Blue Mackerel Offshore Wind Project

Application Number: **03229** Commencement Date: **24/11/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Blue Mackerel Offshore Wind Project

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 *

01/01/2030

1.1.4 Estimated end date *

31/12/2073

1.2 Proposed Action details

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

The proposed action includes construction, operation and decommissioning of a one GW wind farm within feasibility licence area (FL-001) in the Gippsland, Victoria declared offshore wind area (OEI-01-2022). The wind farm will connect to Victoria's electricity network via VicGrid's proposed connection hub near Giffard. The Project's main components are described below and general locations shown in **Att 1 Figure 1**:

Offshore wind farm:

- Up to 70 offshore wind turbines within the 163 km2 feasibility licence area depending on the turbine type and generating capacity. Each turbine will have a capacity ranging from 15 to 23 MW to achieve a nominal capacity of one GW. The height of the upper blade tip will be between 266 m and 327 m above mean sea level. The foundations may include jackets, monopiles, gravity-based foundations or a combination of these.
- Network of 66 kV or 132 kV high voltage alternating current (HVAC) subsea inter-array cables to connect the turbines to each other or to offshore substation/s. Cables will be buried approximately 0.5 to 2 m below the seabed or armoured (e.g. rockbags or mattresses) for protection.
- One or two offshore substation/s to transform the electricity from the inter-array cables to 275 kV for export to the grid. The substation platforms comprise electrical equipment such as transformers, generators, switchgear, batteries, fire system and facilities for operational and maintenance activities. The indicative platform dimensions (if two are used) are 40 m wide, 30 m depth and 36 m height. The underside of the platform is likely around 17 m above sea level.

Offshore export cables:

- Two 275 kV HVAC cables will connect the wind farm to the shore crossing to facilitate export of generated renewable energy to the grid. If two offshore substations are constructed they will have one export cable each leading from them. If one offshore substation is constructed, two export cables will lead from it. Each cable construction corridor is expected to be around 12 to 20 km in length (subject to change depending on final design) and approximately 30 m wide (to allow for micro-siting). The disturbance footprint is an indicative 10 m width. Cables will be buried approximately 0.5 to 2 m below the seabed or armoured (e.g. rockbags or mattresses) for protection.

Onshore works:

- Shore crossing: Potential locations at McGaurans Beach are under consideration. The HVAC export cables (2 x 275 kV circuits, each circuit comprising a single 3 core 275 kV cable) will be pulled from approximately 600 to 1200 m offshore (depending on water depths) to an onshore jointing pit which connects the offshore and onshore cables. The jointing pit site(s) will be approximately 10 by 3 m for each cable, plus link boxes (1 by 1 m) for each cable.
- Cable corridor: onshore cables (2 x 275 kV circuits, each circuit comprising 3 single core cables) from the jointing pit. The cables will be between 6 and 10 km in length and will transmit electricity from the shore crossing location to VicGrid's proposed connection hub near Giffard where the electricity would be transformed to 500 kV. The cables will be installed within an onshore cable construction corridor, approximately 50 m wide (including trench area, access road and buffer). During operation, the easement will be approximately 30 m wide. Cables will be installed in lengths and connected with sub-surface jointing bays. This is likely to include an indicative 18 to 28 joint bays of an indicative 10 m length by 3 m width and 2m pit depth.
- Onshore substation: a new 275 kV / 500 kV substation will be developed within VicGrid's proposed connection hub. VicGrid's proposed connection hub will provide future offshore wind energy facilities with a shared connection point to access the grid. The proposed onshore substation is included in VicGrid's *Gippsland Offshore Wind Transmission 2GW Project* (EPBC 2024/09980) assessment and so is excluded from this referral.
- Ancillary components: Temporary construction areas will be required (e.g., laydown areas, site offices and access tracks). The need for any relocation of services/utilities will be determined through route selection and in consultation with the relevant providers. No major road upgrades are expected to be

required. Depending on cable route selection, minor road upgrade works such as road widening and resurfacing may be required for construction vehicles. Road upgrades related to construction of the onshore substation will be included in VicGrid's *Gippsland Offshore Wind Transmission 2GW Project* (EPBC 2024/09980) and are therefore excluded from the scope of this referral.

KEY CONSTRUCTION ACTIVITIES

Construction of the Project is expected to occur over a two-to-three-year period.

Offshore components will typically be constructed continuously (24 hours per day, 7 days a week) and include:

- Minor seabed preparation if required, such as removal of any hazards identified (e.g., UXO, small rocks and boulders). Where practicable the alignment will be micro-sited to avoid these. Minor clearance/levelling may be required at the exit point(s) of the shore crossing.
- Subsea cables will be laid between turbines and the offshore substation (inter-array cables) and from the offshore substation/s to the grid onshore (export cables). The cables are rolled out from specialised cable-laying vessels. These vessels may use dynamic positioning systems to stay on course on the pre-determined route when laying the cables. The cable-laying vessels are equipped with ploughs, jet sleds or a hybrid trencher which bury or cut a path for the cable in the seabed. Where underlying rock prevents cables from being buried, protection solutions like rockbags or mattresses may be used to protect the cable.
- Infrastructure required for the offshore wind farm will be loaded onto a heavy lift vessel, installation vessel or barge, which will travel to the offshore wind farm from the construction port. If monopiles or jackets are used as foundations for turbines and offshore substation/s, these will be driven into the seabed using a hydraulic hammer, drilling, vibro-piling (where vibration rather than hammer strikes are used to drive in the monopile) or jetting (using high-pressure water jets to lower the resistance of the surrounding sediment, allowing the monopile to sink into the seabed). Gravity-based foundations are typically constructed onshore and towed or floated to the offshore location, before being sunk to the seabed. Structures will be erected using cranes and grouted, bolted or welded in place. Scour protection and cable protection systems are likely to be used around the base of the foundations.
- Testing and commissioning of the wind farm will be undertaken to confirm successful installation and check the Project performs in line with design requirements.

Onshore components will typically be constructed within normal working hours where practicable, though some out of hours works may be required. Trenchless construction (horizontal directional drilling (HDD) or direct pipe) would be 24 hours per day. Key onshore construction activities include:

- Site preparation (i.e. clearing, levelling and vegetation removal) at temporary construction areas and the onshore cable construction corridor. If required, existing roads will be upgraded and/or access tracks constructed for material and plant delivery for onshore components.
- A work site will be established for the shore crossing construction and include space to accommodate plant and machinery for pulling the cable through the drill hole from offshore to onshore, water storage and a drilling fluid recycling unit, vehicle and equipment storage. The work site is estimated as 100 by 100 m in area (including hardstand area and allowance for storage of vegetation and spoil). The indicative setback from the high-water mark is around 200 m. The cable conduits will be pulled or pushed into the trenchless crossings and will require an onshore stringing and fabrication area if thrust in from onshore. This area will be confined to the onshore cable route where practical to minimise the works footprint.
- The onshore cable construction corridor is expected to be up to 50 m in width. Trenching is the primary construction method, with HDD or direct pipe methods utilised in areas of high environmental or cultural heritage sensitivity as well as when crossing existing roads and infrastructure where practicable.
- Site reinstatement and site rehabilitation will be carried out to a condition consistent with existing conditions and regulatory requirements or as agreed with landholders.

KEY OPERATIONAL ACTIVITIES

The Project will operate for up to 40 years. Key operations and maintenance activities include:

- Ongoing operation and monitoring of the turbines.
- Routine inspections, testing and maintenance of offshore infrastructure or at the operations and maintenance port as required. Activities may include maintenance activities such as blade repair/replacement.
- Use and maintenance of onshore infrastructure and easement, including vegetation management.
- Ongoing investigations and surveys if required (e.g. environmental, geotechnical).
- Repowering (subject to any required regulatory approvals) at the end of turbines' design life, involving replacement with new turbines on existing foundations, thereby extending design life further.

