Gippsland Skies Offshore Wind Project marine surveys (investigations)

Application Number: 02476

Commencement Date: 25/06/2024

Status: Locked

1. About the project

1.1 Project details

1.1.1 Project title *

Gippsland Skies Offshore Wind Project marine surveys (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 *

01/12/2024

1.1.4 Estimated end date *

01/12/2032

1.2 Proposed Action details

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

The proposed action to be undertaken by Gippsland Skies Pty Ltd (**Gippsland Skies**) is marine survey investigations ('**the investigations**') including supporting activities, to support the proposed future development of the Gippsland Skies Offshore Wind Project (the '**Project**') offshore, off west Gippsland, Victoria.

The investigations, including supporting activities, are required to provide baseline data for future environmental impact assessments for the Project. The referral area for the proposed action shown in Section 2.1 and comprises the feasibility licence area (**FLA**), proposed cable corridor (137km long) and a 1nm buffer area around the FLA (the '**investigation area**'). The investigation area is approximately 2,200 km2, of which approximately 107 km2 is the buffer area for the purpose of vessel manoeuvring around the FLA. The disturbance footprint of the geophysical investigation area will be less than 2,200 km2, noting that in the case of geophysical investigations, 'footprint' refers only to area traversed and the proposed cable route survey area will be refined prior to the survey commencing. For the benthic and geotechnical investigations, the disturbance footprint is estimated to be 0.004 km2 (0.2 ha), the calculations for which are outlined in **Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 3.1.3, page 25.**

The investigations will include geophysical and geotechnical investigations, benthic habitat surveys and wind and oceanography surveys.

Geophysical investigations

The geophysical investigations will collect data for assessment of water depths, seabed topography, seabed and shallow sub-seabed conditions and identification of obstructions on the seabed. The data will inform the geotechnical investigations and environmental assessment and engineering design for the Project. The geophysical investigations are proposed to take place over three campaigns:

- Campaign 1 proposed to commence Q4-2024/Q1-2025 subject to receipt of necessary approvals, finalisation of contracting arrangements, weather and vessel availability. Survey of the entire investigation area with indicative line spacing of 100-150 m and cross lines spaced 2 km apart (subject to optimisation). It is expected to take approximately 8-11 weeks, subject to weather. Cable corridor area to be refined prior to survey.
- Campaign 2 notionally proposed to commence in approximately 2027 and take 2-3 weeks (weather dependent). It will undertake detailed surveying and tighter spaced survey lines over proposed locations of wind turbine generators (WTGs), offshore substation platforms (OSPs) and inter-array cables.
- Campaign 3 notionally proposed to commence in 2028 or 2029, will take up to four to six weeks (weather dependent) and will be a pre-construction survey to refine the location of all proposed infrastructure.

The following geophysical activities are proposed (a detailed description is provided in **Attachment 1** 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 3.1.2, pages 14-25):

- Multibeam echosounder (MBES)
- Side scan sonar (SSS)
- Sub-bottom profiling (SBP)
- Magnetometry surveys
- 2D shallow seismic (i.e. Mini air guns. Use of this equipment is subject to the results of the SBP and is likely only to be required in deeper water and particular geology conditions).

Geotechnical investigations

Geotechnical investigations collect detailed information on the physical properties of the seabed and the underlying shallow sediments to supplement and validate the data gathered from the geophysical surveys. This will provide key data to assist with selecting the locations for the WTGs, OSPs and development of foundation designs. Most of the samples collected will be transported to an onshore laboratory for testing. Some initial geotechnical testing will be performed on the geotechnical vessel. The geotechnical investigations are proposed to take place over three campaigns:

- Campaign 1 proposed to commence in 2025, subject to vessel availability. These preliminary
 investigations will take place across the investigation area and likely to take two to three months to
 complete, subject to weather
- Campaign 2 likely to be split into three phases during 2027 and/or 2028, involving more detailed geotechnical investigations to inform project development. There is the potential for the second and third campaign to be condensed into one campaign.
- Campaign 3 are proposed to commence in 2029 for Phase 1 project and between 2029 and 2032 for all three phases, and likely to involve taking one borehole sample and one downhole cone penetration test (CPT) sample at each of the proposed WTG locations. The horizontal directional drilling exit pit location will be subject to borehole and CPT sampling in this campaign.

The following geotechnical activities are proposed (a detailed description is provided in Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 3.1.3, pages 25-35):

- Seabed grab sampling
- Coring (including vibro coring, box coring or piston (or gravity) coring)
- CPTs
- Standard penetration tests (SPT)
- · Seabed sediment thermal conductivity testing
- Borehole sampling

Benthic habitat surveys

Boat-based benthic habitat surveys will be undertaken to develop an understanding of seafloor habitat characteristics and characterise grain type and any possible contaminants within seabed sediments. The surveys will be designed using desktop information and site-specific geophysical data. The number of samples required will be confirmed once geophysical survey data is available. Benthic survey techniques are likely to include benthic grab samples, drop down camera and drop-down video, and an intertidal walkover survey.

Wind and oceanography surveys

Data on wind speeds, ocean currents and wave heights will be collected using Floating LiDAR Systems (FLS), wave measuring buoys, and Acoustic Doppler Current Profilers (**ADCP**). Two FLS will be deployed in the FLA for the purpose of measuring wind speed and direction. Deployment locations have not yet been finalised for wave buoys, but FLS are notionally set to be located at 39.446712624°S and 146.157896417°E; 39.569548170° S and 146.155003589°E. These will be fixed to the seabed with cabling and an anchor/ballast weight or mooring.

ADCPs will be deployed to measure the water current velocities within the FLA and at points along the proposed cable corridor using the doppler effect of sound waves to measure the speed and direction of currents. These could be deployed either on fixed buoys or from Unmanned Autonomous Vessels (UAV). If fixed, equipment will be located on the seabed in a trawl-resistant frame (mooring cage).

A detailed description of the surveys is provided in **Attachment 1** '**Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials**', Section 3.3.2 pages 38-46).

The following activities will also be carried out in parallel with the investigations and are referenced for completeness but do not form part of the proposed action that is the subject of this referral:

- Passive acoustic monitoring surveys
- Water and sediment quality sampling
- Biological surveys (i.e. aerial surveys for birds and marine megafauna and supporting observational surveys, baited remote underwater video surveys for fish, towed camera surveys for fish and shellfish and e-dna sampling).

A detailed description of these surveys is provided in **Attachment 1** 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Sections 3.4, 3.5 and 3.6, pages 43-48).

There are several sources of environmental impacts and risks associated with the investigations, however the potential for them to cause significant environmental harm is considered minor. Potential impacts from the investigations are discussed in detail in Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Sections 7,8,9 pages 102-139). The main potential impacts are summarised below:

- Underwater sound from geophysical and geotechnical equipment and vessels that may disturb marine fauna
- Entanglement of marine fauna in towed equipment
- Vessel collision with megafauna
- Seabed disturbance
- Marine pollution from a vessel hydrocarbon spill or accidental release of waste
- Introduction of invasive marine species to the marine environment.

Environmental protection measures that will be implemented to ensure the investigations are undertaken in a manner that does not cause environmental harm are provided in Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Sections 7.1 – 7.9 and Section 8, pages 102-125.

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).

This referral relates only to marine survey activities in support of development of the Project and is the first referral required for the Project. Subsequent referrals for the Project (i.e. for the proposed construction and operation of Gippsland Skies Offshore Wind and associated infrastructure) are proposed to be submitted in 2025.

The Project is anticipated to be delivered in phases, and referrals under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) will be submitted as required. These are described in Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 2, page 10.

The results of the marine investigations subject of this referral will inform development of the Project's scope based on the data collected.

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

Commonwealth legislation, policies and guidelines

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act is the primary piece of legislation for the assessment, management and protection of nationally significant species, habitats or places in Commonwealth waters. The EPBC Act also sets out requirements for activities in the Australian Whale Sanctuary, which protects all cetaceans (whales and, dolphins) in Australian waters, which is comprised of the Commonwealth marine area beyond coastal waters as well as the Exclusive Economic Zone (EEZ). These areas cover waters from 3 nm to 200 nm from the territorial sea baseline. This Referral is submitted under the EPBC Act for the investigations in the marine environment that may have significant impacts on Matters of National Environmental Significance (MNES). MNES potentially impacted by the investigations are: Listed threatened species; Listed migratory species; Commonwealth marine areas, and Wetlands of International Importance (Ramsar).

The Project area intersects a number of biologically important areas (BIA), which indicates important areas for a particular lifecycle of a threatened or migratory species.

Offshore Electricity Infrastructure Act 2021 (OEI Act)

The OEI Act and associated regulations stipulate the framework to enable construction, operation and decommissioning of offshore electricity infrastructure projects. A Feasibility Licence is required prior to conducting site feasibility studies to support Project engineering studies. A Feasibility Licence for the Project was granted by the Commonwealth government on the 29th of April 2024.

Management Plans will be required under the OEI Act for the construction, installation, operation, maintenance and decommissioning of offshore renewable energy infrastructure and transmission infrastructure. This includes fixed or tethered infrastructure that is used to assess the feasibility of exploiting a renewable energy source. The Management Plans must be prepared by the Licence Holder and submitted to the Offshore Infrastructure Regulator (OIR) for assessment and acceptance prior to undertaking activities that involve fixed or tethered infrastructure that is offshore renewable energy infrastructure or offshore electricity transmission infrastructure.

For the early-phase investigations, it is understood following the publication of the Draft Offshore Electricity Infrastructure Amendment Regulations, that a Management Plan is required for the deployment and operation of FLS, wave buoys, ADCPs and geotechnical investigations. The Project will prepare and submit a Management Plan to the Offshore Infrastructure Regulator to cover these activities.

Works involving the collection of environmental data to inform the EIA under the EPBC Act will not require a Management Plan (e.g., deployment of noise loggers on the seabed, benthic habitat studies, marine fauna studies and so forth).

Underwater Cultural Heritage Act 2018 (UCH Act)

The Underwater Cultural Heritage Act legislates the protection of Australia's shipwrecks, sunken aircraft and other types of UCH, which includes Aboriginal and Torres Strait Islander Underwater Cultural Heritage in Commonwealth waters. The Underwater Cultural Heritage Act clarifies the existing and ongoing jurisdictional arrangements for protecting and managing Australia's Underwater Cultural Heritage, as agreed upon in the 2010 Australia Underwater Cultural Heritage Intergovernmental Agreement. This includes establishing protection zones around identified UCH and permits for traversing a protection zone or interacting with cultural heritage. The investigations must adhere to the following additional requirements:

- Do not disturb or damage Underwater Cultural Heritage and its surrounding environment or remove artefacts.
- Observe the requirements of protected zones.

- Provide authorities with a notification of any new Underwater Cultural Heritage discovery within 21 days.
- Use best endeavours to report any suspicious or illegal activity that you observe happening around Underwater Cultural Heritage sites.

Scientific research permits

- To obtain biological resources (i.e. take and/or remove samples) from a Commonwealth area for the purpose of research and development on any genetic resources, or biochemical compounds, comprising or contained in the biological resources, a permit under Part 8A of the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth) (the Regulations) will be required. Samples to be taken for field work are limited and will likely include sediment samples to characterise marine sediment properties, and fish sampling.
- It is a requirement to obtain a permit under the EPBC Act to take, keep, move, interfere with (harass, chase, herd, tag, mark or brand) a cetacean. A cetacean permit is not sought at this time, as passive acoustic monitoring will not involve interference with cetaceans and therefore will have no significant impacts on cetaceans.
- It is a requirement to obtain a permit under the Underwater Cultural Heritage Act to undertake any sort of activity or works in a protected zone and specified protected underwater cultural heritage site. There are several shipwrecks mapped along the cable corridor, though these do not have protection zones around them. Should surveys be required in a protection zone (which is not the case at this time), a permit is required in order to conduct certain site geotechnical and geophysical surveys in or across identified protection zone(s).

