

Southern Winds Offshore Wind Project Initial Marine Field Investigations

Application Number: **01463**Commencement Date: **06/10/2022**Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Southern Winds Offshore Wind Project Initial Marine Field Investigations

1.1.2 Project industry type *

Energy Generation and Supply (renewable)

1.1.3 Project industry sub-type

Wind Farm

1.1.4 Estimated start date *

2/04/2023

1.1.4 Estimated end date *

26/06/2026

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

Southern Winds OWP Project Pty Ltd ACN 662232895 as trustee for the Southern Winds OWP Project Trust on behalf of BlueFloat Energy International S.L.U propose the Southern Winds Offshore Wind Project (the Project).

The wind turbines and offshore substations are located approximately 8-20 kilometres (km) off the coastline between Cape Douglas (South Australia) and Nelson (Victoria), in an area approximately 29,000 ha (290 km²). Within this area, the Project involves 77 'bottom-fixed' wind turbines, two offshore substations and associated infrastructure with the capacity to generate up to 1.155 gigawatts (GW) of electricity. The wind turbines will have a capacity between 15 MW and 20 MW, hub heights between 165 m and 190 m and rotor diameters of 250 m to 275 m.

Whilst the wind turbines and offshore substations are located in an area of approximately 29,000 ha, the Marine Study Area includes this area (the Project Area) plus a 5 km buffer. As such, the proposed development footprint for the marine field investigations will comprise a total area of approximately 174,000 ha (174 km²). Therefore, the disturbance footprint will also be 174,000 ha. Refer to **Figure 1-1** in the Sampling and Analysis Plan (**Attachment 1** - Southern Winds Offshore Wind Project Sampling and Analysis Plan, Section 1, pp 8)

Two potential subsea cable and onshore transmission routes are being considered from the offshore substations to the proposed grid connection:

- Option 1 proposes subsea export cables to travel southeast from the more easterly offshore substation for approximately 72 km, landing near the northwest corner of the Narrawong Coastal Reserve, 1.5 km from the Portland Aluminium Smelter. Close to the landfall site, these subsea cables would be connected to onshore cables in a transition joint bay. These onshore cables would then

continue to the existing switchyard at the smelter site (connecting in via a new onshore substation located adjacent to the smelter switchyard).

- Option 2 proposes subsea export cables to travel southeast from the more easterly offshore substation for approximately 42 km, landing near the south-eastern corner of the Discovery Bay Ramsar site at Cape Bridgewater (avoiding the Discovery Bay Marine National Park). Close to the landfall site, the subsea cables would be connected to onshore cables in a transition joint bay. These onshore cables would then continue underground or overhead north-east through Gorae West for approximately 29 km to the Heywood Terminal Station (connecting in via a new onshore substation located adjacent to the terminal station). Transition to an overhead line, if applicable, would likely be located within 5 km of the coast.

The offshore wind farm component of the Project is located within the Territorial Sea and the Exclusive Economic Zone (both Commonwealth waters), with the grid connection within the Glenelg Local Government Area (LGA) in Victoria.

This referral relates specifically to early field work in the marine environment, which includes:

- benthic habitat mapping using multibeam acoustic survey
- basic sediment sampling of the seafloor (grab samples only to a maximum of 1m depth)
- collection of sediment samples from the seafloor for the purposes of characterising benthic invertebrates and confirm benthic habitat
- deployment of tethered water quality and hydrodynamic instruments for a period of up to two years
- deployment of wind lidar instruments for a period of up to two years
- seabird, cetacean, other megafauna and fish surveys

Further information on proposed surveys is provided in **Attachment 1** - Southern Winds Offshore Wind Project Sampling and Analysis Plan, Sections 3-5, pp 9-27.

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

Yes

1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?

Yes

1.2.5 Provide information about the staged development (or relevant larger project).

The whole-of-Project (i.e., the offshore wind farm and associated infrastructure) has been separately referred under the EPBC Act (EPBC number 2022/09435). A third referral will also be submitted for geotechnical and geophysical surveys. These works are excluded from the scope of this referral.

The results of the marine surveys will inform the Project's detailed design.

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

Any survey works will be undertaken in accordance with relevant national guidelines including the:

- Survey Guidelines for Australian Threatened Birds (Commonwealth of Australia, 2010)
- Australian National Guidelines for Whale and Dolphin Watching (Commonwealth of Australia 2017)

All survey works will be undertaken in accordance with the requirements of the EPBC Act, in particular, the following sections:

- Section 229 - an offence is committed if the proponent causes 'death or injury of a cetacean in the Australian Whale Sanctuary'
- Section 254E - it is an offence if the proponent 'trades, keeps or moves a member of a marine species'

Field work will be undertaken in a non-intrusive manner that does not contravene these clauses within the EPBC Act.

The activities will be conducted in Sea Country of the Gournditch-Mara (Gunditjmarra) people who are also the relevant native title group (National Native Title Tribunal no. VCD2011/001), for which the registered native title body corporate (RNTBC) is the Gunditj Mirring Traditional Owners Aboriginal Corporation RNTBC (GMTOAC). Compliance with the *Native Title Act 1993* (Cth) (NTA) is likely to be

required for some of the proposed activities, even where native title has not been positively determined to exist. Section 24NA of the NTA will apply to all future acts seaward of the low water mark.

There are five shipwrecks of heritage value within the Study Area: The Triumph (ID 6654), Jane (ID 6303), Captain Cook (ID6042), Isabella (ID 6286), Merope (ID 6429) and an Unknown French Whaler (ID 6758). These sites are protected under the *Underwater Cultural Heritage Act 2018*. Field work will be conducted in a way that does not cause any impacts to these cultural heritage values and is mindful of the 500m exclusion zone.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

Authentic and respectful partnerships and consultation with Traditional Owners, through GMTAOC (as the Registered Aboriginal Party and RNTBC and all stakeholders will form an integral and vital role in the development of the Project. The Project will prepare a Stakeholder and Engagement Strategy which will to create social value by delivering outcomes that benefit Traditional Owners and local communities, whether that be through social, economic, or environmental means.

The Project is planning to carry out extensive consultation with relevant stakeholders. These stakeholders include host landholders, proximal landholders and communities, ocean users, Traditional Owners, local and State government agencies, local business and service providers, community and development groups and environmental groups.

The Project is committed to exploring partnerships with local stakeholders to include (but not limited to) commercial and investment arrangements, skills and jobs training, community funds, scholarships and apprenticeships, and opportunities for local supply chain, businesses and service providers.

The Project's approach to Traditional Owners is one of partnership as well as consultation. We are committed to early communication with the Traditional Owners so that we can provide updates and receive input from First Nations perspectives, explore partnerships and opportunities, understanding Traditional Owners' relationship to the land and sea and hearing First Nation stories, minimise impacts on the cultural and heritage importance and ensure involvement in project design, construction and procurement.

Consultation has been undertaken with the Victorian Department of Energy, the Environment and Climate Action (DEECA) and the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) through pre-referral meetings and discussions to date providing an overview of the project description, timeframes and studies proposed.

The Project also held three public information sessions in February 2023:

- A drop-in information session in Port MacDonnell on 13 February 2023
- A drop-in information session in Portland on 14 February 2023
- An online webinar on 16 February 2023

These sessions provided the opportunity for community members and businesses to learn more about the Project, meet the Project team and ask questions.