KEY DECOMMISSIONING ACTIVITIES

Decommissioning activities will be similar in type and scale to construction and will be reviewed in discussion with the transmission system operator and regulator at the time and considering any other existing or proposed future use. Decommissioning may include:

- Removing structures above the seabed
- Leaving buried cables and subsea foundations below the mudline in situ to avoid the environmental disturbance caused by removal
- Keeping underground transmission cables buried, with the cable ends cut and sealed
- Rehabilitation.

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)?

No

1.2.4 Related referral(s)

EPBC Number	Project Title
2024/09980	Gippsland Offshore Wind Transmission 2GW Project

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

The Victorian government is pursuing a range of projects to support the State's commitment to greenhouse gas reduction, including net-zero emissions and offshore wind energy generation targets for the State. This includes VicGrid's Gippsland Offshore Wind Transmission 2 GW project (EPBC 2024/09980) and the 2025 Victorian Renewable Energy Terminal (EPBC 2025/10224). Whilst the Project would interface with these projects, they are being separately pursued by the Victorian government to support the broader Victorian offshore wind industry and are excluded from the scope of this referral.

Blue Mackerel North Pty Ltd (BMN)'s proposed onshore substation would be located within VicGrid's proposed connection hub, with activities and potential impacts associated with this substation to be assessed by VicGrid as part of the Gippsland Offshore Wind Transmission 2 GW project (EPBC 2024/09980). BMN's onshore substation is therefore excluded from the scope of this referral.

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

Legislative requirements applicable to the Commonwealth and State jurisdictions are outlined below.

Primary approvals and/or assessments

Commonwealth

- *Environment Protection and Biodiversity Conservation Act 1999* (Cwth) (EPBC Act): Referral and if determined a controlled action by the Minister for the Environment and Water due to potential significant impacts to matters of national environmental significance (MNES), assessment and approval under this Act. The area being referred includes Project activities within both the Victorian and Commonwealth jurisdictions including the onshore and offshore environment.
- *Offshore Electricity Infrastructure Act 2021* (Cwth) (OEI Act): Licenses and associated management plans. This includes a feasibility licence (already granted), commercial licence, transmission and infrastructure licence, design notification and OEI management plan/s.

State

- *Aboriginal Heritage Act 2006* (Vic) (AH Act): Approval through a Cultural Heritage Management Plan (CHMP)
- *Marine and Coastal Act 2018* (Vic) (MACA): Consent for use and development and to undertake onshore and offshore works on marine and coastal Crown land
- *Planning and Environment Act 1987* (Vic) (P&E Act): Approval for the use and development of land through a Planning Scheme Amendment
- *Environment Effects Act 1978* (Vic) (EE Act): Referral and if determined by the Minister for Planning, assessment under this Act. This will apply to Project components within state jurisdiction (i.e., Victorian coastal waters and onshore environment).

Other approvals, leases and licenses

Other approvals, leases and licenses that may be required depending on the final siting and design of the Project infrastructure and the construction methodology include:

- *Catchment and Land Protection Act 1994* (Vic): Permit for removal of soil that is likely to contain any part of a noxious weed
- *Country Fire Authority Act 1958* (Vic): Permit for specific activities involving fire during the Fire Danger Period or on days of Total Fire Ban
- *Crown Land (Reserves) Act 1978* (Vic): Lease or Licence to occupy or use Crown land
- *Electricity Industry Act 2000* (Vic): A licence is required to generate, transmit, supply, or sell electricity in Victoria.
- *Electricity Safety Act 1998* (Vic): Authorisation from the entity that controls an electric line that is intersected by the Project
- *Fisheries Act 1995* (Vic): A permit or licence for the capture, handling, or translocation of fish.
- *Flora and Fauna Guarantee Act 1988* (Vic): Permit to take or remove FFG Act listed threatened species or communities
- *Environment Protection Act 2017* (Vic): General discharge permission for ballast water. Under the Act BMN is also required to proactively identify and manage environmental risk (general environmental duty).
- *Environmental Protection (Sea Dumping) Act 1981* (Cwth): Rock placement on the seabed in Commonwealth waters may trigger permit requirements
- *Heritage Act 2017* (Vic): If discovered, a permit or consent will be required prior to commencing any works that may disturb, damage or modify any of these protected items or sites (including underwater cultural heritage) in Victoria
- *Land Act 1958* (Vic): Licence to occupy or use unreserved Crown land
- *Local Government Act 1989* (Vic): Permits may be required to be granted by Wellington Shire Council under local laws

- *Marine Safety Act 2010* (Vic): Notice to mariners
- *Road Management Act 2004* (Vic): Permit for works near or across roadways, or requiring a modified use of the roadway
- *Underwater Cultural Heritage Act 2018* (Cwth): Permit for entry into a protected zone or to impact underwater cultural heritage in Commonwealth waters. Note the only protected zone is associated with the SS Glenelg located in Commonwealth waters, which would be avoided. No underwater cultural heritage is currently known for Victorian coastal waters. A permit under this Act will only be required if heritage is discovered. An Underwater Cultural Heritage Management Plan will be required in relation to all identified underwater cultural heritage (including the SS Glenelg, noting works will be in the vicinity of the protection zone but not within the protection zone).
- *Water Act 1989* (Vic): Permit to complete works on or near waterways and/or License to Take and Use water from waterways or groundwater (if required)
- *Wildlife Act 1994* (Vic): Authority to Control Wildlife permit.

The requirement for these other approvals will be determined as Project design development and the approval process progresses and will be informed by the results of environmental surveys and assessments and agency consultation.

Other relevant legislation that the Project must comply with:

- *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth)
- *Airports Act 1996* (Cth) and Airports (Protection of Airspace) Regulations 1996
- *Climate Change Act 2022* (Cth)
- *Climate Change Act 2017* (Vic)
- *Energy and Public Land Legislation Amendment (Enabling Offshore Wind Energy) Act 2024 (Vic)*
- *Marine Safety Act 2010* (Vic)
- *National Electricity (Victoria) Act 2005* (Vic)
- *Native Title Act 1993* (Cth)
- *Navigation Act 2012* (Cth)
- *Occupational Health and Safety Act 2004 (Vic)*
- *Sea Installations Act 1987* (Cth)
- *Traditional Owner Settlement Act 2010* (Vic)
- *Work Health and Safety Act 2011* (Cth)

State and local policy

- Victorian Marine & Coastal Policy (2020): Provides an overarching framework and sets out policies for planning and managing the marine and coastal environments in Victoria
- Victorian Coastal Strategy (2022): Sets a long-term vision and framework for the sustainable management of Victoria's coastal, estuarine and marine environments. It also informs the development and implementation of regional coastal plans and coastal management plans.
- Gippsland Regional Plan (2020-2025): Provides a long-term strategic vision for Gippsland in 2040 which identifies Gippsland as a prime location for offshore wind generation
- Gippsland Regional Growth Plan (2014): Provides broad direction for land use and development across the Gippsland Region to encourage growth, strengthen regional labour markets and provide a greater diversity of affordable housing and employment opportunities.
- Offshore Wind Energy Implementation Statements (2022-2025): Published by the Victorian Government to support and guide industry, stakeholders and the Victorian community on the development of the offshore wind sector
- The 2025 Victorian Transmission Plan: Provides a long-term strategic plan for transmission and renewable energy zone development in Victoria. The Plan proposes the Gippsland Shoreline Renewable Energy Zone where offshore wind developers will need to locate the onshore infrastructure, such as underground cables, to connect their offshore wind farms to the grid. The

onshore cable investigation area is within the proposed Gippsland Shoreline Renewable Energy Zone.

