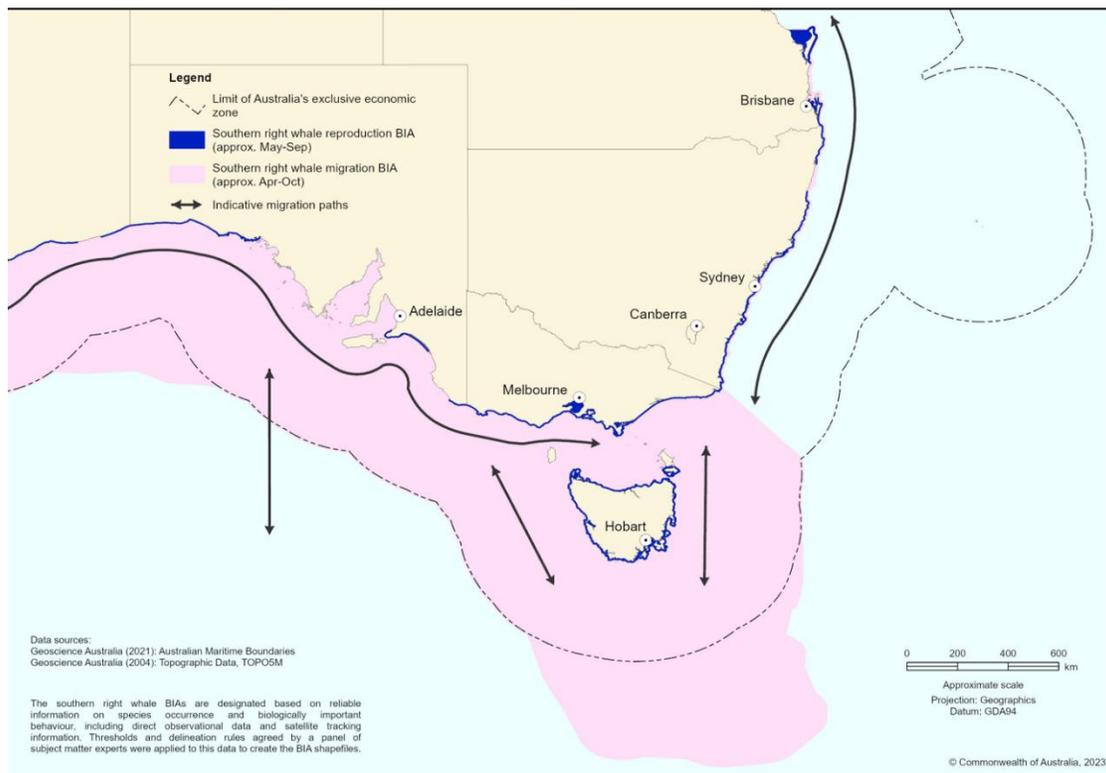


Figure 2: Southern right whale reproductive Biologically Important Area / Habitat Critical to Survival (source: Draft National Recovery Plan for the Southern Right Whale (*Eubalaena australis*), Commonwealth of Australia 2022)

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3.3.3 *Fin whale* (Vulnerable, Migratory, Cetacean)

Sei whale (Vulnerable, Migratory, Cetacean)

Fin whales are generally thought to undertake long annual migrations from higher latitude summer feeding grounds to lower latitude winter breeding grounds (Mackintosh 1965; Bannister 2008a; Aguilar 2009). Fin whales have been sighted in the proximity of the Bonney Upwelling, Victoria, along the continental shelf in summer and autumn months (Gill 2002). Fin whales in the Bonney Upwelling are sometimes seen in the vicinity of blue and sei whales. The sighting of a cow and calf in the Bonney Upwelling in April 2000 and the stranding of two fin whale calves in South Australia suggest that this area may be important to the species' reproduction, perhaps as a provisioning area for cows with calves (Morrice et al., 2004).

Sei whales are primarily found in deep water oceanic habitats and their distribution, abundance and latitudinal migrations are largely determined by seasonal feeding and breeding cycles (Horwood 2009). Sightings of sei whales within Australian waters includes areas such as the Bonney Upwelling off South Australia (Miller et al., 2012), where opportunistic feeding has been observed between November and May (Gill et al., 2015).

3.3.4 *Humpback whales (Megaptera novaeangliae)*; Migratory, Cetacean)

There are two humpback whale subpopulations in Australian waters: western Australian (stock D) and eastern Australian (stock E1). The proposed SOR declaration area is within the eastern Australian subpopulation's core range. After feeding in Antarctic waters during the summer an estimated 45,000 humpback whales migrate slowly northwards along Australia's eastern coastline from April to the winter calving grounds of Queensland, returning in the southward migration by November each year.

The main migratory route of the eastern population diverges around Tasmania and the most recent annual estimated population post whaling is 45,000 individuals. As advised by the Australian Antarctic Division, these individuals migrate up the east coast of Australia to Hervey Bay in Queensland, along the shoreline of Tas, Vic and NSW, primarily on the continental shelf. There is likely to be considerable individual variability or fidelity to migratory route. At a population level, inter and intra-annual variability related to climate and oceanographic influences are likely.