To date, consultation has been undertaken with:

Commonwealth

- Australian Energy Market Operator
- Civil Aviation Services Authority
- DCCEEW – SA and Victorian assessment unit
- DCCEEW Heritage
- National Offshore Petroleum Titles Administrator
- National Offshore Petroleum Safety and Environmental Management Authority

Victoria:

- AusNet
- Country Fire Authority
- DEECA
- Department of Transport and Planning
- Environment Protection Authority
- First Peoples - State Relations
- Glenelg Shire Council
- GMTAOC
- Heritage Victoria
- Moyne Shire Council
- Port of Portland
- Portland Aluminium Smelter
- Ports Victoria
- VicGrid
- Warnambool City Council

South Australia

- City of Mount Gambier
- Department of Energy and Mining
- Department of Environment and Water
- Department of Primary Industries and Regions
- Department of Transport and Infrastructure
- District Council of Grant
- Heritage SA
- Wattle Ranges Council

Consultation is also intended to be undertaken with the Burrendies Aboriginal Corporation in South Australia.

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

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Confirm that you have read and understand this Privacy Notice *

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	54010830421
Organisation name	BMT Commercial Australia Pty Ltd
Organisation address	Level 5, 348 Edward St Brisbane QLD 4000

Referring party details

Name	Sophie Barrett
Job title	Graduate Scientist
Phone	+6107 3831 6744
Email	sophie.barrett@bmtglobal.com

Address

Level 5, 348 Edward Street, Brisbane, 4000 QLD

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN	662232895
Organisation name	Southern Winds OWP Project Pty Ltd as trustee for the Southern Winds OWP Project Trust
Organisation address	The Commons, 11 Wilson Street, South Yarra, Victoria 3141

Person proposing to take the action details

Name	Southern Winds OWP Project Pty Ltd C/- Deb Neumann
Job title	Director, Environment and Planning, BlueFloat Energy on behalf of Southern Winds Project P/L
Phone	0414811290
Email	dneumann@bluefloat.com
Address	The Commons, 11 Wilson Street, South Yarra, Victoria 3141

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

Yes

1.3.2.16 Describe the nature of the trust arrangement in relation to the proposed action. *

The referred action will be undertaken by the Southern Winds OWP Project Pty Ltd as a trustee for the Southern Winds OWP Project Trust. BlueFloat Energy International S.L.U is the Project developer.

Please refer to **Attachment 2** - SWOWP Project Trust - Trust Deed, pp 1-44.

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

Southern Winds OWP Project Pty Ltd is a newly established entity for the development of the Southern Winds Offshore Wind Project. This entity has no history of past environmental management.

BlueFloat Energy International S.L.U is a nimble and fast-growing offshore wind developer shaping the global energy transformation by bringing scaled decarbonisation solutions to new markets. Leveraging the team's extensive knowledge and hands-on experience in both bottom-fixed and floating offshore wind project development and execution, they are at the forefront of the emerging global market for offshore wind. Their portfolio of both bottom-fixed and floating wind farm projects comprises over 22 GW of planned capacity in eight countries across the globe.

BlueFloat Energy International S.L.U has a satisfactory record of responsible environment management and does not have any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against them.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

The Southern Winds OWP Project Pty Ltd is committed to providing and maintaining a safe, healthy and positive workplace for its people and acting in ways that minimise adverse environmental impacts and promote sustainability. Hazards and risks to health and safety will be eliminated or minimised, as far as reasonably practicable. The responsibility for managing HS&E issues sits with the person in control of the Southern Winds OWP Project, however workers also have important responsibilities for health and safety in the workplace. This policy applies to all workers, partners, contractors and consultants across all sites of the Southern Winds OWP Project Pty Ltd. It is a requirement to adhere to this policy throughout the life of the Project.

Our Commitments In line with our HS&E goals, the Southern Winds OWP Project Pty Ltd is committed to:

- Adhering to high standards to protect the environment where we do business and integrating environmental considerations into all business activities
- Meeting or exceeding our regulatory obligations for HS&E.
- Eliminating or minimise all workplace hazards and risks as far as is reasonably practicable
- Supervising workers to ensure work activities are performed safely
- Providing appropriate safety equipment and personal protective equipment
- Pursuing a no harm policy that applies to people, local communities, the environment, cultural heritage and project assets in the places where we operate.
- Using resources and energy efficiently, minimising emissions and waste and promoting the sustainability of the natural resources we use.
- Continually reviewing and improving the way we operate in order to minimise HS&E risks and impacts, and to promote best practice.
- Recognising our responsibility and accountability in managing HS&E risks associated with our business activities.
- Supporting our personnel, partners and contractors by providing training and guidance to manage HS&E as acritical business activity. This includes sharing our own objectives, learnings and commitments.
- Responding quickly and transparently to any HS&E incidents resulting from our operations.
- Providing a suitable injury management and return to work program

Please refer to **Attachment 3** - SWOWP Health Safety and Environmental (HS&E) Policy, pp 1 for more information.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	662232895
Organisation name	Southern Winds OWP Project Pty Ltd as trustee for the Southern Winds OWP Project Trust
Organisation address	The Commons, 11 Wilson Street, South Yarra, Victoria 3141
Proposed designated proponent details	
Name	Southern Winds OWP Project Pty Ltd C/- Deb Neumann
Job title	Director, Environment and Planning, BlueFloat Energy on behalf of Southern Winds Project P/L
Phone	0414811290
Email	dneumann@bluefloat.com
Address	The Commons, 11 Wilson Street, South Yarra, Victoria 3141

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	54010830421
Organisation name	BMT Commercial Australia Pty Ltd
Organisation address	Level 5, 348 Edward St Brisbane QLD 4000
Representative's name	Sophie Barrett
Representative's job title	Graduate Scientist
Phone	+6107 3831 6744
Email	sophie.barrett@bmtglobal.com
Address	Level 5, 348 Edward Street, Brisbane, 4000 QLD

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	662232895
Organisation name	Southern Winds OWP Project Pty Ltd as trustee for the Southern Winds OWP Project Trust
Organisation address	The Commons, 11 Wilson Street, South Yarra, Victoria 3141
Representative's name	Southern Winds OWP Project Pty Ltd C/- Deb Neumann
Representative's job title	Director, Environment and Planning, BlueFloat Energy on behalf of Southern Winds Project P/L
Phone	0414811290