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

In applying for a feasibility licence, BMN described its plans to investigate, manage, and resolve any stakeholder risks or concerns. Through this process, BMN identified and mapped relevant stakeholders, described its engagement approach and schedule, and defined its negotiation strategy to resolve conflicts over the term of the feasibility licence.

First Nations engagement

BMN has entered an Engagement Agreement with GLaWAC. The agreement formalises BMN's commitment to working collaboratively with GLaWAC and the GunaiKurnai people and creates a structured pathway for GLaWAC to advocate for the rights, interests and aspirations of the GunaiKurnai community throughout the feasibility phase. It allows GLaWAC to work proactively on key areas such as protecting cultural heritage, exploring employment and training opportunities, and ensuring any potential development supports sustainable economic outcomes and includes meaningful community engagement.

BMN has provided GLaWAC updates on the progress of the Project through regular meetings and communications (including issuing Information bulletins and notices in advance of their wider distribution) and will continue to work with GLaWAC to agree priorities and preferences for ongoing engagement during all aspects of the Project's development.

BMN's approach is in keeping with its understanding that GLaWAC wishes to be 'involved' in the development of offshore wind projects and acknowledging that GLaWAC has a right to choose on what and how GLaWAC wishes to participate in the development of these projects (self-determination).

Kurnai Aboriginal Corporation have also been consulted in relation to the project, as well as a number of neighbouring First Nations entities, including the Bunurong Land Council Aboriginal Corporation and Boon Wurrung Foundation.

Community and stakeholder engagement

Since September 2024, BMN has consulted with hundreds of individuals and organisations across many categories and has included direct engagements through to community events. To date BMN has commenced engagement with agencies and industry stakeholders including, but not limited to:

Federal Government Departments and Agencies

- Air Services Australia
- Australian Energy Market Operator
- Australian Fisheries Management Authority
- Australian Hydrographic Office
- Australian Institute of Marine Science
- Australian Maritime Safety Authority
- Australian Hydrographic Office
- Bureau of Meteorology
- Civil Aviation Safety Authority
- Department Of Climate Change, Energy, Environment and Water
- Department Of Defence
- Department of Employment and Workplace Relations
- Department of Foreign Affair and Trade
- Department of Industry, Science and Resources
- Director of National Parks
- Fisheries Research Development Corporation
- Major Projects Facilitation Agency
- National Offshore Petroleum Titles Administrator
- Offshore Infrastructure Regulator
- Offshore Infrastructure Registrar

Federal Ministers and MPs

- Hon Chris Bowen MP, Minister for Climate Change and Energy
- Hon Darren Chester MP, Member for Gippsland
- Hon Tim Ayers MP, Minister for Industry and Science

Victorian Government Departments and Agencies

- Department of Energy, Environment and Climate Action
- Department of Jobs, Skills, Industry and Regions - CarbonNet
- Department of Transport and Planning
- First Peoples - State Relations
- Invest Victoria
- Heritage Victoria
- Offshore Wind Energy Victoria
- Parks Victoria
- Regional Development Victoria
- Safe Transport Victoria
- State Emergency Service – Victoria
- VicGrid

Victorian Government Ministers and MPs

- Hon Lily D'Ambrosio, Minister for Climate Action, Minister for Energy and Rsources, Minister for the State Electricity Commission
- Danny O'Brien MP, Member for Gippsland South
- Tim Bull MP, Member for Gippsland East

Other Government Authorities

- Australian Energy Infrastructure Commissioner
- Environmental Protection Authority
- Energy and Water Ombudsman
- Gippsland Water
- Gippsland Ports Authority
- Ports Victoria
- Victorian Fisheries Authority
- West Gippsland Catchment Management Authority

Local Government Councils

- Bass Coast
- East Gippsland
- Latrobe City
- South Gippsland
- Wellington

Traditional Owner and Aboriginal and Torres Strait Islander people or groups

- Gunaikurnai Land and Waters Aboriginal Corporation
- Kurnai Aboriginal Corporation
- Boonwurrung Land and Sea Council
- Bunurong Land Council Aboriginal Corporation
- Elders Council of Tasmania Aboriginal Corporation
- Moogji Aboriginal Council
- Barengi Gadjin Land Council Aboriginal Corporation
- Batemans Bay Local Aboriginal Land Council

- Bega Local Aboriginal Land Council
- Bodalla Local Aboriginal Land Council
- Cobowra Local Aboriginal Land Council
- Eden Local Aboriginal Land Council
- Illawarra Local Aboriginal Land Council
- Jerrinja Local Aboriginal Land Council
- Kinaway
- Merrimans Local Aboriginal Land Council
- Mogo Local Aboriginal Land Council
- Ngambri Local Aboriginal Land Council
- Nowra Local Aboriginal Land Council
- NSW Aboriginal Land Council Zone Office – Southern Region
- Supply Nation
- Taungurung Land and Waters Council
- Ulladulla Local Aboriginal Land Council
- Wagonga Local Aboriginal Land Council
- Gunditj Mirring Traditional Owners Aboriginal Corporation
- Lakes Entrance Aboriginal Health Association

Ports

- GeelongPort
- Port Anthony
- Port of Hastings Corporation
- Port Kembla
- Port of Newcastle
- TasPorts
- Port of Melbourne
- Qube (Barry's Beach)

Offshore Developer and Renewables Group

- Clean Energy Council
- Offshore Gippsland Developer Group

Utilities, service providers, offshore developers and organisations

- Amplitude Energy
- Australian Pipelines and Gas Association
- APA Group
- AusNet Services
- Esso
- Gippsland Dawn - Bluefloat Energy
- Gippsland Skies Pty Ltd
- Greater Eastern Offshore Wind - Corio Generation
- High Sea Wind Pty Ltd - Ocean Winds
- Iberdrola Australia OW 2 Pty Ltd - Aurora Green
- Kent Offshore Wind Pty Ltd – RWE
- Marinus Link
- Navigator North Project Pty Ltd - Origin / RES
- Origin Energy
- Ørsted Offshore Australia 1 Pty Ltd - Gippsland 01 & Gippsland 02
- Sea Energy
- Subsea7 Energy
- Siemens Energy Pty Ltd

- Seatrium Energy Pty Ltd
- Southerly Ten - Kut-Wut Bratauallung Pty Ltd and Star of the South

Fisheries and Fishing associations

- Abalone Council Victoria
- Bass Strait Scallop Industry Association
- Commonwealth Fisheries Association
- Gippsland Lakes Fishing Club
- Gillnet Hook and Trap Fishing Association
- Southern Shark Industry Alliance
- Lakes Entrance Fishermen's Co-Op
- Loch Sport Fishing Association
- Mitchelson Fisheries Ltd
- McLoughlins Angling Club
- San Remo Fisherman's Co-op
- Seafood Industry Australia
- Seafood Industry Victoria
- South East Trawl Fishing Industry Association
- South Gippsland Game Fishing Club
- Southern Shark Industry Alliance
- Southern Squid Jig Fishery
- Victorian Recreational Fishing Peak Body
- Victorian Rock Lobster Association

Educational institutions – primary, secondary, TAFE and universities

- Multiple Gippsland based schools
- Baw Baw Latrobe Local Learning & Employment Network
- Federation University
- Gippsland Tech School
- TAFE Gippsland

Tourism

- Destination Gippsland

Landowners impacted by offshore wind and onshore transmission infrastructure

Community and special interest groups

- Australian Conservation Foundation
- Bairnsdale Chamber of Commerce and Industry
- Better Transmission Gippsland
- Committee for Frankston and Mornington Peninsula
- Committee for Gippsland
- Energy Innovation Co-operative
- Environment Victoria
- Friends of the Earth
- Friends of the Prom
- Future of Yarram
- Gippsland Alliance for Climate Network
- Gippsland Climate Change Network
- Gippsland Lakes Yacht Club
- Gippsland Women New Energy
- Gippsland Trades and Labour Council