Guidelines

- National Guidelines for the Survey of Cetaceans, Marine Turtles and the Dugong (Department of Climate Change, Energy, the Environment and Water (DCCEEW), 2024) provide best practice survey methodologies to ensure adequate data of a high standard is obtained to answer specific questions on species biology and ecology. The Survey Guidelines summarise the best practice survey techniques for determining the presence (or likely absence), abundance (or density), distribution and habitat use (including behaviours) of cetaceans, marine turtles (in water), and the dugong. These guidelines have been used in the scoping of the biological surveys included in these investigations.
- EPBC Act Policy Statement 2.1 Interaction between offshore seismic exploration and whales Industry Guidelines (Commonwealth Government, 2008) will be applied to minimise the likelihood of injury or hearing impairment to whales from offshore seismic surveys, traditionally undertaken by the oil and gas industry in Australia. These guidelines are relevant for seismic activity in the marine environment only (i.e. surveys that typically use airgun arrays that produce high intensity, lowfrequency impulsive sounds). The guidelines are used as a control measure for the geophysical survey techniques using mini-air guns or boomers/sparkers (i.e., SBP). The Policy Statement is not relevant to any other aspects of the investigations. The Guidelines recommend that in areas where BIAs are present, which applies to these investigations, proponents should consider additional protection measures when undertaking seismic activity such as using greater precaution zones and additional marine mammal observer coverage.
- Key Environmental Factors for the Offshore Windfarm Environmental Impact Assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (DCCEEW, 2023) guidance provides information on the key environmental factors to be considered when developing offshore wind projects in the marine environment.
- Survey Guidelines for specific species. Where appropriate, survey guidelines for specific species published by DCCEEW have been considered to inform the survey methodologies for the investigations. In addition to the guideline referred to in section 5.3.1, these include: Survey guidelines for Australia's threatened birds (2010), and survey guidelines for Australia's threatened fish (2011).

Legislation relevant to use of vessels undertaking the investigations.

Due to the requirement for the deployment of vessels to undertake the actions relevant to this Referral, the investigations would be subject to the following Acts and guidelines.

- *Biosecurity Act 2015* for the prevention of the introduction, establishment or spread of diseases or pests, affecting human beings, animals, or plants.
- *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* regulating ship-related operational activities and requirements of The International Convention for the Prevention of Pollution from Ships (MARPOL convention).

Victorian State legislation, policies and guidelines

Marine and Coastal Act 2018 (MACA)

Consent may be required to use, develop or work on marine or coastal Crown land generally the area between the outer limit of Victorian coastal waters and 200 metres (m) inland of the high-water mark of the sea, to a depth of 200 metres below the surface of that land.

Flora and Fauna Guarantee Act 1988 (FFG Act)

A research permit or approval under the FFG Act may be required for impacts to protected or listed species and/ or communities, or to their habitats e.g., marine mammals through vessel strike. It is likely that that most ecologists operating in Victoria would already have such a permit. There are no threatened flora species within the marine environment, therefore a permit would not be required to take plant matter.

Fisheries Act 1995

A permit may be required from the Victorian Fisheries Authority (VFA) to take, injure, damage or destroy Protected Aquatic Biota (PAB) unless otherwise authorised. Permits can only be issued in accordance with the PAB Permit Policy Statement.

Aboriginal Heritage Act 2006

A Cultural Heritage Management Plan (CHMP) must be prepared for any project for which an Environment Effects Statement (EES) has been required, or for "high impact activities" within an "area of cultural heritage sensitivity", however, the seabed is exempt from CHMP approval under *the Aboriginal Heritage Act 2006*.

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. *

A Stakeholder and Community Engagement Plan (SCEP) has been prepared by Gippsland Skies to guide engagement with community and key stakeholders throughout the life of the project. The SCEP identifies key stakeholders, outlines objectives of engagement and describes a phased approach to seeking feedback.

The SCEP outlines communications and engagement methods for consultation with key stakeholders including potential onshore transmission host landholders, coastal communities, Traditional Owners, commercial and recreational marine users, environmental and interest groups, and Government agencies.

Gippsland Skies' consultation activities to date have focussed on introductory meetings pre-feasibility licence application and post licence award consultation from July 2024 with a range of stakeholders including:

 DCCEEW, Department of Energy, Environment and Climate Action (DEECA), Department of Transport and Planning (DTP) – introduction of consortium and pre-EPBC marine survey referral call

- DECCA and DTP introduction to the consortium and discussion on EPBC referral and State permits required (online)
- Parks Victoria
- First Peoples State Relations (FPSR)
- Heritage Victoria
- Local Councils: Wellington Shire Council, South Gippsland Shire Council and the La Trobe Valley
 Shire Council
- Offshore Infrastructure Regulator
- Offshore Wind Energy Victoria (OWEV)
- VicGrid
- Australian Fisheries Management Authority (AFMA)
- South East Trawl Fishing Industry Association (SETFIA) email introduction
- Commonwealth Fisheries Association
- Australian Maritime Safety Authority (AMSA)
- Maritime Industry of Australia (MIA)

Additionally, Gippsland Skies web page is available for interested parties to get updates on the Project at www.gippslandskies.com.au.

Engaging with Traditional Owners

Gippsland Skies has identified Gunaikurnai, Bunurong and Palawa people as Traditional Owners with potential interests in Sea Country relating to the offshore project area. Gippsland Skies is committed to engaging with Traditional Owners in a respectful and culturally appropriate manner and in accordance with its statutory obligations. It is Gippsland Skies' intention to ensure that, where relevant, free, prior, and informed consent is achieved throughout the life of the project.

Engagement will be guided by the Gunaikurnai Land and Waters Aboriginal Council (GLaWAC), Bunurong Land Council Aboriginal Corporation (BLCAC), and Palawa Traditional Owners. Engagement will also be guided by First Peoples - State Relations.

The focus of this engagement will include:

- Ensuring feedback on marine survey approach is appropriately captured
- Project introduction and relationship building
- Cultural Values (see Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 4.4, page 80)
- Statutory Compliance, noting there is evolving guidance.

Community engagement

Gippsland Skies has undertaken community engagement with the broader community and other key stakeholder groups regarding the Project and the marine investigations through a series of targeted and localised drop-in community information sessions in the region as follows:

- 18 July 2024, Fish Creek Memorial Hall, sessions at 11:00-14:00, and 17:00-20:00 attended by 30 people.
- 19 July 2024, Sandy Point Community Centre, session at 11:00-14:00 attended by 30 people.
- 20 July 2024, Foster War Memorial Arts Centre, session at 08:00-13:00 attended by 60 people.
- 22 July 2024, Yarram Regent Theatre, sessions at 11:00-14:00, and 17:00-20:00 attended by 25 people.
- 23 July 2024, Seaspray Public Hall, session at 11:00-14:00 attended by 15 people.

These events were advertised via:

- Project website
- Print and radio advertising

- Proactive promotion to local community environment and interest groups
- Letters to target stakeholder groups
- Mail out promotion.

Gippsland Skies intends to continue engagement with the broader community and other key stakeholder groups throughout 2024.

Proposed and continuing targeted stakeholder engagement

- Traditional Owners (via GLaWAC, BLCAC and Palawa organisations)
- Local Members for Parliament
- State and Federal Government agencies
- Commercial fisheries
- Recreational fisheries
- Local community, environment, and interest groups.

Feedback gathered throughout consultation will be recorded in a consultation database and shared with relevant technical teams.

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.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint. Alternatively, email us at privacy@awe.gov.au.

Confirm that you have read and understand this Privacy Notice *

1.3.1.1 Is Referring party an organisation or business? *

Referring party organisation details		
ABN/ACN	20093846925	
Organisation name	AECOM AUSTRALIA PTY LTD	
Organisation address	Collins Square, Level 10, Tower Two 727 Collins Street, Melbourne, VIC 3008	
Referring party details		
Name	David Hyett	
Job title	Industry Director- Environment	
Phone	0419421246	
Email	maggie.grigg@aecom.com	
Address	Collins Square, Level 10, Tower Two 727 Collins Street, Melbourne, VIC 3008	

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

11666794369

Organisation name	GIPPSLAND SKIES PTY LTD	
Organisation address	Level 10, Tower 4, 727 Collins Street, Docklands VIC 3008	
Person proposing to tak	e the action details	
Name	Rory van Weerdenburg	
Job title	Project Director	
Phone	+47 904 76 158	
Email	rory.vanweerdenburg@gippslandskies.com.au	
Address	Level 10, Tower 4, 727 Collins Street, Docklands VIC 3008	

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? *

No

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. *

Gippsland Skies Pty Ltd (**Gippsland Skies**) is the Person proposing to take the action (**PPA**) and has a satisfactory record of responsible environmental management.

Additionally, and notwithstanding that they are not the **PPA**, we confirm that Gisppland Skies' direct shareholder Gippsland Skies Holdings Pty Ltd (**GSHPL**), together with each of GSHPL's shareholders, Sønnavindar Offshore Wind AS, Reventus Power Australia Holdings Limited, AGL Energy Hubs Pty Ltd and Direct OSW Pty Ltd as trustee of the Direct OSW Unit Trust, has a satisfactory record of responsible environmental management.

There are no current or previous proceedings under a Commonwealth, State or Territory law against Gippsland Skies for the protection of the environment or the conservation and sustainable use of natural resources.

Additionally, and notwithstanding that they are not the **PPA**, we confirm that there are no current or previous proceedings under a Commonwealth, State or Territory law against Gippsland Skies' direct shareholder Gippsland Skies Holdings Pty Ltd (**GSHPL**), nor against any of GSHPL's shareholders, Sønnavindar

Offshore Wind AS, Reventus Power Australia Holdings Limited, AGL Energy Hubs Pty Ltd and Direct OSW Pty Ltd as trustee of the Direct OSW Unit Trust, for the protection of the environment or the conservation and sustainable use of natural resources.

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

Gippsland Skies is committed to providing and maintaining a healthy and safe workplace, minimising the risks of harm to health, the environment and the communities in which it operates and continually improving the HSE Management System.

Gippsland Skies aims to meet these commitments through:

- Understanding and complying with legal and regulatory compliance obligations
- Operating within an HSEQ management system consistent with international and industry best practice standards
- Proactively identifying and aiming to effectively control, minimise, monitor and raise awareness of HSEQ risks
- Prioritising the consideration of HSEQ issues in business management decisions, procurement, design and delivery
- Ensuring all employees and contractors understand and are responsible for performing work in accordance with approved procedures
- Providing resources to improve the physical and mental health and wellbeing of employees
- Consulting and working collaboratively with employees, contractors, suppliers and community on HSEQ issues
- Ensuring training in HSEQ practices, procedures and any other skills reasonably required is provided
- Seeking to protect the environment from harm
- Establishing, measuring, monitoring and reviewing HSEQ objectives to continuously improve performance and minimise the risks.

Attachment 2, 'HSE Policy' provides Gippsland Skies' Health, Safety and Environment (HSE) Policy.

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 11666794369

Organisation name GIPPSLAND SKIES PTY LTD

Organisation address	Level 10, Tower 4, 727 Collins Street, Docklands VIC 3008	
Proposed designated p	oponent details	
Name	Rory van Weerdenburg	
Job title	Project Director	
Phone	+47 904 76 158	
Email	rory.vanweerdenburg@gippslandskies.com.au	
Address	Level 10, Tower 4, 727 Collins Street, Docklands VIC 3008	

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	20093846925
Organisation name	AECOM AUSTRALIA PTY LTD
Organisation address	Collins Square, Level 10, Tower Two 727 Collins Street, Melbourne, VIC 3008
Representative's name	David Hyett
Representative's job title	Industry Director- Environment
Phone	0419421246
Email	maggie.grigg@aecom.com
Address	Collins Square, Level 10, Tower Two 727 Collins Street, Melbourne, VIC 3008

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	11666794369
Organisation name	GIPPSLAND SKIES PTY LTD
Organisation address	Level 10, Tower 4, 727 Collins Street, Docklands VIC 3008
Representative's name	Rory van Weerdenburg
Representative's job title	Project Director
Phone	+47 904 76 158
Email	rory.vanweerdenburg@gippslandskies.com.au
Address	Level 10, Tower 4, 727 Collins Street, Docklands VIC 3008

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? *

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? *

Referring party

2. Location

2.1 Project footprint



Bass Strait

Project Area: 219979.63 Ha Disturbance Footprint: 219979.63 Ha

Maptaskr © 2024 -39.676993, 146.839259 Powered By Esri - Sources: Esri, TomTom, Garmin, F...