Humpback whales feed along the coastal migratory route, especially during the spring migration as they return to the Southern Ocean feeding grounds. Supplemental feeding occurs annually along the east coast of Australia, but it is currently unclear if feeding is opportunistic, in response to an abundance of prey availability, or an essential aspect of their migratory ecology and annual energy budget. Feeding humpback whales have been regularly observed off the coast of Portland (Watson pers. comm). humpback whale feeding and migration behaviour overlaps with the SOR declaration area.

3.3.5 *Other cetaceans*

The Bonney upwelling supports a significant diversity of cetacean species, many with a paucity of monitoring data available. Additional migratory cetacean species not discussed in this advice that are known or likely to occur within the proposed SOR declaration area include as an example, the killer whale (*Orcinus orca*, Migratory, Cetacean), sperm whale (*Physeter macrocephalus*, Migratory, Cetacean), Antarctic minke whale (*Balaenoptera bonaerensis*, Migratory, Cetacean), dusky dolphin (*Lagenorhynchus obscurus*, Migratory, Cetacean), pygmy right whale (*Caperea marginata*, Migratory, Cetacean).

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4.0 Potential impacts to cetaceans

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, and mitigation measures demonstrate acceptable long-term environmental outcomes for protected species can be achieved regionally. Individual declaration areas could host several offshore wind and other renewable energy projects and marine species are already exposed to significant activities impacting their habitat including offshore oil and gas operations, greenhouse gas storage, vessel traffic, fisheries, subsea communication infrastructure, marine pollution, Australian Defence Force naval operations and climate variability.

Pre-construction, construction, operational and decommissioning activities for offshore renewable energy infrastructure must be managed so that cetaceans engaged in biologically important behaviours can continue without disturbance, displacement, or injury. s. 47C(1)

Habitat critical to the survival of a species is defined in statutory Recovery Plans. Under Part 13, section 270 of the EPBC Act, a Recovery Plan, must identify HCTS and the actions needed to protect those habitats. The new draft National Recovery Plan for the Southern Right Whale has designated the reproductive BIA as HCTS; and as previously noted, Action Area A2 in the Blue Whale Conservation Management Plan is critical to managing the threat of anthropogenic underwater noise to the species. In accordance with the EPBC Act, the Minister cannot make a decision that is inconsistent with a Recovery Plan. s. 47C(1)

Cetaceans rely on sound for basic life functions such as communication (including for mating), navigation, foraging, and predator avoidance.

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The Bonney upwelling is wind driven and wind is expected to change in line with a changing climate. The response of the Bonney upwelling to climate change is uncertain, but the Bonney upwelling is clearly an important feature as a prey resource which is particularly sensitive to climate change, and this must be considered. s. 47C(1)

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- s. 47C(1)
 - Reductions in visibility can affect photosynthesis in algae, a critical component of the krill and cetacean food chain, thereby further disrupting behaviours in marine animals.
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- Increased risk of vessel interactions including injury and mortality due to increased traffic.

5.0 Migratory shorebirds

Migratory shorebirds are found primarily on the coast in all states of Australia. Migratory shorebirds breed in northern hemisphere from May-June. Birds usually arrive to some non-breeding grounds in August-October and leave northwards to breed between February-March/April. The exception to this is double-banded plover which migrates to Australia from New Zealand during winter. Satellite-tracking and geolocation studies indicate that they can migrate from south-east Australia to Yellow Sea in a single flight but may have to stop if they encounter poor migration conditions. Time series data at many sites across Australia have indicated a severe population decline in some species.

Important habitat for all 37 species that migrate to Australia can be found in the [National Directory of Important Migratory Shorebird Habitat](#).

Movement of migratory shorebirds across the proposed declaration area is possible. Large numbers of migratory shorebirds are known to occur in north-west and north-east Tasmania and the Bass Strait islands, particularly King and Flinders Islands. Migratory pathways, timing and flight elevation are all uncertain factors and more research (i.e., tracking) is needed. Some species arriving on the east coast of Australia continue on to New Zealand crossing the Tasman Sea.

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6.0 Seabirds

Bass Strait has a high seabird diversity with large breeding colonies occurring on offshore islands. The Bass Strait Islands, including King Is and the Furneaux Group have large breeding colonies of short-tailed shearwaters (Listed Migratory), fairy prion, common diving-petrel, white-faced storm-petrel, little penguin, Australasian gannet, gulls, terns and cormorants (Brothers et al. 2001). Australian fairy tern (Vulnerable, see Recovery Plan) and little tern (Migratory) are likely to move through the proposed declaration area along with many other species.

In relation to the proposed declaration areas, offshore islands near Portland (Lawrence Rocks, Lady Julia Percy Island and Griffith Island at Port Fairy) are important seabird breeding islands. Individuals from other island groups will enter the proposed declaration areas on migration and/or foraging trips. For example, short-tailed shearwaters generally return to their burrows every night but some feed 150 – 200

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km from colonies (Brothers et al. 2001). Migratory pathways, timing and flight elevation are all uncertain factors, and more research is needed (i.e., tracking).

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Advice from the National Light Pollution Guidelines in relation to breeding seabirds should be considered for relevant seabird species. s. 47C(1)

7.0 Other marine species

There are three species of marine turtles that are likely/may occur in the proposed declaration area including the leatherback turtle (Endangered, Migratory), the loggerhead turtle (Endangered, Migratory), and the green turtle (Vulnerable).

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