- Golden Paradise Beach Community Development Fund
- Gormandale Community House
- Lakes Entrance Rotary Club
- Lakes Entrance Surf Lifesaving Club
- Leongatha Rotary Club
- Korumburra Rotary Club
- Maritime Union of Australia
- Morwell Rotary Club
- Port Albert Yacht Club
- Rotary Club of Maffra
- Sale Rotary Club
- Seaspray Ratepayers Association
- Seaspray Wind Farm Strategy Group
- Seaspray Foreshore Reserve Committee of Management
- Seaspray Surf Life Saving Club
- Students in Renewable Energy, Melbourne University
- Surfriders Foundation
- Voices of the Valley
- Victorian National Parks Association
- Wellington Climate Action Network
- Woodside Beach Surf Life Saving Club
- Yarram Landcare Network

BMN has a Project Engagement Strategy and Framework, which outlines the overarching engagement and communication approach that will be delivered to support the development of the Project. This strategy describes the key project communities and stakeholders and is designed to support the BMN team in informing, consulting, involving and collaborating with community and stakeholders. The engagement framework describes the purpose and objectives of the engagement, what it is seeking to achieve, relevant requirements and the key opportunities for community and stakeholder feedback. The engagement strategy has been developed in consideration of relevant guidelines, standards and legislative requirements at Commonwealth, Victorian and International level and will be updated throughout the life of the Project.

BMN propose to continue to engage with community and stakeholders through forums as described above. Community and stakeholder feedback will be considered in the technical assessments carried out for the project.

Engagement will also be carried out with the following agencies amongst others to support the environmental assessment and approval process:

- DCCEEW
- DEECA
- DTP, Impact Assessment Unit
- DTP, Planning
- Wellington Shire Council
- Environment Protection Authority Victoria
- First Peoples State Relations
- GLaWAC
- Heritage Victoria
- Parks Victoria
- VicGrid
- West Gippsland Catchment Management Authority.

1.3.1 Identity: Referring party

Privacy Notice:

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

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

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

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Alternatively, email us at privacy@dcceew.gov.au.

☑ **Confirm that you have read and understand this Privacy Notice ***

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	32667056439
Organisation name	BLUE MACKEREL NORTH PTY LTD
Organisation address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006

Referring party details

Name	Kim Downs
Job title	Manager - Environmental Planning and Approvals - Blue Mackerel
Phone	+61 3 9021 0602
Email	kim.downs@jnbp.com
Address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006

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	32667056439
Organisation name	BLUE MACKEREL NORTH PTY LTD
Organisation address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006

Person proposing to take the action details

Name	David Ghaly
Job title	Project Director
Phone	+61 3 9021 0602
Email	info@bluemackerel.com.au
Address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006

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. *

Blue Mackerel North Pty Ltd (BMN) is a newly established entity for the development of the Blue Mackerel Offshore Wind Project. This entity has not previously developed, constructed or operated energy infrastructure within Australia. BMN has commenced marine survey activities required to inform Project approvals documentation and Project design and development (EPBC 2024/09934). This survey program includes geophysical, geotechnical, metocean and environmental surveys which are being undertaken in a particular manner as required by the EPBC Act referral decision by the Minister for the Environment's delegate, and the Metocean and Geotechnical Management Plan approved by the Offshore Infrastructure Regulator (OIR).

Blue Mackerel North Pty Ltd is solely owned by JERA Nex bp, a 50:50 joint venture between JERA Co. and bp. The purpose and business of JERA Nex bp is the development of sustainable offshore wind. JERA Nex bp does not have any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources.

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

JERA Nex bp has developed a Health, Safety, Security and Environmental (HSSE) Policy (**Att 2**). The principles within this policy guide Blue Mackerel North Pty Ltd's planning and operations. The HSSE Policy sets commitments to:

- Regularly communicate the commitment to HSSE and set the appropriate example to the workforce
- Provide the necessary resources to deliver the policy
- Comply with all Applicable Laws and Regulations and applicable industry standards in relation to HSSE
- Establish, implement, and maintain an integrated HSSE Management System in line with good practice, as defined and referenced by the G+ and the Energy Institute and other relevant standards
- Empower the workforce to stop work if they have any safety concerns
- Report all HSSE incidents and near misses, follow the required HSSE procedures and complete all relevant HSSE training assigned
- Set, monitor and review appropriate HSSE performance metrics, targets and objectives
- Provide appropriate HSSE training to enable delivery of the HSSE policy
- Drive continuous improvement of HSSE performance through regular monitoring and evaluation against targets and objectives, audit, assurance and verification results, and feedback from the workforce.

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	32667056439
Organisation name	BLUE MACKEREL NORTH PTY LTD
Organisation address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006

Proposed designated proponent details

Name	David Ghaly
Job title	Project Director
Phone	+61 3 9021 0602
Email	info@bluemackerel.com.au
Address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006

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	32667056439
Organisation name	BLUE MACKEREL NORTH PTY LTD
Organisation address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006
Representative's name	Kim Downs
Representative's job title	Manager - Environmental Planning and Approvals - Blue Mackerel
Phone	+61 3 9021 0602
Email	kim.downs@jnbp.com
Address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006

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	32667056439
Organisation name	BLUE MACKEREL NORTH PTY LTD
Organisation address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006
Representative's name	David Ghaly
Representative's job title	Project Director
Phone	+61 3 9021 0602
Email	info@bluemackerel.com.au
Address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006