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Gippsland Declared Area OEI-01-2022 Part 3 and corridor along the coast of Gippsland, toward

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? *

The investigation area occurs within Commonwealth marine waters with parts of the proposed cable corridor located in Victorian and with potential overlap with Tasmanian State waters. The FLA is located in Bass Strait, approximately 30 km off the coast of Victoria between Walkerville and Tidal River, while the proposed cable corridor will connect to the mainland and is based on VicGrid's nominated onshore connection point at Giffard for offshore wind in the Seaspray region. Refer to Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Figure 2.1, page 13).

The investigation area is divided into the FLA (626.39 km2), proposed cable corridor (which is 137 km long and between 3 - 23 km wide (widest point is adjacent to FLA)) and a 1 nautical mile (nm) buffer area (107km2).

Parts of the proposed cable corridor (east of Wilsons Promontory) run adjacent to the Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC) Native Title claim along the Gippsland coast.

3. Existing environment

3.1 Physical description

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

The investigation area is situated in Bass Strait and occurs within the south-east marine region of Australia which is characterised by predominantly westerly to south-westerly wind and wave climate. The following is a summary of the description of the investigation area in **Attachment 1** '**Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials**', Section 4, pages 49-91.

Water Depths

The FLA and cable route water depths are approximately 80m at the deepest point and gradually get shallower as they approach the intertidal area.

Seabed

The substrate throughout the investigation area is mapped as calcareous gravel, sand and silt, while the substrate in the proposed cable corridor traverses a mix of calcareous gravel, sand and silts. There is a large section of calcareous ooze approximately 5km south of the FLA. The nearshore environment along the Victorian coastline adjacent the cable corridor is largely mixed soft substrate and consolidated hard substrata. The proposed cable corridor passes through some small areas of invertebrates, consolidated hard substrata, sand and seagrass. The benthic habitat types of the FLA are poorly known.

The proposed cable corridor is located adjacent to parts of the Beagle Australian Marine Park (AMP) which has extensive areas of mobile, sedimentary bedforms and limited areas of raised rocky reef. The investigations subject of this referral will provide a detailed understanding of the physical and benthic characteristics of the marine environment.

Winds

The investigation area contains wind speeds typically around 6 to 12 m/s, with little seasonal variation, although stronger wind speeds occur around winter months, July to September.

Waves

Significant wave heights are typically in the order of 1.5 to 2.5 m but can go up to around 7m. Peak wave periods in the order of 8 to 14 seconds are common. There is slight seasonal variation, with more energetic wave conditions occurring during winter, May through to September, and the least energetic wave conditions during the summer months of December to February.

Currents

The area typically experiences easterly flowing surface currents of 0.1 to 0.6 m/s speed. Near the seabed, the predominant current direction is towards the south-east, with slower speeds that rarely exceed 0.5 m/s. Currents are slightly stronger in the months of April to August, and weaker during summer, December to February. Subsurface water temperatures range from around 12 degrees Celsius in August to September to 21 degrees Celsius in February to March. The tidal range in this area is of approximately 3m.

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

Commercial fisheries are an existing marine use in the investigation area as are recreational boating activities and shipping.

The area overlapped between the investigation area with commercial fisheries is small, ranging between 0.008% and 7.39% of the total fishery area.

Refer to Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 4.6, pages 89-91 for further details of other marine uses.

The investigation area is located within the Gippsland Declared Area made under the OEI Act. Another offshore wind project (Kut-Wut Brataualung) proposed by Southerly Ten, is located south of the Gippsland Skies FLA, within the Declared Area.

The proposed Marinus Link electricity and data interconnector between North West Tasmania and the Latrobe Valley in Victoria passes through the Gippsland Skies investigation area.

The Yolla offshore gas platform (Beach Energy) and facilities are located to the west (30.6km) of the investigation area.

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

Several outstanding natural features exist within the south-east marine region of Australia, however none of these features are known to occur within the investigation area. The south-east marine region profile describes the ecosystems, conservation values and uses of Commonwealth marine waters in south-eastern Australia, including Bass Strait. The region is generally considered to have low productivity, with the exception of localised hotspots that include the Bonney Upwelling in south-eastern South Australia, the Bass Strait Water Cascade on the shelf break east of Bass Strait, and the East Australian Current along the eastern edge of the region.

Outstanding natural features or areas of unique values near the investigation area include:

Australian Marine Parks (AMP)

The nearest AMP to the investigation area is the Beagle AMP. The Beagle AMP is located 22.8 km from the FLA and is adjacent to (but is not within) the proposed cable corridor. No investigations will occur within the Beagle AMP.

The Beagle AMP protects rocky reefs and sponge gardens and is an important foraging area for seabirds that breed on the Kent Islands within the park (Australian Marine Parks, 2022). The Kent Islands are a cluster of five granitic islands in Bass Strait, which also have Tasmanian Marine Protected Areas covering all waters up to three nautical miles (nm) around them.

The Beagle AMP provides shelter for shark species in the winter and scallop beds on sandy substrate provide foraging for these species. Port Jackson sharks (*Heterodontus portusjacksoni*) have been observed near the reef ridges. Fish species within the AMP that are commonly observed include Degen's leatherjacket (*Thamnaconus degeni*), butterfly perch (*Caesioperca lepidoptera*), barber perch (*Caesioperca razor*), common gurnard perch (*Neosebastes scorpaenoides*), Melbourne silverbelly (*Parequula melbournensis*), jackass morwong (*Nemadactylus macropterusrosy*), wrasse species, sand flathead (*Platycephalus bassensis*) and draughtboard shark (*Cephaloscyllium laticeps*).

Marine Parks

Ninety Mile Beach Marine Park is located close to the eastern edge of the proposed cable corridor, but a buffer of 0.5 nm (0.02 km) has been placed around the Marine Park to ensure no encroachment of investigations within the Marine Park.

Ninety Mile Beach Marine Park is characterised by its unique sandy environment, which supports a significant diversity of marine invertebrates and marine fauna. The coast also provides habitat for shore birds, including the threatened species. The area is popular for recreational activities and retains high conservation values due to prohibition of all forms of extraction within the marine park.

Ramsar sites

The Corner Inlet Ramsar site is located adjacent to short sections (about 14 km) of the proposed cable corridor. No investigations will occur within the Corner Inlet Ramsar site.

The Corner Inlet Ramsar site is 67,186 hectares (ha). This Ramsar site is fringed by mangroves, saltmarshes, sandy beaches and intertidal mudflats. The only extensive bed of broad-leafed seagrass (*Posidonia australisin*) in Victoria occurs within the wetland. The area supports 390 species of marine invertebrates and 390 species of native flora. The wetland site provides extensive tidal flats at low tide which are important feeding areas for waders. Thirty-two wader species have been recorded within the wetland, and it is estimated that nearly 50% of overwintering migratory waders in Victoria occur in Corner Inlet. Nationally threatened species that utilise the Ramsar site include the orange-bellied parrot (*Neophema chrysogaster*), growling grass frog (*Litoria reniformis*), Australian grayling (*Prototroctes maraena*) and swift parrot (*Lathamus discolor*).

Threatened Ecological Communities (TEC)

The Subtropical and Temperate Coastal Saltmarsh, a TEC, is present within intertidal areas in proximity to the investigation area. While investigations will not directly impact this TEC, there is potential for indirect impacts to water quality (e.g. through a spill event), although this is still unlikely. The proposed cable corridor is near the coastal saltmarsh which is widespread along the eastern and southern coast of Australia. The saltmarsh is common in intertidal areas, often located between the mean high tide and mean spring tide levels. These communities host a wide range of vegetation types, including grasses, succulent herbs, shrubs and non-vascular plants such as epiphytic algae, diatoms and cyanobacterial mats.

Marine and Coastal Parks

The proposed cable corridor is also adjacent to, but does not intersect, marine and coastal parks with unique values and natural features. These include:

• Wilsons Promontory Marine National Park - extends off the southern coast of Wilsons Promontory and is Victoria's largest marine protected area. The marine park is home to one of the richest marine ecosystems off the coast of Australia.

- Shallow Inlet Marine and Coastal Park is located between Waratah Bay and the peaks of Wilsons Promontory. The sheltered waters of Shallow Inlet provide a secluded and peaceful setting for a range of water-based activities such as fishing, boating and sailboarding.
- Nooramunga Marine and Coastal Park is an intricate network of waterways and islands. The park consists of shallow marine waters, isolated granite islands, intertidal mudflats and a complex of over 40 sand barrier islands.

The investigations will not impact on any of these values.

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 depth range within the investigation area is generally between 74-80 m in the FLA. The proposed cable corridor water depths range from approximately 80 m at the deepest point and gradually get shallower as they approach the intertidal area.

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.

Listed threatened species and migratory species potentially occurring in the investigation area were identified using the Protected Matters Search Tool (PMST). The search returned 95 listed threatened species and 68 listed migratory species. Due to the surveys included in this document being marine based, terrestrial species identified in the PMST search have been excluded from this report, resulting in a total of 67 threatened and 68 migratory species potentially occurring in the investigation area. This search identified 40 threatened species and 37 migratory species in the FLA, and 67 threatened species and 68 migratory species overlap between the FLA and the proposed cable corridor.

Migratory species

A high number of threatened and migratory shorebird and seabird species potentially occur in the investigation area. Several biologically important areas (BIA) for bird species are located within the investigation area. BIAs are indications that an area has a high level of importance for a species, either threatened or migratory, under the EPBC Act. These include BIAs for the following species: White-faced storm petrel, shy albatross, wandering albatross, Bullers albatross, Indian yellow nosed albatross, black-browed albatross, Campbell albatross, short-tailed shearwater and common diving petrel.

The region contains breeding areas for several other seabirds, potentially migratory pathways for parrot species that migrate between Tasmania and the mainland (orange-bellied parrot and swift parrot) as well as habitat for shorebirds in the nearshore environment.

For further details on migratory species, refer to Section 4.3 of Attachment 1, 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials' pages 53-79.

Fish and sharks

The investigation area overlaps the great white shark (*Carcharodon carcharias*) BIA. This species is known to be a temporary resident in areas it inhabits. There are two populations of white shark within Australian waters; the eastern and the southern-western populations, with the eastern population known to be present along the entire eastern seaboard. According to the Australian Marine Spatial Information System (AMSIS) mapping, the proposed cable corridor (but not the FLA) occurs within the section mapped as a reproduction (or breeding) area for this species.

The other shark species identified are the mako shark, whale shark and the porbeagle mackerel shark. Migratory and movement details on the other species is limited.

Fish species that may occur within the investigation area include the blue warehou (*Seriolella brama*), or are primarily freshwater species that may spend a small amount of their lifecycle in coastal areas but most time in coastal rivers (Australian grayling, dwarf galaxias). The blue warehou may occur in the coastal areas of the investigation area and is commercially fished in this area.

No critically endangered or endangered fish or shark species occur in the investigation area.

Marine mammals

Two populations of the southern right whale (*Eubalena australis*) inhabit Australian waters; eastern and western, with the eastern population of the southern right whale being the population of interest for the investigation area.

The investigation area overlaps the BIA for the southern right whale, which spans the entirety of the Bass Strait and extends around the southern coast of Australia. The FLA lies only within the migratory section (indicating presence of the species during April to October), while the proposed cable corridor intersects with the reproduction BIA. The reproduction BIA indicates areas where the species are present during May to September.

The investigation area occurs within the 'possible foraging area' of the pygmy blue whale (Balaenoptera *musculus brevicauda*), with this categorisation being based of limited direct observations or through indirect evidence, such as occurrence of krill near whales or satellite tagged whales showing circling tracks. According to BIA mapping, there are no breeding grounds that occur within the investigation area or in proximity to it.

The dusky dolphin (*Lagenorhynchus obscurus*), humpback whale (*Megaptera novaeangliae*) and killer whale (*Orcinus orca*) are non-threatened migratory species with habitat in the investigation area. No BIAs for any of these species are mapped to occur in the investigation area. The sei whale (*Balaenoptera borealis*), fin whale (*Balaenoptera physalus*) and pygmy right whale (*Caperea marginata*) have areas that are likely to or may support foraging, feeding or other behaviour within the investigation area. The Australian fur seal (*Arctocephalus pusillus doriferus*) and long-nosed fur seal (*Artocephalus forsteri*) may forage and may have breeding colonies in the Bass Strait, predominantly the Bass Strait islands.