Email

dneumann@bluefloat.com

Address

The Commons, 11 Wilson Street, South Yarra, Victoria 3141

✔ Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

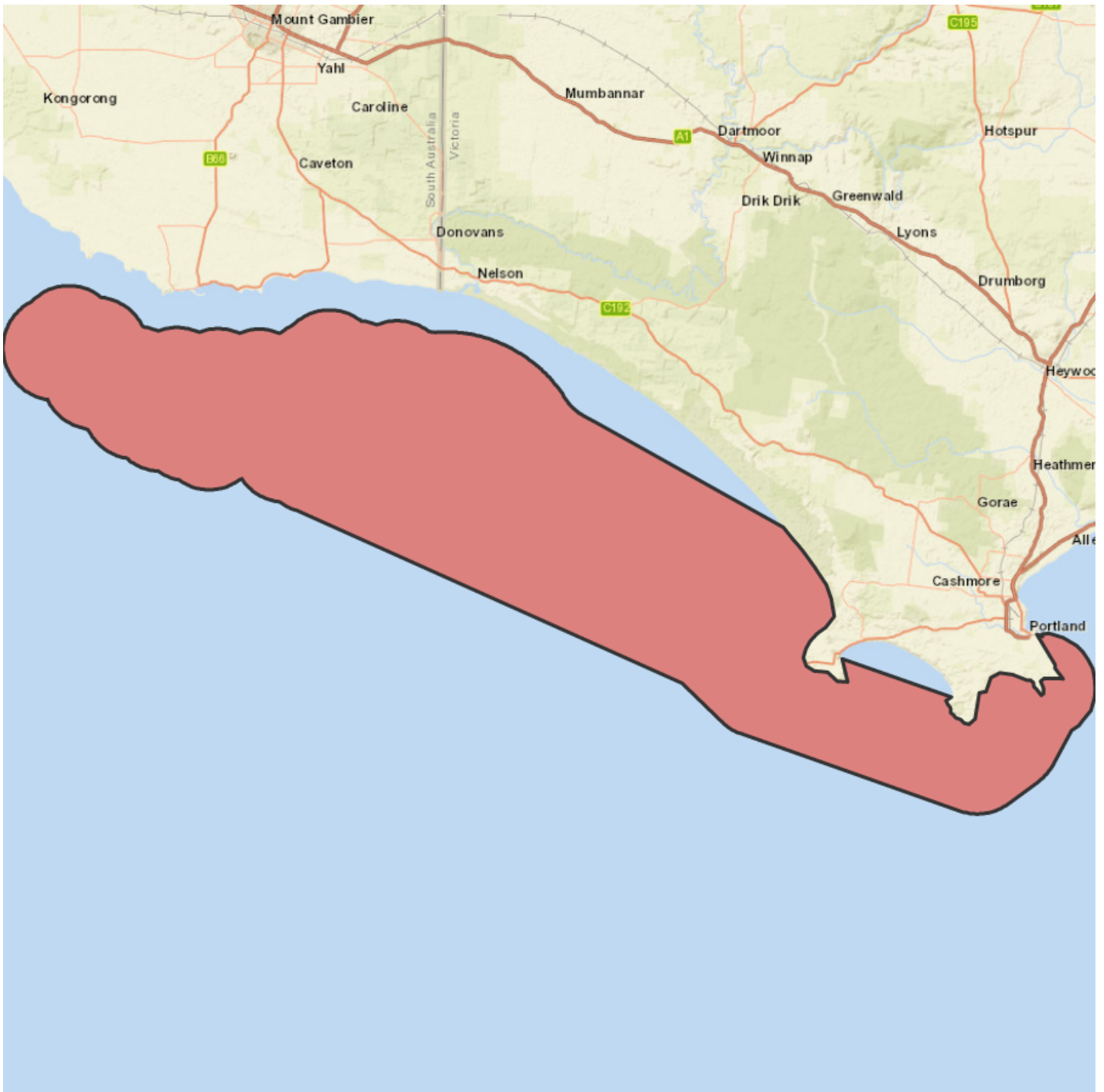
1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Person proposing to take the action

2. Location

2.1 Project footprint



2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Offshore between Cape Douglas (South Australia) and Portland (Victoria)

2.2.2 Where is the primary jurisdiction of the proposed action? *

Commonwealth Marine

2.2.3 Is there a secondary jurisdiction for this proposed action? *

Yes

2.2.4 Where is the secondary jurisdiction of the proposed action? *

Victoria

2.2.5 What is the tenure of the action area relevant to the project area? *

Tenure will be granted under the feasibility licence under the *Offshore Electricity Infrastructure Act 2021* (Cth) (OEI Act) and the *Marine and Coastal Act 2018* (Vic) (MaC Act).

For many activities, no tenure is required. However, the Project will apply for any necessary tenure under the MaC Act for certain activities in Victorian state waters, and will apply for a feasibility licence under the OEI Act for certain activities in Commonwealth waters, once invitations for licence applications are made.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The Study Area is located within the south-east marine region which is generally considered to have low productivity (i.e. low biomass in the system), with the exception of localised hotspots which include the Bonney Upwelling in south eastern South Australia, the Bass Strait Water Cascade on the shelf break east of Bass Strait and the flow of the East Australian Current along the eastern edge of the Region. The Study Area also interacts with the Glenelg, Discovery Bay and Cape Nelson state marine biounits.

The current generally flows in an easterly direction towards Bass Strait. Generally, the area has a very active wave environment with high winds. Deakin University maintain a wave and current buoy at Cape Bridgewater - it reports wave heights of up to 8m in the winter months, with summer providing calmer conditions. The water temperature varies, but averages around 14oC in winter and 16 -17oC in summer.

The substrate in the nearshore area off the Discovery Bay coast identifies as mainly being rock, with sand beyond the 60-90 m depth contour. The shallow inshore areas of the Otway continental margin predominantly include limestone substrates that support a variety of assemblages (molluscs, sponges and algae) (Butler et al., 2002). Deeper areas are dominated by mega-rippled bryozoan sands while deep areas of the shelf have bioturbated, fine bioclastic sands.

The marine Study Area is not within any Commonwealth Marine Parks, however, does include the state Discovery Bay Marine Park. The subsea cabling options avoid the Marine Park and are proposed to be located to its north and south. The park protects reef and macroalgae habitats and supports a high diversity of marine life including whales, seabirds, fish, and Australian fur seals (Parks Victoria, 2007). The Study Area also crosses into the South Australian Lower South East Marine Park (though no infrastructure is planned within the marine park), which at its closest point is zoned as a sanctuary zone (Marine Park Local Advisory Group, 2010).

The Study Area sits within the Bonney coast upwelling Key Ecological Feature (KEF); a seasonal upwelling that brings cold nutrient rich water to the sea surface and is an area of high productivity and aggregations of marine life. It is one of 12 recognised areas worldwide where blue whales are known to feed in relatively high numbers.

There are no marine invasive species known from the Study Area, however it is possible that species could be identified during benthic ecology and fish ecology surveys that are planned.

For further information, please refer to **Attachment 4** - Southern Winds Preliminary Desktop Marine Environmental Assessment, Section 5, pp 14-64 (BMT, 2022).

3.1.2 Describe any existing or proposed uses for the project area.

A number of other uses exist in the Study Area which includes commercial fishing, vessel navigation and recreational activities. The Discovery Bay Marine National Park is located within the Study Area. The subsea cabling options avoid the Discovery Bay Marine National Park and are proposed to be located to its north or south. The Marine Park is recognised as an important habitat for commercial fish, including tuna and mackerel (Director of National Parks, 2013), and is a key migratory area for whales, including humpback, fin, blue and sei whales.

The fishing industry is one of the largest employers in the region, including indirect employment such as fish processing, marine engineering, ship building and maintenance. Commercial fishing directly from Portland involves fishing for sharks, abalone, crayfish and squid.

A number of commercial fisheries exist within the Commonwealth Waters of the offshore Study Area and nearby surrounding area including Southern and eastern Scalefish and Shark Fishery, Southern Squid Jig Fishery, Southern Tuna and Billfish Fishery, and the Small Pelagic Fishery. There are no aquaculture leases within the Study Area.

Cape Bridgewater is a popular destination for whale watching, visiting seal colonies and bushwalking. Surfing and diving are also popular activities around the headland. There are two recreational boat ramps, one at Portland and one at Nelson. There are several whale watching and fishing charters that launch from Portland and may visit the Study Area.

The 2021 vessel tracking information for the region shows the main shipping channel from the Port of Melbourne to the Port Adelaide is within proximity to the Study Area (Marine Traffic, 2022), with between 35,000 to 200,000 vessel movements per year. Further consultation with the major shipping ports and Harbor Masters will be required to understand if the wind turbines represent a navigational hazard for larger container vessels.

Other Proposed Offshore Uses

The VIC Offshore Windfarm is a project proposed by Australis Energy Ltd comprising 62 wind turbine generators and lies directly east of the Southern Winds Offshore Wind Project in the Discovery Bay area. This Project has been referred **2021/8966** and technical assessments are progressing, whilst planning approval has not yet been granted. Atlinta Energy is proposing the Spinifex Offshore Wind Farm off the coast of southern Victoria. There are also several other projects proposed in South Australia.