Confirmed Proposed designated proponent's identity

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

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

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

No

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

No

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

No

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

No

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

No

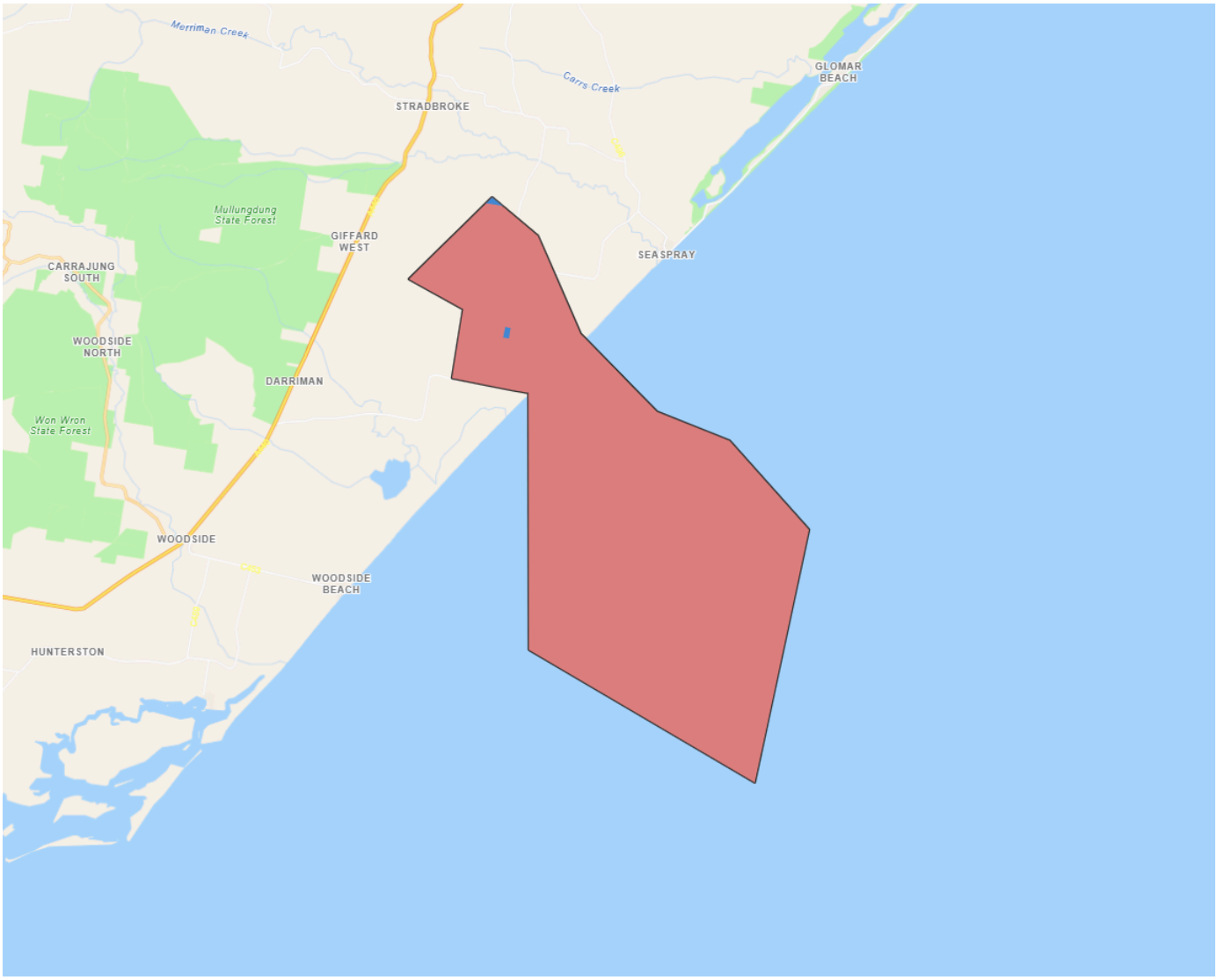
1.4 Payment details: Payment allocation

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

Person proposing to take the action

2. Location

2.1 Project footprint



Project Area: 32422.32 Ha **Disturbance Footprint:** 32422.32 Ha **Avoidance Area:** 37.75 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Approximately 10 km inland from McGaurans Beach, Giffard to approximately 25 km offshore

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 referral area includes offshore and onshore components and represents a broad investigation area in which Project infrastructure will be sited.

Land tenure is illustrated in **Att 1 Figure 4**. The majority of the onshore referral area is freehold title, with some smaller areas of Crown land. The parcels directly affected will be confirmed during route selection and detailed design.

The onshore referral area includes Crown land attributed to McLoughlins Beach – Seaspray Coastal Reserve, Darriman H29 Bushland Reserve, Giffard (Rifle Range) Flora Reserve, Giffard Plantation, Crown land road reserves and the seabed of Victorian coastal waters. The seabed of Victorian coastal waters and McLoughlins Beach – Seaspray Coastal Reserve, will be intersected by the offshore cables and shore crossing. The Darriman H29 Bushland Reserve, Giffard (Rifle Range) Flora Reserve and the Giffard Plantation will be avoided.

Access to and use of freehold title areas will be negotiated with the relevant landowners via easement, purchase or lease agreements. Access to and use of Crown land will be arranged with the relevant Victorian state agencies through leases or licences.

The shore crossing and onshore cable corridor will be located within the Gippsland Shoreline Renewable Energy Zone proposed in VicGrid's 2025 Victorian Transmission Plan and will connect to the connection hub area (also referred to as the Giffard Terminal Station) proposed by VicGrid (https://caportal.com.au/vicgrid/offshore-wind-energy-transmission).

A Native Title determination affects part of the referral area; VCD2010/001 (Gunai/Kurnai People) was determined 22 October 2010, with Native Title found to exist in parts of the determination area (specific Crown land parcels and 200 m of offshore Sea Country). GLaWAC was registered as the Registered Native Title Body Corporate. Areas within the referral area where Native Title has been determined to exist, are shown on **Att 1 Figure 4**. These include:

- The Giffard (Rifle Range) Flora Reserve
- The Darriman H29 Bushland Reserve
- Coastal areas.

Indigenous Land Use Agreements (ILUA) have previously been established in the Gippsland region between Traditional Owners and proponents for activities on Crown land where Traditional Owner settlements have been reached. The Project may enter an ILUA or other agreement under the *Traditional Owner Settlement Act 2010* following further engagement with GLaWAC.

There are several existing easements in the referral area (e.g., oil and gas pipelines, transmission lines). Project design and development will explore opportunities to utilise existing easements and co-locate infrastructure to minimise impacts by limiting new land disturbance, where practicable, and in consultation with the relevant owner/operator.

3. Existing environment

3.1 Physical description

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

Desktop reviews including the Preliminary Marine Ecology Assessment Preliminary (**Att 3**), Onshore Ecology Assessment (**Att 4**) and the Cultural Heritage Desktop Assessment (**Att 5**), have been undertaken to understand environmental assets and sensitivities within the referral area. The Preliminary Onshore Ecology Assessment was also informed by a rapid field assessment of public land. **Att 3, Section 5, pg 17-134, Att 4, Section 5, pg 24-77**, and **Att 5, Section 4, pg 21-79** describe the current condition of the onshore and offshore referral areas and locality, and existing uses.

Offshore

The offshore referral area comprises the feasibility licence area, which will contain the offshore wind farm, and an offshore cable investigation area that will contain transmission cable/s. The feasibility licence area is located entirely within Commonwealth waters and the Gippsland, Victoria Declared Offshore Wind Area (OEI-01-2022). The offshore cable investigation area traverses Commonwealth waters and Victorian coastal waters.

The offshore referral area largely comprises fine to medium sand with a band of patchy rocky substrate running parallel to the coast, while silty sand dominates the substrate further offshore. The location of rocky outcrops is well understood by BMN due to the detailed geophysical surveys undertaken. Selection of the offshore cable construction corridors will seek to avoid and minimise impacts on the rocky outcrops. The offshore cable investigation area also contains rippled scour depressions of medium to coarse sand that are oriented perpendicular to the coastline.

The offshore referral area is exposed to the high-energy environment of the Bass Strait. The tides in the Bass Strait are mainly semidiurnal with small tidal amplitudes (<0.2 m). This region is influenced by the East Australian Current, which transports warm waters southward along the coast. The predominant wave direction is south-easterly, with an average significant wave height of approximately 1-2 m and average peak wave height of 3-4 m. Refer to **Att 3, section 5.1, pg 17 and 5.2.2, pg 20-22** for further information.

Onshore

The onshore referral area, comprising the shore crossing and onshore cable investigation area, sits within the Gippsland Plain (GipP) bioregion, Wellington Shire Local Government Area and the West Gippsland Catchment Management Authority. The onshore referral area aligns with the Gippsland Shoreline Renewable Energy Zone, proposed in VicGrid's 2025 Victorian Transmission Plan.

The planning zones within the onshore referral area (**Att 1 Figure 2**) include:

- Farming Zone (FZ) – majority of land within the investigation area
- Public Conservation and Resource Zone (PCRZ) – Darriman H29 Bushland Reserve, McLoughlins Beach – Seaspray Coastal Reserve and Giffard (Rifle Range) Flora Reserve
- Transport Zone 3 (TRZ3) – road reservation for Gifford Road
- Public Use Zone – Service and Utilities (PUZ1) - on the coastline, west of the unnamed creek

The onshore referral area consists of rural land use within the localities of Giffard, Giffard West and the north-east part of Darriman. Giffard Road runs centrally through the onshore referral area in a north-south orientation. Access to the onshore referral area is provided via Giffard Road and Giffard West Road (both Council-managed roads). A range of smaller local roads are also present, largely to provide access to the farmland in the area. The farming land seen through much of the onshore referral area has been subject to vegetation clearing, grazing (sheep and cattle) and often ploughing and cropping. Fencing and rural roads, as well as some utilities have been constructed to support the farming properties. There are also some residential buildings associated with the farms.