Marine reptiles

Reptiles identified to potentially be present in the investigation area are loggerhead (*Caretta caretta*) (endangered), green (*Chelonia mydas*) (Vulnerable) and leatherback turtles (*Dermochelys coriacea*) (Vulnerable). The loggerhead and leatherback turtle are endangered species while the green turtle is

vulnerable. Nesting areas for these turtles are located further north off the coast of Queensland or Northern Territory, or off Western Australia. As such, any turtles in the investigation area are likely passing through and potentially foraging and would be unlikely to remain in one area for an extended time.

For further details on the above, refer to Section 4.3 of Attachment 1, 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials' pages 53-79.

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

The action is proposed to be taken in Commonwealth marine waters and Victorian waters. No terrestrial vegetation, terrestrial native vegetation or terrestrial soils occur within the investigation area.

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 shipwrecks mapped along the coast within and adjacent to the investigation area. While no shipwrecks are mapped within the FLA, several shipwrecks are mapped in the proposed cable corridor (*P.S. Thistle, Wave, Albertross 2, Emily* and *Sarah*). None of these shipwrecks have a declared Underwater Cultural Heritage Protected Zone around them under the *Underwater Cultural Heritage Act 2018*.

The nearest declared shipwreck under the *Underwater Cultural Heritage Act 2018* is the *Clonmel*, which is located approximately one kilometre beyond the investigation area.

Any shipwrecks within the investigation area will be identified during the magnetometer, SSS and SBP surveys.

Refer to Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials' Section 4.4.2, page 81.

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

The investigations will occur within the sea country of the Gunaikurnai people. The area of investigation may hold cultural values for the Gunaikurnai people and that these values may be tangible, intangible, known and unknown.

There are three Traditional Owner groups identified as having interests in Sea Country.

The Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC) is a Registered Aboriginal Party (RAP) for much of the Gippsland region, to the east of Wilsons Promontory. Their country of interest, including state waters, covers an area from Inverloch in the west to the Snowy River in the east. In 2022, an agreement was signed between the Federal Government and GLaWAC to start the process of establishing a Sea Country Indigenous Protection Area (IPA).

The investigations are not proposed in Country from the Bunurong Land Council Aboriginal Corporation (BLCAC) and the Palawa Traditional Owners of Tasmania.

BLCAC is the RAP for the Western Port region, covering an area from the Mornington Peninsula, across to Inverloch including Victorian coastal waters. The Bunurong Peoples land extends from the Werribee River south to Wilsons Promontory. The Palawa Traditional Owners potentially may have an interest in Sea Country between its traditional lands in Tasmania and the FLA.

The marine geophysical and geotechnical survey program is an important assessment component for Gippsland Skies. The results of the program will be important in guiding future assessments of cultural values, including UCH through future statutory processes. Gippsland Skies is committed to the ongoing assessment of cultural values within the investigation area.

Refer to Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials' Section 4.4.1 page 80 and Section 1.2.7 of this referral for details regarding consultation with the Traditional Owners.

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 investigation area is located within Bass Strait in the offshore marine environment, which does not intersect with onshore hydrological features or groundwater.

The investigation area does not include any part of the Corner Inlet Ramsar area.

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 sites within or nearby the proposed investigation area.

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 or nearby the proposed investigation area.

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	Corner Inlet
No	Yes	Gippsland Lakes

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. *

The proposed investigations have a low potential for direct and indirect impacts on the Corner Inlet Ramsar site. The proposed cable corridor is adjacent to parts of the Ramsar site. However, no survey activities will be undertaken within the Ramsar site itself.

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. *

An assessment of significant impacts to this MNES has been prepared in accordance with the Significant Impact Guidelines 1.1 prepared by DCCEEW in 2013. Additional details of this assessment and MNES significant impact criteria, are presented in **Attachment 1** '**Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials' Section 9, pages 126-139.**

Investigations will be conducted outside of the Corner Inlet Ramsar site and are not expected to destroy or substantially modify the wetland or anticipated to lead to changes in hydrology.

The Ramsar site has several inlets that connect Bass Strait to the wetland. While investigations will occur within areas potentially used by fauna to cross into the Ramsar site, these will not block any inlets and will only remain in each survey location temporarily. Tethered equipment will not be placed in these inlets. As such, fauna will be able to move in and out of the wetland via other inlets if one has a survey vessel in proximity.

Geophysical and geotechnical investigations undertaken near to the Corner Inlet Ramsar site will be of short duration.

The investigations are not expected to result in the introduction of an invasive species.

The investigations have been assessed against the Matters of National Environmental Significance, Significant impact guidelines 1.1 EPBC Act.

Refer to Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 9, pages 126-139 for further details of the MNES significant impact criteria.

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.

*

Survey activities will not be undertaken within a Ramsar wetland. As a result:

- No areas of the wetland will be destroyed or substantially modified. The proposed cable corridor is adjacent to the Corner Inlet Ramsar site in some areas, however this is predominantly terrestrial. There are a few inlets from the Bass Strait into the mapped wetland area, however as the investigations will not be conducted within the wetland, they will not destroy or substantially modify the wetland.
- No habitat or lifecycle of native species, including invertebrate fauna and fish species dependent upon the wetland, will be significantly affected. While the investigations will be occurring within areas potentially used to cross into the Corner Inlet wetland, these will not block any inlets and will only remain in each location temporarily. Tethered equipment will not be placed in these inlets. As such, fauna will be able to move in and out of the wetland via other inlets if one has a survey vessel in proximity. Underwater noise impacts from geophysical and geotechnical surveys will not cause longterm impacts to fauna. As such, with control measures in place, impacts to native species of the wetland will not be significantly affected by the proposed investigations.
- No substantial and measurable change in the water quality of the wetland will occur. The potential for water pollution from onboard waste, hydrocarbon spills and other forms of discharges from vessels will be managed to ensure no temporary and localised areas of reduced water quality occur. Geotechnical investigations undertaken near to the Corner Inlet wetland may cause temporary and localised changes to water quality due to seabed disturbance, however these impacts will be short-

term and very localised. As such, these changes are not expected to adversely impact on biodiversity, ecological integrity, social amenity or human health in the long-term.

• No invasive species that are harmful to the ecological character of the wetland are expected to be introduced, or an existing invasive species being spread in the wetland. The proposed activities, while potentially using vessels sourced from overseas, will adhere to relevant biosecurity rules and regulations to minimise potential for introduction of pest and invasive species into the marine environment.

Refer to Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 9, pages 126-139 for further details of the assessment using the MNES significant impact criteria.

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. *

Vessels used to undertake the investigations have the potential to create water pollution from onboard waste, engine and equipment cooling, bilge water and hydrocarbon spills. Marine survey vessels are likely to be using local ports during the survey work. Borehole drilling also has the potential to mobilise sediment and other contaminants at the seabed as well as potentially contribute drilling fluids to the marine environment.

For this action, the following mitigation measures are proposed to avoid and mitigate indirect impacts to the Corner Inlet Ramsar site:

Discharge of geotechnical drilling muds

 Only low-toxicity water-based muds will be used for borehole sampling that are not harmful to water quality. Mud additives must be listed on the United Kingdom Centre of Environment Fisheries and Aquaculture Science (CEFAS) Definitive Ranked Lists of Registered Products as Gold/Silver or Group E/D products.

Seabed disturbance

- Drop down camera or video to be used to verify absence of sensitive seabed habitat and fauna prior to sampling.
- Vessel anchoring to occur only when necessary.
- No flora is to be taken from the marine environment unless a sample is required for identification purposes.
- Moorings or anchorages are not to be installed in areas containing sensitive marine habitat.
- Moorings or anchorages are to be removed from the marine environment when no longer required.

Routine liquid and solid vessel discharges (treated sewage, cooling water, oily water, putrescible waste)

- All vessels will be fitted with appropriate waste receptacles that are sealed and stored correctly.
- All waste is to be collected and taken to shore for recycling and disposal.
- Sewage from vessels will be treated via a treatment system approved by the International Convention for the Prevention of Pollution from Ships (MARPOL) before ocean discharge.
- In the event of needing to discharge untreated sewage (e.g. treatment plant malfunction), this will only occur when the vessel is >12nm offshore (as per MARPOL).
- Putrescible waste from vessels will also be handled in line with MARPOL requirements, namely implementing a Garbage Management Plan and ensuring that macerated food waste is not discharged within Victorian waters (Commonwealth waters only).
- In the event of macerator malfunction, non-macerated food waste can only be discharged when the vessel is >12nm from the shore.

- In terms of bilge water and deck drainage, deck cleaning products will be biodegradable and contaminated waters will be treated to <15ppm oil in water using an oil-water separator (OWS) before discharge.
- Residual oil will be stored in tanks for onshore disposal.
- Hydrocarbon and chemical storage areas will be bunded and drain to the bilge tank, and potable bunds will be used to collect spills or leaks from equipment not contained within a permanently bunded area.
- Vessel crews will be trained to be competent in spill response.
- Spill kits will be available and maintained on board.
- Any chain, anchors, mooring systems, or other monitoring equipment are to be removed once monitoring has been completed (unless it is not feasible to recover, i.e. has become buried and is not retrievable).
- All refuelling will be undertaken at a licenced bunkering facility with appropriate spill management procedures in place; no refuelling is to be undertaken at sea.

Introduction and spread of invasive species

- All vessels and equipment will be thoroughly cleaned to lower risk of pests.
- Vessels will be sourced from within Australia where possible.
- Regular pest inspections will be carried out on all vessels and equipment.

Diesel spill from accidental vessel spill or collision

- No vessel refuelling will be undertaken at sea.
- All vessels will have appropriate navigational lighting and follow AMSA navigational directions.
- To minimise the risk of vessel-to-vessel collisions, vessels contracted to Gippsland Skies will comply with:
- The requirements of Navigation Act 2012 (Cth), Chapter 3, Part 3 (Seaworthiness of vessels).
- Marine Order 21 (Safety and emergency arrangements).
- Marine Order 30 (Prevention of Collisions).
- Marine Order 91 (Marine pollution prevention oil).
- Vessels will have approved Shipboard Marine Pollution Equipment Plans (SMPEPs, or equivalent appropriate to class) that is implemented in the event of a large marine diesel oil spill.
- Vessel crews will be trained in spill response techniques in accordance with their SMPEP.
- In accordance with the SMPEP, oil spill response kits will be available in relevant locations around the vessels, are fully stocked and are used in the event of hydrocarbon or chemical spills to deck.
- Gippsland Skies will use best endeavours to report any overboard spill to regulatory authorities within two hours of the spill or within two hours of becoming aware of the spill.

For more details on the proposed control measures for the investigations, refer to **Attachment 1** 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 8, pages 114-125.

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

No offsets are proposed as the residual impacts are considered to be minor following the implementation of mitigation measures.