Turbines have been positioned so that they do not enter the exclusion zone of existing or proposed infrastructure. The proposed use for the project area is an offshore wind farm, including fixed wind turbines, substations, connecting turbine cables and the main transmission line connection to the mainland.

For further information, please refer to **Attachment 4** - Southern Winds Preliminary Desktop Marine Environmental Assessment, Section 5.3, pp 20-27)

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

The Study Area includes the **Discovery Bay National Marine Park**, however the Project infrastructure has been designed to avoid directly interacting with this. The park protects reef and macroalgae habitats and supports a high diversity of marine life including whales, seabirds, fish and Australian fur seals (Parks Victoria, 2007).

The Study Area also interacts with the South Australian **Lower South East Marine Park** which lies directly north of the offshore wind farm component of the Project. The area nearest the Project is a sanctuary zone and habitat protection zone established to protect: the only area of sheltered fine-medium sandy beach along this part of the coastline, seabed habitats including rocky reef and soft-sediment habitat, important shorebird roosting and feeding areas, plus habitats for migratory birds, shallow macroalgae beds and intertidal rocky reef at French Point that offers diverse invertebrate habitat.

As previously mentioned, the KEF, Bonney Coast Upwelling occurs over most of the Study Area, and there is potential for the Threatened Ecological Communities (TEC) Giant Kelp Marine Forests of South East Australia to occur in nearshore areas close to the Victorian/South Australian border, although this will be confirmed by field investigations.

Forty-eight EPBC listed marine species are recorded within the Study Area.

The Study Area interacts with the following state coastal marine biounits (BMT, 2022), although largely infrastructure will be placed beyond these biounits:

- **Glenelg Biounit** lies to the north and east of the proposed offshore wind farm area. This is dominated by infralittoral rock (i.e. hard surfaces in the near shore zone typically supporting seaweed and kelp communities) and sublittoral sediment (i.e. areas of nearshore permanently covered by water. This is one of only 12 sites worldwide for the feeding of blue whale (*Balaenoptera musculus*). It also contains extensive habitat for the hooded plover (*thinornis cucullatus*) which nests on the coastline. Nelson Reefs provide important giant kelp beds and Noble Rocks provide a rocky reef in an otherwise sandy coastline.
- **Discovery Bay Biounit** lies to the south-east of the offshore Project area and encompasses the cable landing area for Option 2. This biounit is dominated by infralittoral fine sand with some low-profile reef communities. It is one of only a few pygmy blue whale (*Balaenoptera musculus brevicauda*) feeding areas worldwide. It has recorded a high number of southern right whales and southern elephant seals, it is an occasional breeding site for the Australian fur-seal (*Arctocephalus pusillus doriferus*), contains habitat for hooded plover on the shoreline, feeding and roosting habitat for endangered seabirds including petrels and albatross, is a nursery

habitat for great white shark (*Carcharodon carcharias*) and grey nurse shark (*Carcharias taurus*) and the southern bluefin tuna (*thunnus maccoyii*), and is the most productive abalone habitat in Victoria.

- **Cape Nelson Biounit** lies in the south-eastern extent of the Study Area near the cable landing for Option 1. This area is characterised by high-energy, wave-dominated beaches and rocky shores, sublittoral reed and sediments, coastal cliffs and lagoons. Dominant benthic profiles are infralittoral fine sand, high energy lower infralittoral zone and high energy common kelp communities. This biounit supports an aggregation area for the southern right whale (*Eubalaena australis*), important seabird habitat including migratory shorebird breeding ground and high density of hooded plovers, rocky reefs support diverse fish, invertebrate and macroalgae communities and seagrass meadows in Portland Bay support populations of kingfish, whiting, flathead, mulloway and snapper, as well as the rare brown algae (*Crystophora cymodocea*).

There are five shipwrecks of heritage value within the offshore Study Area: The Triumph (ID 6654), Jane (ID 6303), Captain Cook (ID6042), Isabella (ID 6286), Merope (ID 6429) and one shipwreck located in the onshore Study Area: Unknown French Whaler (ID 6758). A permit is required to undertake activities which may impact on underwater heritage under the Commonwealth *Underwater Cultural Heritage Act 2018*.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The offshore Study Area is located on the southern continental shelf at the narrowing point of the Bonney Coast Upwelling where there are over 20 very large and steep canyons dominated by swells and open cool water. In the nearshore, there are typically exhumed limestone and rocky substrates, whilst the middle shelf (within the Study Area) is a zone of swelling waves, characterized by mega-rippled bryozoan sands, with areas of rock.

Depth contours for the offshore Study Area range from around 60-90 m, and the substrate encountered is mainly sand and shell, with rock potentially at <60 m from the shore.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

Ecological Communities

The EPBC-listed TEC Giant Kelp Marine Forests of Southeast Australia has the potential to occur within the eastern and western sections of the nearshore environment, around Cape Bridgewater and Nelson. Commonwealth mapping of the likely extent of this TEC identifies the Giant Kelp Marine Forests of Southeast Australia as 'maybe occurring'. Site surveys undertaken under this referral will confirm the area of TEC potentially impacted. Although the TEC is mapped within the Study Area, infrastructure footprints avoid this area and its unlikely to be impacted directly by the project if present.

Flora

Previous studies within a similar area have only identified isolated and sparse patches of seagrass and macroalgae within the nearshore environment, however the area where the majority of turbines and other infrastructure will be placed is not well studied. Given the water depth however it is unlikely significant flora will be present.

Fauna

There are a diverse and large number of marine species that may occur within the area within which field investigations may occur. There are 48 listed threatened species as potentially occurring within the Study Area (excluding terrestrial species). This includes 33 bird (mostly seabirds, but also migrating parrots and shorebirds), 5 fish, 5 mammals (4 whale and 1 seal species), 3 turtle and 2 shark species that may inhabit the study area. In addition, other fauna include marine and benthic invertebrate species.

The Study Areas is mapped as a Biologically Important Area (BIA) for the following species:

- Whales: foraging habitat and high use area for pygmy blue whale (*Balaenoptera musculus breviceauda*), aggregation, migration and resting areas for southern right whale (*Eubalaena australis*)
- Seabirds (foraging only): antipodean albatross (*Diomedea exulans antipodensis*), wandering albatross (*Diomedea exulans*), wedge-tailed shearwater (*Ardenna pacifica*), common diving-petrel (*Pelecanoides urinatrix*), Buller's albatross (*Thalassarche bulleri*), Indian yellow-nosed albatross (*Thalassarche chlorohychnos bassi*), black-browed albatross (*Thalassarche melanophris*) and Campbell albatross (*Thalassarche melanophris impavida*).
- Sharks: foraging area for the white shark (*Carcharodon carcharias*)

A BIA is an indication that an area has a high level of importance for a species, either threatened or migratory under the EPBC Act.

For further information refer to **Attachment 4** - Southern Winds Preliminary Marine Desktop Environmental Assessment, Section 5.1-5.4, pp 14-59.

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

Generally, the nearshore environment features limestone and rocky substrates, whilst the middle shelf (within the Study Area) is characterised by mega-rippled bryozoan sands, with areas of rock. Deeper areas of the shelf contain fine bioclastic sands. As identified in Section 3.2.1 above, benthic habitat the nearshore environment is also categorised by sparse patches of seagrass and macroalgae. However, the marine field investigation area is predominately within the offshore environment where water depths range from approximately 60-90m and the benthic environment has not been well studied. Desktop investigations indicate substrate within this area is comprised of mainly sand and shell, with rock potentially occurring at less than 60m from the shoreline.

Detailed information regarding soil properties will be determined as part of the subsequent geophysical and geotechnical investigations (which will be the subject of the third EPBC referral for the Project).