The landscape within the onshore referral area is highly modified, having been extensively cleared from native vegetation for historical agricultural and agroforestry uses. Based on aerial imagery and the DEECA Landcover layer 2015-2019, approximately 88% of the onshore referral area has been cleared or modified. Areas of remnant native vegetation persist within the onshore referral area (mainly within reserves or along

roadsides), which provide important habitat for threatened flora, fauna and ecological communities. Areas of remnant habitat include grasslands, forest and woodland, riparian scrub, wetlands and waterways and coastal vegetation (grassland, sedgeland, saltmarsh) which is likely to be of high habitat value for a range of fauna, including threatened and migratory species. Refer to Section 3.2 for discussion of flora and fauna and ecological communities with potential to occur in the referral area.

As described in further detail in Section 3.1.3, three reserves are located within the referral area and are used for conservation and recreational purposes. **Att 1 Figure 4** displays the reserves and parks that intersect with the onshore referral area.

The Giffard Plantation was established in the study area by 1991 and has been expanding in the decades since (**Att 5, Section 4.2.4.2, pg 45-48**).

While unformed (dirt) tracks run alongside McLoughlins and McGaurans beaches no other infrastructure is evident on aerial imagery. It is likely that there has been limited disturbance in this area, restricted to light vehicles, animals, and pedestrian usage. McGauran Beach has a camping area (with no facilities), which is located within the onshore referral area (**Att 5, Section 4.2.4.8, pg 54**).

Existing waterways in the referral area are currently in poor to moderate condition due to agricultural and urban land use pressures. Refer to Section 3.4 for discussion of the waterways and wetlands present.

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

Existing uses

The offshore referral area has the following existing uses and development:

- Marine uses including recreational boating, recreational fishing, commercial fishing, and other recreational uses (marine-based tourism opportunities including cruises, whale and wild-life watching, sailing, diving, snorkelling, surfing and kayaking) (**Att 3, Section 5.8, pg 133**). Most recreational boating and fishing occurs close to shore due to rough offshore conditions in Bass Strait, though larger game boats occasionally venture further out.
- Offshore infrastructure – The Basslink interconnector runs along the western boundary of the offshore referral area. Other offshore oil and gas infrastructure is located in proximity to the offshore referral area including the Perch-Dolphin-Seaspray (Esso) and Gippsland-Tasmania (Tas Gas Networks) pipelines (approximately 4-8 km east of the offshore referral area), Perch and Dolphin platforms, and other Esso and petroleum wellheads (the closest wells are Wasabi 1 (Santos), approximately 1 km east and Tommyruff (BHP), approximately 1 km west of the offshore referral area). Both of the closest wellheads are listed on the National Offshore Petroleum Information Management System (NOPIMS) as exploration boreholes with a current status of 'Abandoned'.
- Commercial shipping - the Bass Strait has extensive vessel traffic due to the large numbers of cargo, passenger and ferry services that operate within the region. As indicated in **Att 3, Figure 5.19, pg 134** a high density of shipping occurs within key shipping routes to the south of the offshore referral area that run parallel to the coast, most over the continental shelf. Other commercial shipping movements are focussed around the various offshore petroleum assets, with a marine 'area to be avoided' around oil and gas assets, including subsea wellheads and pipelines. The offshore referral area therefore experiences low commercial shipping activity relative to the region.
- Tourism - there are a variety of marine-based tourism activities within the South-east Marine Region of Australia, focusing on ecotourism (e.g., whale watching and nature tours), fishing and charter boat cruises, sailing, snorkelling and diving, and water sports (such as surfing). Lakes Entrance and Gippsland Lakes are the closest major tourist destinations in the region, however the Ninety Mile Beach area is the closest tourist destination to the offshore study area.

The onshore referral area has the following existing uses and development (**Att 1, Figure 2**):

- Rural residential and agricultural land on freehold title
- Conservation reserves, road reserves and agroforestry (plantation) on Crown Land
- Electricity transmission and associated infrastructure (i.e., Basslink runs through the western half of the onshore referral area)
- Holiday accommodation at Barooma Homestead

The referral area intersects with Defence Practice Area (DPA) R359F and R359C which are associated with defence activities from the Royal Australian Air Force (RAAF) Base East Sale. These DPAs are used for air surveillance and Royal Australian Air Force training. DPA R359F may also support navy vessel and submarine activities on occasion.

Proposed uses

The referral area is proposed to be used for the development and operation of the Project (offshore wind farm and associated onshore and offshore export transmission cables).

The Project is located within the Declared Offshore Wind Area in Gippsland, made under the OEI Act. The feasibility of several other offshore wind projects is under investigation in the Declared Area surrounding the Project, including:

- Star of the South located south-west of the Project
- Greater Eastern Offshore Wind located south-west of the Project
- Aurora Green Offshore Wind located south of the Project

- Orsted is proposing to develop two offshore wind farms, Gippsland 01 and Gippsland 02, both located south-east of the Project
- Navigator North located north-east of the Project
- Kut-Wut Brataualung located south-west of the Project
- High Sea Wind located south of the Project

There is potential for export cables associated with some of these proposed offshore wind farms to also be located within the referral area to connect to VicGrid's proposed connection hub near Giffard.

It is unlikely that all these projects will be built and they will be staged through time in accordance with the Victorian auction process, and the construction of onshore transmission.

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

The preliminary assessment reports identify the existing conditions of the referral area and its surrounds, including natural values. These values are summarised below and further discussed in the Preliminary Marine Ecology Assessment (**Att 3, Section 5, pg 17-134**) and Preliminary Onshore Ecology Assessment (**Att 4, Section 5, pg 24-77**).

Offshore

Key ecological features (KEF)

There are no KEFs within the referral area. The closest KEF to the offshore referral area is the upwelling east of Eden, approximately 85 km east of the offshore referral area (**Att 3, Figure 5.2, pg 19**).

Biologically important areas (BIAs)

The referral area includes BIAs for (**Att 3, Section 5.7.2.2, pg 117 - 130**):

- Pygmy Blue Whale (*Balaenoptera musculus brevicauda)* - The offshore referral area intersects with a Pygmy Blue Whale foraging BIA but not a migratory BIA, noting that data on habitat use by Pygmy Blue Whales are scarce for the east coast of Australia.
- Southern Right Whale (*Eubalaena australis)* – a reproduction BIA for Southern Right Whales has been defined within approximately 3 km from the coastline, intersecting with the offshore referral area. A migration BIA also overlaps the entirety of the offshore referral area.
- White Shark (*Carcharodon carcharias)* - a reproduction BIA for White Sharks overlaps with the offshore referral area. The offshore referral area is adjacent to one of the two known east coast White Shark nurseries, located at Corner Inlet and 90 Mile Beach, Victoria.
- Eight seabird species - foraging BIAs for Short-tailed Shearwater (*Ardenna tenuirostris*), Common Diving-petrel (*Pelecanoides urinatrix*) and six species of Albatross overlap the offshore referral area. The Albatross species include: Wandering Albatross (*Diomedea exulans (sensu lato)*), Bullers Albatross (*Thalassarche bulleri*), Shy Albatross (*Thalassarche cauta cauta*), Indian Yellow-nosed Albatross (*Thalassarche chlororhynchos bassi*), Black-browed Albatross (*Thalassarche melanophris*) and Campbell Albatross (*Thalassarche melanophris impavida*). The nearest breeding location for seabirds is Seal Island group, approximately 24 km to the south-west, where the Short-tailed Shearwater and Common Diving-Petrel breed.