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	Common name
No	No	Amphibromus fluitans	River Swamp Wallaby-grass, Floating Swamp Wallaby-grass
No	No	Antechinus minimus maritimus	Swamp Antechinus (mainland)
No	Yes	Anthochaera phrygia	Regent Honeyeater
No	Yes	Ardenna grisea	Sooty Shearwater
No	Yes	Arenaria interpres	Ruddy Turnstone
No	Yes	Balaenoptera borealis	Sei Whale
Yes	Yes	Balaenoptera musculus	Blue Whale
No	Yes	Balaenoptera physalus	Fin Whale
No	Yes	Botaurus poiciloptilus	Australasian Bittern
No	No	Caladenia orientalis	Eastern Spider Orchid
No	No	Caladenia tessellata	Thick-lipped Spider-orchid, Daddy Long-legs
No	Yes	Calidris acuminata	Sharp-tailed Sandpiper
No	Yes	Calidris canutus	Red Knot, Knot
No	Yes	Calidris ferruginea	Curlew Sandpiper
No	Yes	Calidris tenuirostris	Great Knot
No	No	Callocephalon fimbriatum	Gang-gang Cockatoo

Direct impact	Indirect impact	Species	Common name
No	No	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo
Yes	Yes	Carcharodon carcharias	White Shark, Great White Shark
No	Yes	Caretta caretta	Loggerhead Turtle
No	Yes	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
No	Yes	Charadrius mongolus	Lesser Sand Plover, Mongolian Plover
No	Yes	Chelonia mydas	Green Turtle
No	No	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
No	No	Commersonia prostrata	Dwarf Kerrawang
No	No	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
No	No	Delma impar	Striped Legless Lizard, Striped Snake-lizard
No	Yes	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
No	No	Dianella amoena	Matted Flax-lily
No	Yes	Diomedea antipodensis	Antipodean Albatross
No	Yes	Diomedea antipodensis gibsoni	Gibson's Albatross
No	Yes	Diomedea epomophora	Southern Royal Albatross
No	Yes	Diomedea exulans	Wandering Albatross
No	Yes	Diomedea sanfordi	Northern Royal Albatross
No	No	Dodonaea procumbens	Trailing Hop-bush
Yes	Yes	Eubalaena australis	Southern Right Whale
No	No	Falco hypoleucos	Grey Falcon
No	Yes	Fregetta grallaria grallaria	White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian)
No	No	Galaxiella pusilla	Eastern Dwarf Galaxias, Dwarf Galaxias
No	Yes	Galeorhinus galeus	School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark
No	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe

Direct impact	Indirect impact	Species	Common name
No	No	Glycine latrobeana	Clover Glycine, Purple Clover
No	No	Grantiella picta	Painted Honeyeater
No	Yes	Halobaena caerulea	Blue Petrel
No	Yes	Hirundapus caudacutus	White-throated Needletail
No	No	Isoodon obesulus obesulus	Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern)
No	Yes	Lathamus discolor	Swift Parrot
No	No	Lepidium hyssopifolium	Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed
No	Yes	Limosa lapponica baueri	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit
No	Yes	Limosa limosa	Black-tailed Godwit
No	No	Lissolepis coventryi	Swamp Skink, Eastern Mourning Skink
No	No	Litoria aurea	Green and Golden Bell Frog
No	No	Litoria raniformis	Southern Bell Frog,, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog
No	Yes	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
No	Yes	Macronectes halli	Northern Giant Petrel
No	No	Mastacomys fuscus mordicus	Broad-toothed Rat (mainland), Tooarrana
No	No	Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)
No	Yes	Neophema chrysogaster	Orange-bellied Parrot
No	Yes	Neophema chrysostoma	Blue-winged Parrot
No	Yes	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	Yes	Pachyptila turtur subantarctica	Fairy Prion (southern)
No	No	Petaurus australis australis	Yellow-bellied Glider (south-eastern)
No	Yes	Phoebetria fusca	Sooty Albatross
No	Yes	Pluvialis squatarola	Grey Plover

Direct impact	Indirect impact	Species	Common name
No	No	Potorous tridactylus trisulcatus	Long-nosed Potoroo (southern mainland)
No	No	Prasophyllum spicatum	Dense Leek-orchid
No	Yes	Prototroctes maraena	Australian Grayling
No	No	Pseudomys novaehollandiae	New Holland Mouse, Pookila
No	Yes	Pterodroma leucoptera leucoptera	Gould's Petrel, Australian Gould's Petrel
No	Yes	Pterodroma mollis	Soft-plumaged Petrel
No	Yes	Pteropus poliocephalus	Grey-headed Flying-fox
No	No	Pterostylis chlorogramma	Green-striped Greenhood
No	No	Pterostylis cucullata	Leafy Greenhood
No	No	Pycnoptilus floccosus	Pilotbird
No	No	Rhincodon typus	Whale Shark
No	Yes	Rostratula australis	Australian Painted Snipe
No	No	Senecio psilocarpus	Swamp Fireweed, Smooth-fruited Groundsel
No	Yes	Seriolella brama	Blue Warehou
No	Yes	Stagonopleura guttata	Diamond Firetail
No	Yes	Sternula nereis nereis	Australian Fairy Tern
No	Yes	Thalassarche bulleri	Buller's Albatross, Pacific Albatross
No	Yes	Thalassarche bulleri platei	Northern Buller's Albatross, Pacific Albatross
No	Yes	Thalassarche carteri	Indian Yellow-nosed Albatross
No	Yes	Thalassarche cauta	Shy Albatross
No	Yes	Thalassarche chrysostoma	Grey-headed Albatross
No	Yes	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	Yes	Thalassarche melanophris	Black-browed Albatross
No	Yes	Thalassarche salvini	Salvin's Albatross
No	Yes	Thalassarche steadi	White-capped Albatross

Direct impact	Indirect impact	Species	Common name
No	No	Thelymitra matthewsii	Spiral Sun-orchid
No	No	Thesium australe	Austral Toadflax, Toadflax
No	Yes	Thinornis cucullatus cucullatus	Eastern Hooded Plover, Eastern Hooded Plover
Yes	Yes	Thunnus maccoyii	Southern Bluefin Tuna
No	Yes	Tringa nebularia	Common Greenshank, Greenshank
No	No	Uperoleia martini	Martin's Toadlet
No	Yes	Xenus cinereus	Terek Sandpiper
No	No	Xerochrysum palustre	Swamp Everlasting, Swamp Paper Daisy

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Natural Damp Grassland of the Victorian Coastal Plains
No	Yes	Subtropical and Temperate Coastal Saltmarsh
No	No	Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E. brookeriana)
No	No	Tasmanian white gum (Eucalyptus viminalis) wet forest

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. *

The following definitions are provided under the Matters of National Environmental Significance – Significant impact guidelines 1.1 *Environment Protection and Biodiversity Conservation Act 1999* (DoE, 2013):

- Significant impact an impact which is important, notable, or of consequence, having regard to its context of intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment, which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts.
- When is a significant impact likely to be likely, it is not necessary for a significant impact to have a greater than 50% chance of it happening; it is sufficient if a significant impact on the environment is a

real or not remote chance or possibility.

Impacts can be either direct or indirect. Indirect impacts can include:

- 'Downstream' or 'downwind' impacts such as impacts on reefs from sediment or chemicals which are discharged
- 'Upstream' impacts such as impacts associated with inputs which are used to undertake the action
- 'Facilitated' impacts which result from further actions (including actions by third parties) which are made possible or facilitated by the action.

A Protected Matters Search of the referral area (**Refer to Annex A in Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials')** identified the following threatened species as potentially occurring within the referral area:

- **Cetaceans** threatened species listed in the investigation area are the southern right whale, blue whale, sei whale and fin whale. The investigation area overlaps the southern right whale (SRW) and pygmy blue whale BIAs.
- **Marine turtles** threatened species listed in the investigation area are the loggerhead, green and leatherback turtles. There are no BIAs for these species in Bass Strait, nor nesting beaches.
- **Fish** (including sharks)– threatened species listed in the investigation area (excluding species that primarily inhabit freshwater environments) are blue warehou, great white shark, Australian Grayling and whale shark. The referral area overlaps the distribution and breeding BIAs for the great white shark.
- **Seabirds and shorebirds** 49threatened avian species are listed in the investigation area and foraging BIAs for ten seabirds overlap the investigation area.

The potential impacts to these MNES as a result of the proposed action are summarised below:

Underwater noise from the survey vessels, geophysical and geotechnical survey acoustic equipment and drilling (boreholes) may cause localised and temporary behavioural disturbance to noise sensitive marine fauna including cetaceans, fish, and reptiles. Specifically, underwater sound may directly impact:

- 4 fish species including blue warehou, great white shark, Australian Grayling and whale shark
- 4 whale species including southern right, blue, sei and fin whales
- 3 marine reptile species including loggerhead, green and leatherback turtles

Light glow may act as an attractant to light-sensitive species (e.g., seabirds, turtles), in turn affecting predator-prey dynamics (due to attraction to or disorientation from light). Continuous lighting may result in localised alterations to normal marine fauna behaviours. Specifically light glow may impact:

- 4 fish species including blue warehou, great white shark, Australian Grayling and whale shark
- 3 marine reptile species including loggerhead, green and leatherback turtles
- 49 avifauna species including 15 species of albatross and 6 species of petrel

Atmospheric emissions from diesel fuel combustion may lead to localised and temporary decrease in air quality due to gaseous emissions. Specifically atmospheric emissions may indirectly impact:

• 49 avifauna species including 15 species of albatross and 6 species of petrel

Routine vessel discharges may cause marine pollution, which has the potential to impact all marine fauna due to contamination of the marine environment. Specifically, routine vessel discharges may directly impact:

- 4 fish species including blue warehou, great white shark, Australian Grayling and whale shark
- 4 whale species including southern right, blue, sei and fin whales
- 3 marine reptile species including loggerhead, green and leatherback turtles

Waste discharges have the potential to cause marine pollution, which has the potential to impact all marine fauna due to contamination of the marine environment. Waste discharges may directly impact:

- 4 fish species including blue warehou, great white shark, Australian Grayling and whale shark
- · whale species including southern right, blue, sei and fin whales
- marine reptile species including loggerhead, green and leatherback turtles
- 49 avifauna species including 15 species of albatross and 6 species of petrel species

Introduction of invasive marine species may cause direct impacts to marine fauna, for example, through habitat alterations, changes to food sources and introduction of new diseases. Specifically, the introduction of invasive marine species may indirectly impact:

- 4 fish species including blue warehou, great white shark, Australian Grayling and whale shark
- 4 whale species including southern right, blue, sei and fin whales
- 3 marine reptile species including loggerhead, green and leatherback turtles
- 49 avifauna species including 15 species of albatross and 6 species of petrel

Vessel collision with megafauna may result in potential injury or death of marine fauna (direct impact). Generally, slower moving species (turtles and whales) are at a higher risk of vessel strike. Threatened species that may be at risk from vessels undertaking survey work include:

- 4 fish species including blue warehou, great white shark, Australian Grayling and whale shark
- 4 whale species including southern right, blue, sei and fin whales
- 3 marine reptile species including loggerhead, green and leatherback turtles

Entanglement risk from towed and tethered equipment may directly impact marine mammals that transit through the ocean, particularly larger species. Entanglement in towed survey equipment may result in a direct impact through injury or death. However, the likelihood of entanglement is relatively low due to 'taut' lines attached to vessel equipment. Specifically, species at risk of entanglement include:

- 4 fish species including blue warehou, great white shark, Australian Grayling and whale shark
- 4 whale species including southern right, blue, sei and fin whales
- 3 marine reptile species including loggerhead, green and leatherback turtles

Seabed disturbance will be minimised wherever possible, however disturbance of small areas of benthic habitat will be required, which may cause an indirect impact to fisheries values (6 fish species) and other marine fauna that forage in the area, including:

- 4 fish species including blue warehou, great white shark, Australian Grayling and whale shark
- 4 whale species including southern right, blue, sei and fin whales
- 3 marine reptile species including loggerhead, green and leatherback turtles

Diesel spill has the potential impact all marine fauna due to contamination of the marine environment. Specifically, a diesel fuel spill has the potential to impact:

- 4 fish species including blue warehou, great white shark, Australian Grayling and whale shark
- 4 whale species including southern right, blue, sei and fin whales
- 3 marine reptile species including loggerhead, green and leatherback turtles
- 49 avifauna species including 15 species of albatross and 6 species of petrel.

Refer to Table 4-4 on page 67 within **Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials'**, Section 4 for a list of threatened and migratory species identified within investigation area.

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

*

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

An assessment of significant impacts to this MNES has been prepared in accordance with the Significant Impact Guidelines 1.1 prepared by DCCEEW in 2013. Additional details of this assessment are presented in Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 9, pages 126-139.

Geophysical surveys (MBES, SSS) will emit underwater noise but are considered *de minimis* impacts with a low likelihood of disturbance to marine mammals or other marine fauna. Magnetometers do not generate any noise or electro-magnetic fields.

Geophysical surveys (SBP and 2D shallow seismic equipment) will generate noise from boomers, sparkers or mini air-guns. The underwater noise impacts from these types of surveys are not considered significant due to their temporary duration and the short distance to behavioural effects for most marine fauna.

The geophysical survey techniques proposed are unlikely to cause anything other than a negligible impact consequence. This is because the loudest sources of sound will come from the use of mini-air guns with a range of less than or equal to 10 cubic inches each (for a total of up to 40 cubic inches). This is two orders of magnitude smaller than the sources designated as Tier 2 and will have a very low impact consequence to marine mammals (Ruppel et al (2022)).