For further information, please refer to **Attachment 4** - Southern Winds Preliminary Desktop Marine Environmental Assessment, Section 5, pp 14-30 (BMT, 2022).

3.3 Heritage

3.3.1 Describe any Commonwealth heritage places overseas or other places recognised as having heritage values that apply to the project area.

There are no Commonwealth heritage places that apply to the Study Area, however there are five shipwrecks of heritage value within the Study Area: The Triumph (ID 6654), Jane (ID 6303), Captain Cook (ID6042), Isabella (ID 6286), Merope (ID 6429) and an unknown French Whaler (ID 6758). While remains of a wooden vessel, possibly the Jane have been reported, it is not confirmed that the other vessels are still intact.

A permit is required to undertake activities which may impact on underwater heritage under the Commonwealth *Underwater Cultural Heritage Act 2018*. the survey work which is the subject of this referral will involve using multi-beam surveys from a vessel to determine whether any physical structures from shipwrecks remain. These are non intrusive surveys however and will not physically harm any items of cultural heritage.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

The Study Area is considered part of the Sea Country of the Gournditch-Mara (who are also the relevant native title group) with creation stories explaining the spiritual connection of the Gournditch-Mara with Deen Maar Island, the sea and the afterlife (State of Victoria, 2007). Whales in particular, hold spiritual and totemic significance. There are a number of shell middens at Cape Duquesne. The Discovery Bay Marine National Park Management Plan suggests that cultural heritage material could still be present beneath the waters of Discovery Bay.

The Kooyang Sea County Plan (Framlingham Aboriginal Trust and Winda Mara Aboriginal Corporation, 2004) sets out issues of concern for sea country management, which include the conservation of whales, commercial fishing, cultural heritage site protection, environmental degradation and unsustainable land uses.

Consultation with relevant Traditional Owners (including GMTOAC) will assist in identifying any specific values relevant to the Study Area, and how these may be protected. In particular, they are likely to have an interest in the disturbance of the sea bed and any potential cultural heritage items it may contain. whilst this referral does include the collection of sediment grab samples from the seabed surface these are of very minor volumes (less than 1 m² per sample) and would not be expected to significantly impact the seafloor or any cultural heritage. No samples will be undertaken within 500 m of a possible shipwreck location.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

The southeast marine region is considered to have low productivity (i.e. low biomass in the system), with the exception of localised hotspots which include the Bonney Upwelling in south-eastern South Australia, the Bass Strait Water Cascade on the shelf break east of Bass Strait and the flow of the East Australian Current along the eastern edge of the Region. The Bonney Upwelling is a seasonal upwelling that regularly occurs between November/ December and March/ April annually, in which cold nutrient rich water is brought to the sea surface.

The current generally flows in an easterly direction towards Bass Strait. Generally, the area has a very active wave environment with high winds. Deakin University maintain a wave and current buoy at Cape Bridgewater – it reports wave heights of up to 8 m in the winter months, with summer providing calmer conditions. The water temperature varies, but averages around 14oC in winter and 16-17oC in summer.

The purpose of this application is to undertake further field investigations to better characterise the hydrodynamics of the marine environment within which the wind farm will be constructed.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	Yes	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	Yes	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth heritage places overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no world heritage areas within proximity of the area in which field investigations will occur.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no national heritage places within close proximity of the area in which field investigations will occur.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Ramsar wetland
No	Yes	Glenelg Estuary and Discovery Bay Wetlands

Direct impact	Indirect impact	Ramsar wetland
No	Yes	Piccaninnie Ponds Karst Wetlands

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.3.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Bird survey work may occur within the Ramsar Wetland; these will likely be undertaken by a variety of methods including transect surveys, arial surveys. This may involve minor disturbance to birds using the area who are easily disturbed by human presence i.e. drones/planes.

4.1.3.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.3.6 Describe why you do not consider this to be a Significant Impact. *

Any survey works will be undertaken using methods that minimise the disturbance of birds, in accordance with the *Survey guidelines for Australia's threathened birds* (Australian Government, 2010). These would include measures such as selecting appropriate personnel, not disturbing nests, avoiding trapping etc.

4.1.3.7 Do you think your proposed action is a controlled action? *

No

4.1.3.9 Please elaborate why you do not think your proposed action is a controlled action. *

The action is minor in nature, involving survey work that will be undertaken in a manner that does not cause disturbance to bird species occurring within the ramsar wetland.

4.1.3.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

Any survey works will be undertaken using methods that minimise the disturbance of birds, in accordance with the *Survey guidelines for Australia's threatened birds* (Australian Government, 2010). These would include measures such as selecting appropriate personnel, not disturbing nests, avoiding trapping etc.

4.1.3.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

No offsets are proposed.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species
No	No	Amphibromus fluitans
No	No	Antechinus minimus maritimus
No	Yes	Balaenoptera borealis
No	Yes	Balaenoptera musculus
No	Yes	Balaenoptera physalus
No	Yes	Botaurus poiciloptilus
No	Yes	Caladenia colorata
No	No	Caladenia hastata

Direct impact	Indirect impact	Species
No	No	<i>Calidris canutus</i>
No	Yes	<i>Calidris ferruginea</i>
No	Yes	<i>Callocephalon fimbriatum</i>
No	Yes	<i>Calyptorhynchus banksii graptogyne</i>
No	Yes	<i>Carcharodon carcharias</i>
No	Yes	<i>Caretta caretta</i>
No	Yes	<i>Charadrius leschenaultii</i>
No	Yes	<i>Chelonia mydas</i>
No	No	<i>Dasyurus maculatus maculatus</i> (SE mainland population)
No	Yes	<i>Dermochelys coriacea</i>
No	Yes	<i>Diomedea antipodensis</i>
No	Yes	<i>Diomedea epomophora</i>
No	Yes	<i>Diomedea exulans</i>
No	Yes	<i>Diomedea sanfordi</i>
No	No	<i>Euastacus bispinosus</i>
No	Yes	<i>Eubalaena australis</i>
No	Yes	<i>Falco hypoleucos</i>
No	Yes	<i>Galaxiella pusilla</i>
No	Yes	<i>Galeorhinus galeus</i>
No	No	<i>Glycine latrobeana</i>
No	Yes	<i>Grantiella picta</i>
No	Yes	<i>Halobaena caerulea</i>
No	No	<i>Haloragis exalata</i> subsp. <i>exalata</i>
No	Yes	<i>Hirundapus caudacutus</i>
No	No	<i>Isodon obesulus obesulus</i>
No	No	<i>Ixodia achillaeoides</i> subsp. <i>arenicola</i>
No	Yes	<i>Lathamus discolor</i>
No	No	<i>Lepidium aschersonii</i>
No	Yes	<i>Limosa lapponica baueri</i>
No	No	<i>Litoria raniformis</i>
No	Yes	<i>Macronectes giganteus</i>
No	Yes	<i>Macronectes halli</i>
No	No	<i>Miniopterus orianae bassanii</i>
No	Yes	<i>Nannoperca obscura</i>
No	Yes	<i>Neophema chrysogaster</i>