Marine protected areas

There are no marine protected areas (Australian Marine Parks, marine and coastal parks, marine park or marine reserves) within the referral area. The nearest marine protected area is Ninety Mile Beach Marine Natonal Park, which is located approximately 500 m east of the referral area. The nearest Australian Marine Park is Beagle Marine Park, which is located more than 50 km south.

Onshore

Parks and reserves

The onshore referral area features reserves and parks zoned as Public Conservation and Resource Zone including (**Att 1, Figure 4**):

- Giffard (Rifle Range) Flora Reserve, which partially intersects the onshore referral area and is known to harbour several threatened flora species listed under both the EPBC and FFG Acts including *Commersonia prostrata* (Dwarf Kerang) and provides suitable habitat for several other threatened flora.
- Darriman H29 Bushland Reserve which occurs entirely within the onshore referral area and is known to support Natural Damp Grassland of the Victorian Coastal Plains Threatened Ecological Community (TEC). The rapid site assessment identified the EPBC and FFG Act- listed Endangered (E) *Dianella amoena* (Matted Flax-lily) within the reserve.

- McLoughlins Beach – Seaspray Coastal Reserve which spans the barrier dune and coastal portion of the onshore referral area and provides potential habitat for coastal flora.

Landscape values

A preliminary review of seascape, landscape and visual impact (SLVIA) considerations has been undertaken to characterise existing visual and landscape values (**Att 6, Section 5, pg 7-9**). Key values include landscape values within areas designated as Public Conservation and Resource Zone (PCRZ), which are valued for their natural appearance, recreational uses, and biodiversity values.

A section of Ninety Mile Beach is located within the referral area. The Ninety Mile Beach landscape holds high scenic value and is comprised of beaches, dunes, peninsulas and wetlands. The Coastal Spaces Landscape Assessment Study (Planisphere, 2006) identifies the section of Ninety Mile Beach within the referral area as being of local significance. This is recognised by Schedules to the Environmental Significance Overlay of the Wellington Planning Scheme. The section of Ninety Mile Beach to the northeast of the referral area is identified as being of state significance. This is recognised by Schedule 1 of the Significant Landscape Overlay of the Wellington Planning Scheme.

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

Offshore

Bathymetric data indicates that the seabed within the offshore referral area increases in depth with distance from the coastline to a maximum depth of 40-50 m (below the Lowest Astronomical Tide (LAT)) at the southernmost limit of the offshore referral area.

Onshore

The onshore referral area and its surrounds broadly feature flat, low-lying coastal and alluvial plains and is banded by coastal barrier dunes that grade into low lying floodplains and swampy flats (landward of the barrier dunes), and low undulating hills further inland. The onshore referral area ranges in elevation from 0 m above sea level at the coast to approximately 50 m above sea level at the most inland area near the Giffard Plantation. The majority of the onshore referral area has an elevation of between 0-30 m above sea level.

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.

Desktop reviews including the Preliminary Marine Ecology Assessment (**Att 3**) and Preliminary Onshore Ecology Assessment (**Att 4**) have been undertaken to understand ecological assets and sensitivities within the referral area. The Preliminary Onshore Ecology Assessment was also informed by a rapid field assessment of public land.

Offshore

No marine flora species protected under the EPBC Act or the FFG Act are known or likely to occur in the offshore referral area.

Threatened and conservation dependent fauna

A total of 69 EPBC Act and/or FFG Act fauna species listed as threatened, conservation dependent or migratory by the EPBC Act (55 species) and/or FFG Act (44 species) are either known to occur or have the potential to occur (assessed as 'may' or 'likely to' occur) within the offshore referral area, noting some species are listed under both Acts. The EPBC-Act threatened species, conservation dependent or migratory listed species include:

- 6 mammals (3 x Endangered, 3 x Vulnerable (VU))
- 40 birds (4 x Critically Endangered (CE), 9 x Endangered, 27 x Vulnerable)
- 6 fish (1 x Critically Endangered, 3 x Vulnerable, 1 x Conservation Dependent (CD) and one species having a Critically Endangered east coast population and Vulnerable west coast population)
- 3 reptiles (turtles) (2 x Endangered, 1 x Vulnerable)

Migratory species

A total of 56 migratory species are either known to occur or are considered as possibly occurring (assessed as 'may' or 'likely to' occur) within the offshore referral area. This includes the following species, noting that several of these species are also listed above as threatened or conservation dependent:

- 9 mammals
- 17 seabirds
- 21 shorebirds
- 1 terrestrial bird
- 5 fish
- 3 reptiles (turtles)

Onshore

Threatened ecological communities

Two threatened ecological communities (TECs) listed under the EPBC Act have the potential to occur within the onshore referral area:

- Natural Damp Grassland of the Victorian Coastal Plains (NDGVCP) (Critically Endangered) - likely to occur in the Darriman H29 Bushland Reserve and may occur at roadsides along Giffard Road and West Giffard Road and on private property north of West Giffard Road.
- Subtropical and temperate coastal saltmarsh (STCS) (Vulnerable) - likely to occur on private property adjoining and intersecting with Lake Denison modelled wetland and modelled Estuarine Wetland (EVC 10) and may occur within discrete locations within McLoughlins Beach - Seaspray Coastal Reserve.

Threatened flora

A total of 36 threatened flora species listed under the EPBC Act (8 species) and/or FFG Act (34 species) are either known to occur or have the potential to occur (assessed as 'may' or 'likely to' occur) within the onshore referral area, noting some species are listed under both Acts. Of the EPBC-Act listed species, this includes three species with a conservation status of Endangered and five with a status of Vulnerable. Refer

to **Att 4, Table 5.6, pg 57** for the list of these species. During the rapid site assessment *Dianella amoena* (Matted Flax-lily), listed as Endangered under the EPBC Act and the FFG Act, was recorded in Darriman H29 Bushland Reserve.

Areas of large, connected and more intact native vegetation often provide the most value for threatened flora species. Most threatened flora species are unlikely to occur across the majority of the onshore referral area as it is predominantly disturbed land, comprising cropped, non-native pasture and heavily grazed areas as well as small and fragmented patches of degraded native vegetation.

Threatened fauna

A total of 65 threatened fauna species listed under the EPBC Act (38 species) and/or FFG Act (60 species) are either known to occur or have the potential to occur (assessed as 'may' or 'likely to' occur) within the onshore referral area, noting some species are listed under both Acts. Of the EPBC-Act listed species this includes:

- 16 shorebirds and coastal birds (2 x Critically Endangered, 4 x Endangered, 10 x Vulnerable)
- 1 wetland bird (Endangered)
- 11 terrestrial birds (2 x Critically Endangered, 2 x Endangered, 7 x Vulnerable)
- 6 mammals (3 x Endangered, 3 x Vulnerable)
- 1 reptile (Endangered)
- 3 frogs (1 x Endangered, 2 x Vulnerable)

Refer to **Att 4, Section 5.5.2, pg 63-67** for the list of these species.

Migratory species

A total of 31 migratory species are either known to occur or are considered as possibly occurring (assessed as 'may' or 'likely to' occur) within the onshore referral area. Most habitat for migratory species within the onshore referral area occurs at Lake Denison and its associated estuarine habitats. Some species may also use sandy beach habitats at Ninety Mile Beach and freshwater wetlands/waterways that occur in the onshore referral area.

During the rapid site assessment Double-banded Plover (*Charadrius bicinctus*), listed as migratory under the EPBC Act, was recorded within the onshore referral area.

Key habitat areas

Key areas of habitat for threatened species and/or migratory species within the onshore referral area include

- The three conservation reserves: Giffard (Rifle Range) Flora Reserve; McLoughlins Beach – Seaspray Coastal Reserve; and Darriman H29 Bushland Reserve
- Lake Denison and its associated estuarine habitats
- DEECA mapped current wetlands
- High value waterways
- Areas of roadside native vegetation along Giffard Road, Giffard West Road, McGaurans Beach Road and Owens Lane.