Refer to the proposed tiering of controlled active marine acoustic sources based on their impact on marine mammals in **Section 7.1, page 102 of Attachment 1**.

Various types of geotechnical sampling will be undertaken. Geotechnical surveys will not result in significant impacts due to seabed disturbance being localised to the immediate area of disturbance.

The proposed investigations have been assessed against the Matters of National Environmental Significance, Significant impact guidelines 1.1 EPBC Act. Refer to Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 9, pages 126-139 for the assessment against the MNES significant impact criteria.

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.

*

The proposed action will not lead to long term decrease in the size of a population of threatened species or important population of species because:

- behavioural disturbance of mammals from noise sources and strike from equipment or vessels will be mitigated under control measures, with surveys undertaken in short duration on vessels that are slow moving.
- whale species are expected to be temporary visitors to the investigation area for foraging and feeding.
- sharks are unlikely to be impacted by survey noise due to their lack of accessory organs of hearing, and any impacts would likely be behavioural only and occur within tens of metres from the vessel source.
- vessel strike and entanglement with marine fauna are unlikely to occur with the control measures in place.
- entanglement of birds in geophysical survey equipment is unlikely.

- reptile species are not known to have nesting areas in the investigation area and are unlikely to be present for long periods of time.
- Geophysical and geotechnical surveys will be of short duration using slow moving vessels.

The investigations will not reduce the area of occupancy of the species because:

- they will be temporary in nature, therefore there will be no lasting reduction in occupancy for any mammal or fish species. Equipment tethered to the seabed will not reduce any area of occupancy for mammals or sharks. Behavioural impacts would be short term.
- boat-based bird surveys will have no impacts on reducing the area of occupancy of bird species.
- the reptile species are migratory and do not have known breeding or habitat areas in the investigation area or Bass Strait. Equipment tethered to the seabed will not reduce any area of occupancy for turtles.

The investigations will not fragment an existing population into two or more populations because:

• surveys will be localised in nature, allowing individuals or groups to move around the vessels and equipment as required, ensuring there are no physical barriers to any species or risk of dividing existing population groups within the Investigation area.

The investigations will not adversely affect habitat critical to the survival of a species because:

- dynamic positioning will only be used during geotechnical activities to keep the vessel on location.
- the investigation area (and the BIAs) is located within a major shipping route passing and there is an existing high baseline of underwater low frequency noise.
- the short duration of underwater noise-generating activities means that habitat critical to the survival of marine mammals will not be adversely affected.
- surveys will be localised, and bird species will be able to forage in other areas of the BIA during the investigations.
- reptile species of concern do not have known habitat or nesting areas in the investigation area.

The investigations will not adversely disrupt the breeding cycle of a population because:

- underwater noise generated during geophysical and geotechnical surveys and the potential for vessel strike is unlikely due to the temporary nature of the surveys and will not disrupt the breeding cycle.
- the investigation area is marine, with the main connection for threatened bird species in the area being feeding at sea to supply food to offspring.
- surveys will be localised, and bird species will be able to forage in surrounding areas during the surveys reducing the area available for foraging by a negligible amount.
- there are no known turtle breeding or nesting areas within the investigation area.

The investigations will not modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline, because:

• they are temporary in nature and physical disturbance of the seabed is localised, low impact and reversible.

The investigations are unlikely to result in the establishment of invasive species or introduce disease that may cause species decline because:

• while potentially using vessels sourced from overseas, vessels will adhere to Australian biosecurity rules and regulations to minimise the risk of introducing pest species or disease.

The investigations will not reduce the extent of the Subtropical and Temperate Coastal Saltmarsh TEC because the proposed activities will be undertaken in the marine environment, not within the TEC.

The low impact and temporary nature of the investigations means the proposed activities are not expected to interfere with the recovery of any threatened species or ecological communities.

With respect to cultural heritage values, the proposed surveys will not be undertaken within the Beagle AMP, therefore no damage to any cultural heritage values within the Beagle AMP will occur.

Within the Commonwealth marine area MNES, it is unlikely that impacts will occur due to intrusive activities such a geotechnical surveys, as known and unknown shipwrecks identified during the geophysical survey will be avoided with a buffer placed around the wreck/s.

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. *

A complete list of all mitigation measures to be implemented is detailed in **Attachment 1**, '**Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 8, pages 113-125.** Mitigation and management measures to be implemented to minimise potential impacts to threatened species and ecological communities include:

Underwater sound

Impacts of underwater sound will be managed/minimised to as low as reasonably practicable (ALARP) by implementing the following parts of EPBC Act Policy Statement 2.1:

- A.2. Trained crew
- A.3.1. Pre-start-up visual observation
- A.3.3. Start-up delay procedure
- A.3.4. Operations procedure
- A.3.6. Night-time and low visibility procedures
- B.1. Marine mammal observers (MMOs).

If a marine mammal is present the following will be undertaken:

- Observation zone (3km radius of vessel) whales will be monitored and the action can continue.
- Low-power zone (1km radius of vessel) if a whale enters or is about to enter the low power zone, the acoustic source will be powered down to the lowest possible setting until the marine mammal has been sighted to leave the zone or 30 minutes has elapsed since last sighting the individual. Dynamic positioning (DP) will be powered down to the lowest possible setting, if safe to do so and there is no risk to vessel or equipment integrity, and no risk to health and safety
- Shutdown zone (500m radius of vessel) if a whale is sighted in or about to enter the shutdown zone, the acoustic source will be shut down immediately. Equipment will not be re-started until such time as the whale has been sighted to leave the zone or 30 minutes has elapsed since light sighting the individual. DP will be shut down, if safe to do so and there is no risk to vessel or equipment integrity or health and safety.

SBP and 2D shallow seismic surveys will not be undertaken within the SRW reproduction BIA during June to August.

Discharge of geotechnical drilling muds

· Low-toxicity water-based muds listed as Gold/Silver or Group E/D products will be used

Light glow from vessels and equipment

- Navigational lights on equipment will be for the purposes of identification only
- All onboard lights will be directed to operational areas rather than overboard
- Lighting will comply with National Light Pollution Guidelines where it is safe to do so and does not pose a safety risk

Atmospheric emissions from vessels and equipment

• Vessels and equipment will be kept in good working order

Seabed disturbance

- Drop down camera and/or video will be used to verify absence of fauna prior to sampling
- Vessel anchoring will occur only when necessary
- Moorings and anchors will not be installed in areas containing sensitive marine habitat and will be removed when no longer required

Routine liquid and solid vessel discharges

- Routine vessel discharges and emissions are managed in line with MARPOL requirements
- Vessels fulfil the requirements of the Australian Ballast Water Management Requirements (v8 or subsequent revisions)
- Hydrocarbon and chemical storage areas will be bunded and drain to the bilge tank, and portable bunds will be used
- Vessel crews will be trained in spill response
- Spill kits will be available and maintained

Fauna entanglement

- Use of MMO on geophysical vessel prior to and during deployment of equipment
- All survey equipment will be removed promptly following its use
- · Recovery devices will be attached to tethered equipment to facilitate recovery in the event of loss
- Streamer recovery devices will be utilised to recover detached geophysical streamers

Vessel strike

Vessels will comply with the Australian National Guidelines for Whale and Dolphin Watching 2017:

- Caution zones (300 m either side of whales and 150 m either side of dolphins)
- No approach zones (100 m either side of whales and 50 m either side of dolphins)
- Do not encourage bow riding if fauna is bow riding do not change course or speed suddenly
- If there is a need to stop, reduce speed gradually.

While transiting through and/or operating in the southern right whale (SRW) reproduction BIA and when operating elsewhere within the marine investigations area, all vessels will operate at a speed of 10 knots or less.

Introduction and spread of invasive species

 Vessels are managed in accordance with the Guidelines for the Control and Management of Ships' Biofouling to Minimise the Transfer of Invasive Aquatic Species.

Diesel spill from accidental vessel spill or collision

No vessel refuelling will be undertaken at sea.

External and navigational vessel lighting is managed in accordance with:

- AMSA navigational directions
- Navigation Act 2012 (Cth), Chapter 3, Part 3 (Seaworthiness of vessels)
- Marine Order 21 (Safety and emergency arrangements)
- Marine Order 30 (Prevention of Collisions)
- Marine Order 91 (Marine pollution prevention oil).

Vessels will have approved Shipboard Marine Pollution Equipment Plans (SMPEPs, or equivalent).

Underwater cultural heritage artefacts or sites

• Consultation is being undertaken and will continue to be undertaken with Traditional Owners to understand the potential for any tangible and intangible Aboriginal heritage values.

- DDC and/or DDV to be used to verify absence of visible UCH sites prior to geotechnical sampling and placement of anchors for tethered or seabed equipment
- Currently mapped UCH sites to be mapped for avoidance in vessel navigational systems
- Currently unmapped UCH sites that may be revealed during the geophysical surveys will be included in the geotechnical vessels' navigation systems, along with exclusion zones, such that these UCH sites are avoided by the geotechnical investigations
- Exclusion zones to be employed surrounding known UCH sites (200 m around shipwrecks, with exclusion zones for any other features discovered during geophysical surveys to be determined based on the feature and its size)
- Any UCH sites disturbed or found will be reported to the relevant body
- Any UCH sites with Aboriginal cultural heritage that are found or disturbed will be discussed with the relevant RAP.

Gippsland Skies will use best endeavours to report any overboard spill to regulatory authorities within two hours of the spill or within two hours of becoming aware of the spill.

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	Common name
No	Yes	Actitis hypoleucos	Common Sandpiper
No	Yes	Apus pacificus	Fork-tailed Swift
No	Yes	Ardenna carneipes	Flesh-footed Shearwater, Fleshy-footed Shearwater

Direct impact	Indirect impact	Species	Common name
No	Yes	Ardenna grisea	Sooty Shearwater
No	Yes	Arenaria interpres	Ruddy Turnstone
No	Yes	Balaenoptera borealis	Sei Whale
Yes	Yes	Balaenoptera musculus	Blue Whale
No	Yes	Balaenoptera physalus	Fin Whale
No	Yes	Calidris acuminata	Sharp-tailed Sandpiper
No	Yes	Calidris alba	Sanderling
No	Yes	Calidris canutus	Red Knot, Knot
No	Yes	Calidris ferruginea	Curlew Sandpiper
No	Yes	Calidris melanotos	Pectoral Sandpiper
No	Yes	Calidris pugnax	Ruff
No	Yes	Calidris ruficollis	Red-necked Stint
No	Yes	Calidris tenuirostris	Great Knot
No	Yes	Caperea marginata	Pygmy Right Whale
Yes	Yes	Carcharodon carcharias	White Shark, Great White Shark
No	Yes	Caretta caretta	Loggerhead Turtle
No	Yes	Charadrius bicinctus	Double-banded Plover
No	Yes	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
No	Yes	Charadrius mongolus	Lesser Sand Plover, Mongolian Plover
No	Yes	Charadrius veredus	Oriental Plover, Oriental Dotterel
No	Yes	Chelonia mydas	Green Turtle
No	Yes	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
No	Yes	Diomedea antipodensis	Antipodean Albatross
No	Yes	Diomedea epomophora	Southern Royal Albatross
No	Yes	Diomedea exulans	Wandering Albatross
No	Yes	Diomedea sanfordi	Northern Royal Albatross

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Eubalaena australis	Southern Right Whale
No	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	Yes	Gallinago megala	Swinhoe's Snipe
No	Yes	Gallinago stenura	Pin-tailed Snipe
No	Yes	Hirundapus caudacutus	White-throated Needletail
No	No	Isurus oxyrinchus	Shortfin Mako, Mako Shark
No	Yes	Lagenorhynchus obscurus	Dusky Dolphin
No	Yes	Lamna nasus	Porbeagle, Mackerel Shark
No	Yes	Limosa lapponica	Bar-tailed Godwit
No	Yes	Limosa limosa	Black-tailed Godwit
No	Yes	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
No	Yes	Macronectes halli	Northern Giant Petrel
No	Yes	Megaptera novaeangliae	Humpback Whale
No	Yes	Motacilla flava	Yellow Wagtail
No	Yes	Myiagra cyanoleuca	Satin Flycatcher
No	Yes	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	Yes	Numenius minutus	Little Curlew, Little Whimbrel
No	Yes	Numenius phaeopus	Whimbrel
No	Yes	Orcinus orca	Killer Whale, Orca
No	Yes	Pandion haliaetus	Osprey
No	Yes	Phoebetria fusca	Sooty Albatross
No	Yes	Pluvialis fulva	Pacific Golden Plover
No	Yes	Pluvialis squatarola	Grey Plover
No	No	Rhincodon typus	Whale Shark
No	Yes	Rhipidura rufifrons	Rufous Fantail
No	Yes	Sternula albifrons	Little Tern