Direct impact	Indirect impact	Species
No	Yes	<i>Neophoca cinerea</i>
No	Yes	<i>Numenius madagascariensis</i>
No	Yes	<i>Pachyptila turtur subantarctica</i>
No	Yes	<i>Pedionomus torquatus</i>
No	Yes	<i>Petaurus australis australis</i>
No	No	<i>Phoebetria fusca</i>
No	No	<i>Potorous tridactylus trisulcatus</i>
No	No	<i>Prasophyllum litorale</i>
No	No	<i>Prasophyllum spicatum</i>
No	No	<i>Prototroctes maraena</i>
No	No	<i>Pseudomys shortridgei</i>
No	Yes	<i>Pterodroma leucoptera leucoptera</i>
No	Yes	<i>Pterodroma mollis</i>
No	No	<i>Pteropus poliocephalus</i>
No	No	<i>Pterostylis chlorogramma</i>
No	No	<i>Pterostylis cucullata</i>
No	Yes	<i>Rostratula australis</i>
No	No	<i>Senecio psilocarpus</i>
No	Yes	<i>Seriola brama</i>
No	Yes	<i>Sternula nereis nereis</i>
No	Yes	<i>Thalassarche bulleri</i>
No	Yes	<i>Thalassarche bulleri platei</i>
No	Yes	<i>Thalassarche carteri</i>
No	Yes	<i>Thalassarche cauta</i>
No	Yes	<i>Thalassarche chrysostoma</i>
No	Yes	<i>Thalassarche impavida</i>
No	Yes	<i>Thalassarche melanophris</i>
No	Yes	<i>Thalassarche salvini</i>
No	Yes	<i>Thalassarche steadi</i>
No	Yes	<i>Thinornis cucullatus cucullatus</i>
No	Yes	<i>Thunnus maccoyii</i>
No	No	<i>Xerochrysum palustre</i>

Ecological communities

Direct impact	Indirect impact	Ecological community
No	Yes	Giant Kelp Marine Forests of South East Australia
No	No	Grassy Eucalypt Woodland of the Victorian Volcanic Plain
No	No	Karst springs and associated alkaline fens of the Naracoorte Coastal Plain Bioregion
No	No	Natural Temperate Grassland of the Victorian Volcanic Plain

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

There may be some indirect impact to marine threatened species or TEC's. Potential indirect impacts to all threatened marine species could involve entanglement with anchorages, underwater noise from vessel traffic or vessel strike. This is further detailed in **Attachment 1 - Southern Winds Offshore Wind Project Sampling and Analysis Plan**, pages 32-38. However, given the minor level of physical disturbance to the environment, and with appropriate controls in place (refer to the attached Sampling and Analysis Plan which includes an Environmental Management Plan [**Attachment 1 - Southern Winds Sampling and Analysis Plan**, Section 7, pp 32-37]), it is unlikely works would have a direct or indirect significant impact on any threatened species or other protected matters. Environmental management measures to be undertaken during field work include:

- where instrumentation is deployed, it will be undertaken in a manner that minimises the disturbance of benthic habitat or the risk of entanglement e.g. taut lines etc.
- no fauna or flora samples are proposed to be taken or interfered with
- any sediment samples will be taken from the upper seabed layer only (no drilling, coring or seismic surveys proposed as part of this referral)
- all vessels will be required to follow the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017)
- all vessels will be required to maintain their equipment and vessel in good working order to minimise the risk or spills, waste generation or marine pests
- any aerial surveys will be undertaken by licensed operators, and in accordance with the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017).

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.4.6 Describe why you do not consider this to be a Significant Impact. *

The survey work that is the subject of this has been designed to use non-intrusive methods where possible, and the scale of survey is not at a scale or intensity that would cause a significant impact to a species. Refer to **Attachment 1 - Southern Winds Offshore Wind Project Sampling and Analysis Plan**, pages 32-38 for further detail.

4.1.4.7 Do you think your proposed action is a controlled action? *

No

4.1.4.9 Please elaborate why you do not think your proposed action is a controlled action. *

Given the minor level of physical disturbance to the environment, the use of non-survey techniques and with appropriate controls in place (refer to the attached Sampling and Analysis Plan which includes an Environmental Management Plan [**Attachment 1** - Southern Winds Sampling and Analysis Plan, Section 7, pp 32-37]), it is unlikely works would have a direct or indirect significant impact on any threatened species or other protected matters. Environmental management measures to be undertaken during field work include:

- where instrumentation is deployed, it will be undertaken in a manner that minimises the disturbance of benthic habitat or the risk of entanglement e.g. taut lines etc.
- no fauna or flora samples are proposed to be taken or interfered with
- any sediment samples will be taken from the upper seabed layer only (no drilling, coring or seismic surveys proposed as part of this referral)
- all vessels will be required to follow the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017)
- all vessels will be required to maintain their equipment and vessel in good working order to minimise the risk or spills, waste generation or marine pests
- any aerial surveys will be undertaken by licensed operators, and in accordance with the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017)

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

The Environmental Management Plan [**Attachment 1** - Southern Winds Sampling and Analysis Plan, Section 7, pp 32-37]), provides a full description of environmental management measures to be undertaken during field work. These include:

- where instrumentation is deployed, it will be undertaken in a manner that minimises the disturbance of benthic habitat or the risk of entanglement e.g. taut lines etc.
- no fauna or flora samples are proposed to be taken or interfered with
- any sediment samples will be taken from the upper seabed layer only (no drilling, coring or seismic surveys proposed as part of this referral)
- all vessels will be required to follow the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017)
- all vessels will be required to maintain their equipment and vessel in good working order to minimise the risk or spills, waste generation or marine pests
- any aerial surveys will be undertaken by licensed operators, and in accordance with the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017)

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

No offsets are proposed.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species
No	Yes	Actitis hypoleucos

Direct impact	Indirect impact	Species
No	Yes	<i>Apus pacificus</i>
No	Yes	<i>Ardenna carneipes</i>
No	Yes	<i>Ardenna grisea</i>
No	Yes	<i>Ardenna tenuirostris</i>
No	Yes	<i>Arenaria interpres</i>
No	Yes	<i>Balaenoptera borealis</i>
No	Yes	<i>Balaenoptera musculus</i>
No	Yes	<i>Balaenoptera physalus</i>
No	Yes	<i>Calidris acuminata</i>
No	Yes	<i>Calidris alba</i>
No	Yes	<i>Calidris canutus</i>
No	Yes	<i>Calidris ferruginea</i>
No	Yes	<i>Calidris melanotos</i>
No	Yes	<i>Calidris ruficollis</i>
No	Yes	<i>Caperea marginata</i>
No	Yes	<i>Carcharodon carcharias</i>
No	Yes	<i>Caretta caretta</i>
No	Yes	<i>Charadrius bicinctus</i>
No	Yes	<i>Charadrius leschenaultii</i>
No	Yes	<i>Chelonia mydas</i>
No	Yes	<i>Dermochelys coriacea</i>
No	Yes	<i>Diomedea antipodensis</i>
No	Yes	<i>Diomedea epomophora</i>
No	Yes	<i>Diomedea exulans</i>
No	Yes	<i>Diomedea sanfordi</i>
No	Yes	<i>Eubalaena australis</i>
No	Yes	<i>Gallinago hardwickii</i>
No	Yes	<i>Hirundapus caudacutus</i>
No	Yes	<i>Isurus oxyrinchus</i>
No	No	<i>Lagenorhynchus obscurus</i>
No	Yes	<i>Lamna nasus</i>
No	Yes	<i>Limosa lapponica</i>
No	Yes	<i>Macronectes giganteus</i>
No	Yes	<i>Macronectes halli</i>
No	Yes	<i>Megaptera novaeangliae</i>

Direct impact	Indirect impact	Species
No	Yes	Monarcha melanopsis
No	Yes	Motacilla flava
No	Yes	Myiagra cyanoleuca
No	Yes	Numenius madagascariensis
No	Yes	Orcinus orca
No	Yes	Pandion haliaetus
No	Yes	Phoebetria fusca
No	Yes	Physeter macrocephalus
No	Yes	Rhipidura rufifrons
No	Yes	Sternula albifrons
No	Yes	Thalassarche bulleri
No	Yes	Thalassarche carteri
No	Yes	Thalassarche cauta
No	Yes	Thalassarche chrysostoma
No	Yes	Thalassarche impavida
No	Yes	Thalassarche melanophris
No	Yes	Thalassarche salvini
No	Yes	Thalassarche steadi
No	Yes	Tringa nebularia
No	Yes	Tringa stagnatilis

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.5.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

There are no direct impacts to migratory species likely from fauna survey activity. Potential indirect impacts to all listed migratory species are described in the attached Sampling and Analysis Plan which includes an Environmental Management Plan [**Attachment 1** - Southern Winds Sampling and Analysis Plan, Section 7, pp 32-37]). These include:

- Potential creation of underwater noise from vessel movement that may interfere with marine fauna
- Potential for the disturbance of marine fauna by aerial survey methods e.g. planes/drones
- Vessel strike of marine fauna during vessel transit
- Poor water quality from a vessel oil or waste spill
- Disturbance of the seabed through taking sediment samples or anchoring equipment deployed to the seafloor
- Entanglement of marine fauna in equipment cabling or anchorages
- Long term equipment deployment which may foul or cause contamination of the marine environment (particularly if coated with antifoul)
- Introduction of marine pests to the marine environment

4.1.5.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.5.6 Describe why you do not consider this to be a Significant Impact. *

The survey work that is the subject of this has been designed to use non-intrusive methods wherever possible, and the scale of survey is not at a scale or intensity that would cause a significant impact to a migratory species. Refer to **Attachment 1** - Southern Winds Offshore Wind Project Sampling and Analysis Plan, pages 32-38 for further detail.

4.1.5.7 Do you think your proposed action is a controlled action? *

No

4.1.5.9 Please elaborate why you do not think your proposed action is a controlled action. *

Given the minor level of physical disturbance to the environment, the use of non-survey techniques and with appropriate controls in place (refer to the attached Sampling and Analysis Plan which includes an Environmental Management Plan [**Attachment 1** - Southern Winds Sampling and Analysis Plan, Section 7, pp 32-37]), it is unlikely works would have a direct or indirect significant impact on any threatened species or other protected matters. Environmental management measures to be undertaken during field work include:

- where instrumentation is deployed, it will be undertaken in a manner that minimises the disturbance of benthic habitat or the risk of entanglement e.g. taut lines etc.
- no fauna or flora samples are proposed to be taken or interfered with
- any sediment samples will be taken from the upper seabed layer only (no drilling, coring or seismic surveys proposed as part of this referral)
- all vessels will be required to follow the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017)
- all vessels will be required to maintain their equipment and vessel in good working order to minimise the risk or spills, waste generation or marine pests
- any aerial surveys will be undertaken by licensed operators, and in accordance with the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017) and the Survey Guidelines for Threatened Birds (Commonwealth Government, 2010).

These are standard measures that follow published guidelines for marine surveys, and are easily implementable without the need for further assessment or management.

4.1.5.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

The Environmental Management Plan [**Attachment 1** - Southern Winds Sampling and Analysis Plan, Section 7, pp 32-37]), provides a full description of environmental management measures to be undertaken during field work. These include:

- where instrumentation is deployed, it will be undertaken in a manner that minimises the disturbance of benthic habitat or the risk of entanglement e.g. taut lines etc.
- no fauna or flora samples are proposed to be taken or interfered with
- any sediment samples will be taken from the upper seabed layer only (no drilling, coring or seismic surveys proposed as part of this referral)
- all vessels will be required to follow the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017)
- all vessels will be required to maintain their equipment and vessel in good working order to minimise the risk or spills, waste generation or marine pests
- any aerial surveys will be undertaken by licensed operators, and in accordance with the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017)

4.1.5.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

No offsets are proposed.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

Field work does not involve undertaking a nuclear action.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Commonwealth marine area
Yes	Yes	EEZ and Territorial Sea

4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.7.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Field works will occur within Commonwealth waters, however the works proposed are non-intrusive, and will not involve the taking of, or interference with any flora or fauna. Potential impacts may involve:

- very minor disturbances to the seabed for gaining bed surface samples
- vessel and camera work to survey benthic habitat (no physical samples will be taken)
- deployment of of a small number of buoys on which data collection equipment will be placed. These will be anchored to the seafloor temporarily via either a screw anchor or concrete block; these will be retrieved post-survey where possible. Locations will be chosen that avoid any sensitive ecological habitats.

- there will be a small number of boat movements to undertake the field work and maintain instrumentation. These are very minor in comparison to existing vessel traffic and operators will be trained in procedures that minimise risk to marine fauna i.e. go slow to avoid vessel strike, maintain a watch for cetaceans etc.
- there is potential for Aerial surveys of cetaceans - this will be undertaken by licensed operators who have existing permits to undertake this work and will follow procedures for minimising disturbance to cetaceans.

These activities are not expected to have a significant impact on Commonwealth waters.

Potential environmental impacts and management measures implemented are described further in the attached Sampling and Analysis Plan (**Attachment 1** - Southern Winds Offshore Wind Farm Sampling and Analysis Plan, Section 7, pp 32-37).

4.1.7.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.7.6 Describe why you do not consider this to be a Significant Impact. *

As per above, the works are minor in nature and of short duration. They are unlikely to result in a substantial change to the population of a marine species, important habitat, air quality, water quality or heritage values.

4.1.7.7 Do you think your proposed action is a controlled action? *

No

4.1.7.9 Please elaborate why you do not think your proposed action is a controlled action. *

As per above, the works are minor in nature and of short duration. They are unlikely to result in a substantial change to the population of a marine species, important habitat, air quality, water quality or heritage values. Any indirect impacts can be readily addressed through standard mitigation measures.

4.1.7.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

The Environmental Management Plan [**Attachment 1** - Southern Winds Sampling and Analysis Plan, Section 7, pp 32-37]), provides a full description of environmental management measures to be undertaken during field work. These include:

- where instrumentation is deployed, it will be undertaken in a manner that minimises the disturbance of benthic habitat or the risk of entanglement e.g. taut lines etc.
- no fauna or flora samples are proposed to be taken or interfered with
- any sediment samples will be taken from the upper seabed layer only (no drilling, coring or seismic surveys proposed as part of this referral)

- all vessels will be required to follow the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017)
- all vessels will be required to maintain their equipment and vessel in good working order to minimise the risk of spills, waste generation or marine pests
- any aerial surveys will be undertaken by licensed operators, and in accordance with the procedures outlined in the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017)

4.1.7.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

No offsets are proposed.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Study Area is not within proximity of the Great Barrier Reef.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The project does not involve large coal mining or coal seam gas.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

Field work will not occur on commonwealth land.

4.1.11 Commonwealth heritage places overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

There are no commonwealth heritage places overseas impacted by the proposal.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

None

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth heritage places overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

Surveys

The survey methodology chosen complies with all relevant guidelines. A range of survey methods have been considered, however, those that are as non-intrusive as possible (using aerial or satellite technology) have been preferred wherever possible to minimise impacts to the marine environment and fauna.

Wind Resource Assessment

The Project is proposing to deploy a LiDAR for wind resource assessments. The only alternative to using a LiDAR would be to construct and deploy an offshore meteorological mast. However, this would have far higher environmental impact, so is not preferred (it would involve installation and later decommissioning of an entire structure including foundation + mast with various wind measuring devices).