Direct impact	Indirect impact	Species	Common name
No	Yes	Thalassarche bulleri	Buller's Albatross, Pacific Albatross
No	Yes	Thalassarche carteri	Indian Yellow-nosed Albatross
No	Yes	Thalassarche cauta	Shy Albatross
No	Yes	Thalassarche chrysostoma	Grey-headed Albatross
No	Yes	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	Yes	Thalassarche melanophris	Black-browed Albatross
No	Yes	Thalassarche salvini	Salvin's Albatross
No	Yes	Thalassarche steadi	White-capped Albatross
No	Yes	Tringa brevipes	Grey-tailed Tattler
No	Yes	Tringa glareola	Wood Sandpiper
No	Yes	Tringa nebularia	Common Greenshank, Greenshank
No	Yes	Tringa stagnatilis	Marsh Sandpiper, Little Greenshank
No	Yes	Xenus cinereus	Terek Sandpiper

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. *

The following definitions are provided under the *Matters of National Environmental Significance – Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999* (DoE, 2013):

- Significant impact an impact which is important, notable, or of consequence, having regard to its context of intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment, which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts.
- When is a significant impact likely to be likely, it is not necessary for a significant impact to have a greater than 50% chance of it happening; it is sufficient if a significant impact on the environment is a real or not remote chance or possibility.

Impacts can be either direct or indirect. Indirect impacts can include:

- 'Downstream' or 'downwind' impacts such as impacts on reefs from sediment or chemicals which are discharged
- 'Upstream' impacts such as impacts associated with inputs which are used to undertake the action
- 'Facilitated' impacts which result from further actions (including actions by third parties) which are made possible or facilitated by the action.

A Protected Matters Search of the referral area (**Attachment 1**) identified the following migratory threatened species as potentially occurring within the referral area:

- **Cetaceans** migratory species listed in the investigation area are the humpback, killer, southern right, pygmy blue, sei and fin whales and the dusky dolphin. The investigation area overlaps the southern right whale and blue whale BIAs.
- **Marine turtles** migratory species listed in the investigation area are the loggerhead, green and leatherback turtles. There are no BIAs for these species in Bass Strait, nor nesting beaches.
- **Fish** migratory species listed in the investigation area (excluding species that primarily inhabit freshwater environments) are mackerel shark, great white shark, mako shark, and whale shark. The referral area overlaps the distribution and breeding BIAs for the great white shark.
- **Seabirds and shorebirds –** 37 migratory avian species are listed in the investigation area and foraging BIAs for ten bird species overlap the investigation area.

The potential impacts to these MNES as a result of the proposed action are summarised below:

Underwater noise from the survey vessels, geophysical and geotechnical survey acoustic equipment and drilling (boreholes) may cause localised and temporary behavioural disturbance to noise sensitive marine fauna including cetaceans, fish, and reptiles. Specifically, underwater sound may directly impact:

- 4 migratory fish species including mackerel shark, great white shark, mako shark, and whale shark
- 8 migratory cetacean species including humpback, killer, southern right, pygmy right, pygmy blue, sei and fin whales and the dusky dolphin
- 3 migratory marine reptile species including loggerhead, green and leatherback turtles

Light glow may act as an attractant to light-sensitive species (e.g., seabirds, turtles), in turn affecting predator-prey dynamics (due to attraction to or disorientation from light). Continuous lighting may result in localised alterations to normal marine fauna behaviours. Specifically light glow may impact:

- 4 migratory fish species including mackerel shark, great white shark, mako shark, and whale shark
- 3 migratory marine reptile species including loggerhead, green and leatherback turtles
- 37 migratory avifauna species

Atmospheric emissions from diesel fuel combustion may lead to localised and temporary decrease in air quality due to gaseous emissions. Specifically atmospheric emissions may indirectly impact:

• 37 avifauna species

Routine vessel discharges may cause marine pollution, which has the potential to impact all marine fauna due to contamination of the marine environment. Specifically, routine vessel discharges may directly impact:

- 4 migratory fish species including mackerel shark, great white shark, mako shark, and whale shark
- 8 migratory cetacean species including humpback, killer, southern right, pygmy right, pygmy blue, sei and fin whales and the dusky dolphin
- 3 migratory marine reptile species including loggerhead, green and leatherback turtles

Waste discharges have the potential to cause marine pollution, which has the potential to impact all marine fauna due to contamination of the marine environment. Waste discharges may directly impact:

• migratory fish species including mackerel shark, great white shark, mako shark, and whale shark

- 8 migratory cetacean species including humpback, killer, southern right, pygmy right, pygmy blue, sei and fin whales and the dusky dolphin
- 3 migratory marine reptile species including loggerhead, green and leatherback turtles
- 37 migratory avifauna species

Introduction of invasive marine species may cause direct impacts to marine fauna, for example, through habitat alterations, changes to food sources and introduction of new diseases. Specifically, the introduction of invasive marine species may indirectly impact:

- 4 migratory fish species including mackerel shark, great white shark, mako shark, and whale shark
- 8 migratory cetacean species including humpback, killer, southern right, pygmy right, pygmy blue, sei and fin whales and the dusky dolphin
- 3 migratory marine reptile species including loggerhead, green and leatherback turtles
- 37 migratory avifauna species

Vessel collision with megafauna may result in potential injury or death of marine fauna (direct impact). Generally, slower moving species (turtles and whales) are at a higher risk of vessel strike. Threatened species that may be at risk from vessels undertaking survey work include:

- 4 migratory fish species including mackerel shark, great white shark, mako shark, and whale shark
- 8migratory cetacean species including humpback, killer, southern right, pygmy right, pygmy blue, sei and fin whales and the dusky dolphin
- 3 migratory marine reptile species including loggerhead, green and leatherback turtles.

Entanglement risk from towed and tethered equipment may directly impact marine mammals that transit through the ocean, particularly larger species. Entanglement in towed survey equipment may result in a direct impact through injury or death. However, the likelihood of entanglement is relatively low due to 'taut' lines attached to vessel equipment. Specifically, species at risk of entanglement include:

- 4 migratory fish species including mackerel shark, great white shark, mako shark, and whale shark
- 8migratory cetacean species including humpback, killer, southern right, pygmy right, pygmy blue, sei and fin whales and the dusky dolphin
- 3 migratory marine reptile species including loggerhead, green and leatherback turtles.

Seabed disturbance will be minimised wherever possible, however disturbance of small areas of benthic habitat will be required, which may cause an indirect impact to fisheries values (6 fish species) and other marine fauna that forage in the area, including:

- 4 migratory fish species including mackerel shark, great white shark, mako shark, and whale shark
- 8 migratory cetacean species including humpback, killer, southern right, pygmy right, pygmy blue, sei and fin whales and the dusky dolphin
- 3 migratory marine reptile species including loggerhead, green and leatherback turtles.

Diesel spill has the potential impact all marine fauna due to contamination of the marine environment. Specifically, a diesel fuel spill has the potential to impact:

- 4 migratory fish species including mackerel shark, great white shark, mako shark, and whale shark
- 8 migratory cetacean species including humpback, killer, southern right, pygmy right, pygmy blue, sei and fin whales and the dusky dolphin
- 3 migratory marine reptile species including loggerhead, green and leatherback turtles
- 37 migratory avifauna species.

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. *

An assessment of significant impacts to this MNES has been prepared in accordance with the Significant Impact Guidelines 1.1 prepared by DCCEEW in 2013. Additional details of this assessment are presented in Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 9, pages 126-139.

Underwater noise generated by geophysical survey equipment (other than mini-airguns used for 2D shallow seismic surveying) is considered to have *de minimis* impacts with a low likelihood of disturbance to migratory marine mammals, reptiles or fish. The type of mini-airguns used for 2D shallow seismic surveys generally only result in behavioural disturbance to sensitive species up to tens of metres from the sound source. The geophysical surveys will be temporary in nature in any one location (i.e., the vessel will be constantly moving) and 2D shallow seismic surveying is not expected to take place in the proposed cable corridor unless site conditions found during the initial survey require mini air guns/similar to be used to obtain good quality data.

Refer to the proposed tiering of controlled active marine acoustic sources based on their impact on marine mammals in **Section 7.1, pages 102 to 103, of Attachment 1**.

Boat-based seabird observational surveys along pre-defined transects for species richness and relative abundance. There is the potential that up to one hour may be spent chumming at a pre-determined point within the investigation area to attract any species from the broader area (i.e. seabirds using the area but may not have been detected during transect surveys). No significant impact has been determined in accordance with EPBC Act Policy Statement 3.21 - Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species, based on the thresholds of significant impacts on migratory shorebirds which includes loss and degradation of habitat, increased disturbance of habitat, and direct mortality of birds leading to a substantial reduction in migratory numbers.

Refer to Section **3.6.4**, **pages 46-47 of Attachment 1** for further details of the survey methodologies and the sampling framework for migratory seabirds and shorebirds.

Refer to **Section 3.6.5, pages 47-49 of Attachment 1** for further details of the survey methodologies and the sampling framework for marine megafauna.

Adherence to the Australian National Guidelines for Whale and Dolphin Watching 2017 will ensure no disturbance to megafauna will result from the investigations.

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.

*

The investigations will not substantially modify, destroy or isolate an area of important habitat for a migratory species because:

- the proposed activities will be localised and temporary, with marine mammals and fish able to move around the survey equipment as required.
- control measures will be employed to ensure safe movement of cetaceans sighted in the area
- the modification of habitat for migratory fish (e.g., disturbance of seabed sediments for equipment anchoring or geotechnical sampling) will be extremely localised and reversible in the short term.
- the investigation area and surrounding areas of Bass Strait do not contain any breeding or nesting areas for migratory turtles.

The investigations are unlikely to result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species because:

• the proposed activities, while potentially using vessels sourced from overseas, will adhere to relevant biosecurity rules and regulations to minimise potential for introduction of pest species into the marine environment.

The investigations are unlikely to seriously disrupt the lifecycle of an ecologically significant proportion of the population of a migratory species because:

- only the southern right and pygmy blue whales have mapped BIAs within the investigation area.
- other migratory whale species are expected to only pass through the area as temporary foraging visitors.
- low frequency noise from vessels and DP is unlikely to cause permanent threshold shift or temporary threshold shift in low frequency cetaceans (southern right and pygmy blue whales).
- the southern right and pygmy blue whales are migratory and not resident in the investigation area.
- investigations will be localised, and bird species will be able to forage in surrounding areas during all activities.
- investigation occurring within the BIA for great white sharks will be temporary and localised, occupying only a small portion of the foraging and nursery BIA area. Sharks are also not as susceptible to underwater noise as marine mammals due to the absence of a swim bladder.
- the other shark species identified do not have known breeding areas in the investigation area, therefore no impact to their lifecycle will occur.
- the identified migratory turtle species do not have known breeding or nesting areas within the investigation area or Bass Strait.

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. *

Underwater noise from geophysical surveying using MBES, SSS or magnetometer is considered *de minimis*, with risk levels acceptable and no mitigation measures proposed.

The investigations have however been designed to avoid and minimise impacts to migratory species for survey activities which may impact result in an impact. The avoidance and mitigation measures for migratory species are the same as those for threatened species, as outlined in Section 4.1.4.10 of this referral.

For more details on the proposed control measures for the investigations, refer to Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 8, pages 114-125.

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.

The Investigations do 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.

Direct impact	Indirect impact	Commonwealth marine area
No	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. *

The investigations have the potential to cause minor direct and indirect impacts on air, water and sediment quality, seabed habitat and marine species. However, all impacts are predicted to be temporary, localised and insignificant.

Potential impacts to the Commonwealth Marine Area may include:

- Underwater noise from geophysical and geotechnical investigations causing disturbance to marine fauna. The mitigations and regulations in place to minimise impacts of vessels and underwater noise that apply to all cetaceans are also likely to reduce the risk of other species, such as pinnipeds.
- Moving vessels/equipment strike that disturbs or harms marine fauna. This risk is very low compared 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.
- Marine fauna become entrapped or tethered in instrumentation or other floating equipment.
- Potential but unlikely impacts to air quality or water quality as a result of emissions and unplanned discharge of chemicals or oils from spills
- Temporary and localised behavioural disturbance to seabirds from vessel light emissions potential impact will be limited to the immediate area around vessels and be.
- Low risk of damage to known and unknown heritage values.
- Low risk of introduction and establishment of invasive marine pests from vessels and/or equipment to the marine environment.
- Localised loss of habitat from collection methods (such as sediment sampling and boring- however, significant efforts will be made to mitigate harm to ecosystems).

There is expected to be no significant impact on any MNES, marine species or communities, nor the recovery, breeding, feeding, critical habitat, migratory behaviours of these species, populations or ecosystems.

Other than underwater noise generated by the geophysical survey (and to a lesser extent the geotechnical investigations) and seabed disturbance caused by the geotechnical investigations, the activity is like any other vessel-based activity in the region. As such, the vessels will operate under MARPOL regulations, the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*, relevant AMSA Marine Orders, MARPOL *Biosecurity Act 2015* and National Biofouling Management Guidance (Commonwealth of Australia, 2009).

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

*

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

An assessment of significant impacts to Commonwealth Marine Areas has been undertaken in accordance with the Significant Impact Guidelines 1.1 prepared by DCCEEW in 2013, and no significant impacts to MNES have been identified. Additional details of this assessment are presented in **Attachment 1 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials'**, **Section 9**, **pages 126-139**.

In summary, the investigations are low impact in nature and of short duration. They will not result in a substantial change to the population of a marine species, important habitat, water quality or heritage values. Any indirect impacts can be readily addressed through standard mitigation measures. Following the implementation of mitigation measures, all the identified risks to Commonwealth Marine Areas are expected to be routinely managed. As a result, any identified impacts are not expected to be significant.

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.

The investigations will be undertaken in the Bass Strait and open sea. There is extensive use of vessels in the area of Investigation for a variety of maritime uses and extractive industries such as shipping, fisheries and the oil and gas exploration and production.

The investigations are unlikely to result in a known or potential pest species becoming established in the Commonwealth marine area because:

- vessels sourced from overseas will adhere to relevant biosecurity rules and regulations to ensure introduction of pest species into the marine environment does not occur.
- Survey activities will not occur within the Beagle AMP.

The investigations are unlikely to modify, destroy, fragment, isolate or disturb an important or substantial area of habitat such that an adverse impact on marine ecosystem functioning or integrity in a Commonwealth marine area, including the Beagle Australian Marine Park because:

- the proposed surveys will not occur within the Beagle AMP.
- the noise profiles of geophysical and geotechnical surveys will be temporary (only during surveys) and to the functioning of the marine ecosystems are assessed as negligible.

The investigations are unlikely to have a substantial adverse effect on a population of a marine species or cetacean including its life cycle and spatial distribution because:

• of the temporary timeframe over which surveys will occur and the control measures in place to prevent vessel strike, entanglement, and noise impacts.

The investigations are unlikely to result in a substantial change in air quality or water quality (including temperature) which may adversely impact on biodiversity, ecological integrity, social amenity or human health because:

• the vessel-based investigations will result in routine discharges and emissions to the ocean and the atmosphere that will have a negligible impact consequence on biodiversity, ecological integrity, social amenity, or human health.

The investigations are unlikely to result in persistent organic chemicals, heavy metals, or other potentially harmful chemicals accumulating in the marine environment such that biodiversity, ecological integrity, social amenity, or human health may be adversely affected because:

• the proposed survey activities will be not introducing any persistent organic chemicals, heavy metals, or other potentially harmful chemicals to the marine environment or the Beagle AMP.

The investigations are unlikely to have a substantial adverse impact on heritage values of the Commonwealth marine area, including damage or destruction of an historic shipwreck because:

• the proposed surveys will not be undertaken in proximity to cultural values.

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. *

Vessels will be in operation during the investigations and have the potential to create water pollution from onboard waste, engine and equipment cooling, bilge water and hydrocarbon spills. Borehole drilling also has the potential to mobilise sediment and other contaminants at the seabed as well as potentially contribute drilling fluids to the marine environment. Discharges of these contaminants from vessels may contribute to temporary and localised areas of reduced water quality.

The avoidance and mitigation measures relevant to the Commonwealth marine area are the same as those for threatened species, as outlined in Section 4.1.4.10 of this referral.

For more details on the proposed control measures for the investigations, refer to **Attachment 1** 'Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials', Section 8, pages 113-125.

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

No offsets are proposed.

4.1.8.1 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 investigations are a significant distance away (about 1,800 km) from 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 investigations do not involve large coal mining or coal seam gas exploration or extraction.

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.

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.

The investigations will only be undertaken in the marine environment.

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.

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.

The investigations will not be undertaken overseas.

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. *

The investigations are necessary to further develop and assess the feasibility of the Gippsland Skies Offshore Wind Project and will be undertaken using survey methods and equipment based on established industry standards and in line with regulatory guidelines for data gathering required to evaluate the potential for environmental impacts.

No alternative exists for the FLA, as it is the site awarded to Gippsland Skies under a merit based feasibility licence application process. This is the area which will be surveyed extensively to document the physical and environmental conditions and to determine the optimum location of the wind turbines and associated offshore infrastructure.

Currently, no alternative exists to the proposed action being undertaken in the proposed cable corridor. . VicGrid has nominated an onshore connection point near Seaspray for offshore wind farms in Gippsland, which necessitates investigation of the proposed cable corridor. Additional cable corridor marine survey investigations may form the subject of a future referral process by Gippsland Skies, including if a further onshore connection point(s) are identified by VicGrid for offshore wind.

Alternative timeframes that significantly depart from the intended survey timeframes outlined below are not considered possible due to the sequential nature and objective of each survey campaign. For example:

- Biological, oceanography, and habitat surveys are required to commence critical baseline data collection, which require 24 months of data for marine related surveys. This data is required to complete the necessary environmental impact assessments for both State and Commonwealth regulatory approvals.
- Geophysical surveys are the first step in investigating the seabed conditions and shallow geology of the investigation area and are required to measure the engineering properties of the seabed to provide input to the design of foundation structures.
- Geotechnical surveys will collect detailed information on the physical properties of the seabed and the underlying shallow sediments to supplement and validate the data gathered from the geophysical survey.

Combined, the geophysical surveys and the geotechnical investigations provide key data to assess feasibility and support design development and must be undertaken in a coordinated manner to reduce the duration of vessels in operation and surveying to the extent practicable.

It is the intention of Gippsland Skies to commence the investigations as soon as practicable following a decision from the DCCEEW on this Referral. The expected commencement dates of the first of the investigations forming part of this Referral would be around Quarter 4 2024/Q1 2025.

Once commenced, the surveys will need to be delivered in separate and sequential survey campaigns, as described in Section 1.2.1.

Alternative timeframes (i.e., commencement significantly beyond late 2024) have not been considered due to the need to commence baseline data gathering for the purpose of informing the future environmental impact assessments. The biological, oceanography, and habitat surveys are also anticipated to commence within the earliest available timeframe following a decision from the DCCEEW to achieve regulatory approvals in 2027.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Туре	Name	Date	Sens	itivi G onfidenc
#1.	Docum	enAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf Marine survey investigations assessment	10/09/2	20 24 6	High

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

	Туре	Name	Date	Sensiti	vi G onfidence
#1.	Docum	enAttachment 2 HSE Policy.pdf Gippsland Skies Health, Safety, Environment and Quality (HSEQ) Policy	22/04/2	0 2Nf o	High

2.2.5 Tenure of the action area relevant to the project area

	Туре	Name	Date	Sens	itivi G onfiden
#1.	Docum	enAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf	09/09/2	20 204 0	High
		Marine survey investigations assessment			

3.1.1 Current condition of the project area's environment

	Type Name	Date	Sensitivi G onfidence
#1	Document		

3.1.2 Existing or proposed uses for the project area

	Туре	Name	Date	Sens	itivi G onfidenc
#1.	Docum	enAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf	09/09/2	20 2N4 0	High
		Marine survey investigations assessment			

3.2.1 Flora and fauna within the affected area

	Type Name	Date Sensitivi G o	nfidence
#1.	DocumerAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf Marine survey investigations assessment	: 09/09/20 2N o Hig	ıh

3.3.1 Commonwealth heritage places overseas or other places that apply to the project area

	Туре	Name	Date	Sensi	itivi G onfidenc
#1.	Docum	erAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf Marine survey investigations assessment	10/09/2	20 2% D	High

3.3.2 Indigenous heritage values that apply to the project area

	Туре	Name	Date	Sens	itivi G onfidence
#1.	Docum	enAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf Marine survey investigations assessment	10/09/2	20 24 0	High

4.1.3.6 (Ramsar Wetland) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Туре	Name	Date	Sensi	itivi G onfidence
#1.	Docume	enAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf Marine survey investigations assessment	10/09/2	20 2\4 0	High

4.1.3.9 (Ramsar Wetland) Why you do not think your proposed action is a controlled action

	Туре	Name	Date	Sens	itivi G onfidence
#1.	Docum	erAttachment 1 Gippsland Skies Offshore Wind Project	10/09/2	20 2% b	High
		EPBC Act Referral Supporting Materials.pdf			
		Marine survey investigations assessment			

	Туре	Name	Date	Sensi	tivi G onfidence
#1.	Docum	er A ttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf Marine survey investigations assessment	10/09/2	0 2\4 0	High

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

	Туре	Name	Date	Sensi	tivi G onfidenc
#1.	Docume	enAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf Marine survey investigations assessment	10/09/2	0 2% 10	High

4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Туре	Name	Date	Sens	itivi G onfidence
#1.	Docum	enAttachment 1 Gippsland Skies Offshore Wind Project	10/09/2	20 2N/ b	High
		EPBC Act Referral Supporting Materials.pdf			
		Marine survey investigations assessment			

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

	Туре	Name	Date	Sensiti	vi G onfidence
#1.	Docum	enAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf Marine survey investigations assessment	10/09/2	0 2N4 0	High

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

	Туре	Name	Date	Sensi	itivi G onfidenc
#1.	Docume	enAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf	10/09/2	20 2N4 5	High

4.1.5.10 (Migratory Species) Avoidance or mitigation measures proposed for this action

	Туре	Name	Date	Sensi	itivi G onfidence
#1.	#1. DocumerAttachment 1 Gippsland Skies Offshore Wind Project		10/09/2	20 2\4 0	High
		Marine survey investigations assessment			

4.1.7.10 (Commonwealth Marine Area) Avoidance or mitigation measures proposed for this action

	Type Name	Date	Sensi	tivi G onfidence
#1.	DocumerAttachment 1 Gippsland Skies Offshore Wind Project EPBC Act Referral Supporting Materials.pdf	10/09/2	0 2N4 0	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	20093846925
Organisation name	AECOM AUSTRALIA PTY LTD
Organisation address	Collins Square, Level 10, Tower Two 727 Collins Street, Melbourne, VIC 3008
Representative's name	David Hyett
Representative's job title	Industry Director- Environment
Phone	0419421246
Email	maggie.grigg@aecom.com
Address	Collins Square, Level 10, Tower Two 727 Collins Street, Melbourne, VIC 3008

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, **David Hyett of AECOM 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	11666794369
Organisation name	GIPPSLAND SKIES PTY LTD
Organisation address	Level 10, Tower 4, 727 Collins Street, Docklands VIC 3008
Representative's name	Rory van Weerdenburg
Representative's job title	Project Director
Phone	+47 904 76 158
Email	rory.vanweerdenburg@gippslandskies.com.au
Address	Level 10, Tower 4, 727 Collins Street, Docklands VIC 3008

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, Rory van Weerdenburg of GIPPSLAND SKIES PTY LTD, 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, **Rory van Weerdenburg of GIPPSLAND SKIES PTY LTD**, 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. *