Alternative offshore sites

The Proponent has undertaken a number of feasibility and site selection studies to date, including the desktop environmental assessments submitted with this referral, to identify a suitable Project location in the Portland region, taking into consideration the following factors:

- Consistent strong wind patterns
- Relatively shallow water depths that are favourable for installing fixed-bottom offshore wind infrastructure (i.e. turbines and substations)
- Proximity to the existing electricity network at Heywood Terminal Substation
- Suitable onshore infrastructure such as Port of Portland
- Opportunity with the Portland Aluminium Smelter to share common infrastructure and reduce potential environmental and community effects
- Low population density in the surrounding onshore areas
- Existing and historical industrial development in Glenelg and Grant Local Government Areas (LGAs)
- Presence of a political will for energy transition within the region
- Opportunity to engage with the local manufacturing industry within the region and contribute to significant economic benefits to Glenelg region and Victoria more broadly
- Opportunity to utilise existing fishing infrastructure and knowledge in the locality
- Opportunity to re-skill the local workforce into renewable-associated employment

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

#1.	Attachment 1 - Southern Winds Offshore Wind Project Sampling and Analysis Plan	Document	Marine Environment Sampling and Analysis Plan for Southern Winds OWF
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1.3.2.16 (Person proposing to take the action) Nature of the trust arrangement in relation to the proposed action

#1.	Attachment 2 - SWOWP Project Trust - Trust Deed	Document	
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1.3.2.18 (Person proposing to take the action) If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

#1.	Attachment 3 - SWOWP Health Safety and Environmental (HS&E) Policy	Document	Health Safety and Environmental Policy for Southern Winds OWP Project Trust
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3.1.1 Current condition of the project area's environment

#1.	Attachment 4 - Southern Winds Preliminary Desktop Marine Environmental Assessment	Document	Preliminary Desktop Marine Environmental Assessment for Southern Winds Offshore Wind Project
#2.	Assessment of the conservation values of the bonney upwelling area	Link (Journal article)	https://www.dcceew.gov.au/sites/default/files/documents/conservation-assessment-bonney.pdf
#3.	Discovery Bay Marine National Park Management Plan	Link (Webpage)	https://www.parks.vic.gov.au/-/media/project/pv/main/parks/documents-guides-and-publications

#4.	Lower South East Marine Park Preliminary sanctuary zone scenario	Link (Webpage)	https://cdn.environment.sa.gov.au/marine-parks/docs/mp19-factsheet.pdf
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3.1.2 Existing or proposed uses for the project area

#1.	Attachment 4 - Southern Winds Preliminary Desktop Marine Environmental Assessment	Document	Preliminary Desktop Marine Environmental Assessment for Southern Winds Offshore Wind Project
#2.	SOUTH-EAST COMMONWEALTH MARINE RESERVES NETWORK MANAGEMENT PLAN 2013–23	Link (Webpage)	https://parksaustralia.gov.au/marine/pub/plans/se-network-management-plan2013-23.pdf

3.1.3 Natural features, important or unique values that applies to the project area

#1.	Discovery Bay Marine National Park Management Plan	Link (Webpage)	https://www.parks.vic.gov.au/-/media/project/pv/main/parks/documents/guides-and-publications
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3.2.1 Flora and fauna within the affected area

#1.	Attachment 4 - Southern Winds Preliminary Desktop Marine Environmental Assessment	Document	Preliminary Desktop Marine Environmental Assessment for Southern Winds Offshore Wind Project
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3.2.2 Vegetation within the project area

#1.	Attachment 4 - Southern Winds Preliminary Desktop Marine Environmental Assessment	Document	Preliminary Desktop Marine Environmental Assessment for Southern Winds Offshore Wind Project
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4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

#1.	Attachment 1 - Southern Winds Offshore Wind Project Sampling and Analysis Plan	Document	Provides detailed information on potential indirect environmental impacts and management measures to be applied.
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4.1.4.3 (Threatened Species and Ecological Communities) Why your action is unlikely to have a direct and/or indirect impact

#1.	Attachment 1 - Southern Winds Offshore Wind	Document	Marine Environment Sampling and Analysis Plan for Southern Winds OWF
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Project Sampling and Analysis Plan		
#2.	Australian National Guidelines for Whale and Dolphin Watchin 2017	Link (Webpage) https://www.agriculture.gov.au/sites/default/files/documents/aust-national-guidelines-whale-dolphin-

4.1.5.2 (Migratory Species) Why your action has a direct and/or indirect impact on the identified protected matters

#1.	Attachment 1 - Southern Winds Offshore Wind Project Sampling and Analysis Plan	Document	describes potential environmental impacts and management measures from field work.
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4.1.5.3 (Migratory Species) Why your action is unlikely to have a direct and/or indirect impact

#1.	Attachment 1 - Southern Winds Offshore Wind Project Sampling and Analysis Plan	Document	Marine Environment Sampling and Analysis Plan for Southern Winds OWF
#2.	Australian National Guidelines for Whale and Dolphin Watchin 2017	Link (Webpage)	https://www.agriculture.gov.au/sites/default/files/documents/aust-national-guidelines-whale-dolphin-

4.1.5.6 (Migratory Species) Why you do not consider the direct and/or indirect impact to be a Significant Impact

#1.	Attachment 1 - Southern Winds Offshore Wind Project Sampling and Analysis Plan	Document	Provides detailed information on potential indirect environmental impacts and management measures to be applied.
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4.1.5.9 (Migratory Species) Why you do not think your proposed action is a controlled action

#1.	DCCEEW Website	Link (Webpage)	https://www.dcceew.gov.au/sites/default/files/documents/survey-guidelines-birds-april-2017.pdf
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4.1.7.3 (Commonwealth Marine Area) Why your action is unlikely to have a direct and/or indirect impact

#1.	Attachment 1 - Southern Winds Offshore Wind Project Sampling and Analysis Plan	Document	Marine Environment Sampling and Analysis Plan for Southern Winds OWF
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4.1.7.10 (Commonwealth Marine Area) Avoidance or mitigation measures proposed for this action

#1.	Attachment 1 - Southern Winds Offshore Wind Project Sampling and Analysis Plan	Document	Provides detailed information on potential indirect environmental impacts and management measures to be applied.
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5.2 Declarations

✔ Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	54010830421
Organisation name	BMT Commercial Australia Pty Ltd
Organisation address	Level 5, 348 Edward St Brisbane QLD 4000
Representative's name	Sophie Barrett
Representative's job title	Graduate Scientist
Phone	+6107 3831 6744
Email	sophie.barrett@bmtglobal.com
Address	Level 5, 348 Edward Street, Brisbane, 4000 QLD

Check this box to indicate you have read the referral form. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

By checking this box, I, **Sophie Barrett of BMT Commercial Australia Pty Ltd**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

✔ Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	662232895
Organisation name	Southern Winds OWP Project Pty Ltd as trustee for the Southern Winds OWP Project Trust
Organisation address	The Commons, 11 Wilson Street, South Yarra, Victoria 3141
Representative's name	Southern Winds OWP Project Pty Ltd C/- Deb Neumann
Representative's job title	Director, Environment and Planning, BlueFloat Energy on behalf of Southern Winds Project P/L
Phone	0414811290
Email	dneumann@bluefloat.com
Address	The Commons, 11 Wilson Street, South Yarra, Victoria 3141

Check this box to indicate you have read the referral form. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

I, **Southern Winds OWP Project Pty Ltd C/- Deb Neumann of Southern Winds OWP Project Pty Ltd as trustee for the Southern Winds OWP Project Trust**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading

information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

Check this box to indicate you have read the referral form. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

I, **Southern Winds OWP Project Pty Ltd C/- Deb Neumann of Southern Winds OWP Project Pty Ltd as trustee for the Southern Winds OWP Project Trust**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

I would like to receive notifications and track the referral progress through the EPBC portal. *