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

Offshore

The CarbonNet Marine Habitat Surveys (CarbonNet, 2018) were undertaken just east of the offshore study area (30km radius of the offshore referral area) and found that >80% of the area surveyed was dominated by bare sands. Where there was benthic habitat noted, it typically featured seagrass, macroalgae, sponges and low-relief rocky reef (Arup, 2024). The CarbonNet Marine Habitat Surveys (CarbonNet, 2018), as well as more detailed mapping carried out in Victorian waters (DEECA, 2025a), indicate that marine flora is largely concentrated in the benthic habitat of the Ninety Mile Beach patch reefs in the northeast of the offshore referral area.

Seagrasses are known to occur in Victorian waters and have potential to occur in the offshore referral area. The CarbonNet Marine Habitat Surveys (CarbonNet, 2018) findings on seagrass distribution are representative of the Gippsland area, where extensive seagrass meadows are concentrated in the Corner Inlet and Gippsland Lakes. The high energy environment and subsequent increased sediment mobility of the Gippsland coastline is likely to limit light availability and may contribute to the reduced seagrass abundance across sandy sediments that are prominent within the offshore referral area.

There is potential for algae communities to occur in the offshore referral area. The infralittoral rocky reef within the offshore referral area features CBICS Levels 4-6 biotopes of rippled fine sand, grey mounded colonies with seabed erect sponges and thallose red algae with abundant feather stars. Thallose red algae has been recorded at depths between approximately 15 and 25 m within infralittoral rocky reefs off McGaurans Beach (Ninety Mile Beach Marine National Park). The CarbonNet Marine Habitat Surveys (CarbonNet, 2018) noted that large brown kelp and macroalgae (respectively, Ecklonia radiata and Sargassum) was observed at an inshore reef area.

Onshore

As outlined in Section 3.1.1, the landscape within the onshore referral area is highly modified, having been extensively cleared from native vegetation for historical agricultural and agroforestry use, with discrete areas of remnant native vegetation.

716 ha of native vegetation has been modelled across the approximately 6,217 ha onshore referral area (i.e., approximately 12% of the onshore referral area). Six Ecological Vegetation Classes (EVCs) associated with the GipP bioregion are modelled within the onshore referral area, including:

- Coastal Dune Scrub/Coastal Dune Grassland Mosaic (EVC 01, 2% of modelled vegetation)
- Estuarine Wetland (EVC 10, 16% of modelled vegetation)
- Lowland Forest (EVC 16, 22% of modelled vegetation)
- Swamp Scrub (EVC 53, 0.1% of modelled vegetation)
- Riparian scrub (EVC 191, 5% of modelled vegetation)
- Lowland Forest/Heathy Woodland Mosaic (EVC 698, 55% of modelled vegetation)

A rapid site assessment recorded the presence of two additional EVCs: Coast Banksia Woodland (EVC 02) and South Gippsland Plains Grassland (EVC 132_62), which demonstrates that the modelled native vegetation does not always correlate with on-ground conditions. It is possible that additional EVCs may occur within the onshore referral area where no native vegetation has been modelled by DEECA, particularly in areas that were not accessed during the rapid assessment of public land undertaken as part of the Preliminary Onshore Ecology Assessment (Att 4). Similarly, EVCs may be modelled within the offshore referral area that do not occur.

Geotechnical surveys will be undertaken within the referral area to inform design and determine the potential for, and impacts related to, land stability, acid sulfate soils and highly erodible soils. Publicly available mapping of the probability for acid sulfate soils (ASS) to occur shows there are some areas of high probability of occurrence of ASS associated with the estuarine wetlands near the coastline (Att 1 Figure 5). The remainder of the referral area is mapped as low or extremely low probability of occurrence of ASS. Geotechnical surveys will be undertaken as Project design and development progresses to further

inform route selection and the probability for ASS within the cable construction corridor. Trenchless construction methods (HDD or direct pipe) will be used for the shore crossing. No Erosion Management Overlays under the Wellington Planning Scheme exist within the referral 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.

No areas of Commonwealth Heritage were identified by the PMST within 10 km of the referral area.

The Cultural Heritage Desktop Assessment (**Att 5, Section 4.3.3-4.3.4, pg 71-78**) identifies the following historic heritage values in, or in the vicinity of, the referral area:

- One known historic shipwreck site (SS Glenelg) identified in the referral area in Commonwealth waters (**Att 1 Figure 1**).
- A further 60 vessels listed as shipwrecks having a wrecking location on Ninety Mile Beach, Eastern Bass Strait, or an unknown location on a route traversing the Strait. Refer **Att 5, Table 6, pg 74-77**.
- There have been two WWII-era aircrafts lost in the general vicinity of the offshore referral area.

There are no listed Victorian Historic Inventory (VHI), Victorian Heritage Register (VHR) places, or Heritage Overlays (HO) located within the referral area.

Within the onshore referral area, places with potential historic heritage significance include:

- Old Giffard School House Site and associated ruins, located within Darriman H29 Bushland Reserve
- Barooma homestead, which provides holiday accommodation within old shearer's quarters in Giffard
- Giffard (Rifle Range) Flora Reserve which is located on a previous rifle range.

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

A Cultural Heritage Desktop Assessment of the underwater, historic and cultural heritage values relevant to the referral area was completed and is provided as **Att 5**. The Cultural Heritage Desktop Assessment (**Att 5**) has been completed to inform this referral, but as it contains information of a sensitive and confidential nature it has not been publicly exhibited and has been provided to DCCEEW and the Minister for their reference only.

GLaWAC is the Registered Aboriginal Party (RAP) and Registered Native Title Body Corporate (RNTBC) for the referral area. The referral area intersects with mapped areas of cultural heritage sensitivity, and it is considered likely that additional unregistered Aboriginal cultural heritage will be present.

There are 17 Aboriginal cultural heritage places located within the onshore referral area. No registered Aboriginal cultural heritage is located within the offshore referral area.

Consultation with GLaWAC is ongoing in relation to cultural values of their Sea Country, in recognition that Aboriginal cultural heritage is not solely represented by archaeological sites. Further assessments are proposed for indigenous heritage values including preparation of a Cultural Heritage Management Plan and detailed historic heritage and underwater cultural heritage assessments.

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 onshore referral area contains freshwater reaches, inlets and estuaries (**Att 4, Figure 5.1, pg 27-31**). Overall, with the exception of a few high-value freshwater reaches fringed by native vegetation, the majority of onshore waterways present as heavily modified waterways and agricultural drains (**Att 4, Section 5.2.4, pg 26**). Existing waterways in the referral area are currently in poor to moderate condition due to agricultural and urban land use pressures. An unnamed creek generally flows north to south through the onshore referral area, before entering the southwestern section of the Lake Denison wetland system. A relatively large tributary also enters this creek near the Darriman H29 Bushland Reserve.

No Ramsar wetlands or nationally important wetlands are located within the referral area. The closest Ramsar sites are Corner Inlet and Gippsland Lakes, approximately 21 km south-west and 9 km north-east of the onshore referral area, respectively. The Jack Smith Lake State Game Reserve, a nationally important wetland, is located adjacent to the referral area to the south (within one kilometre).

According to the DEECA database of Current Wetlands, five unnamed wetlands (91767, 90965, 91166, 91160 and 91136) are present within the onshore referral area, totaling 224 ha.

The Bureau of Meteorology GDE Atlas suggests that there are a range of groundwater dependent ecosystems (GDEs) within the onshore referral area. These include ecosystems that depend on the surface expression of groundwater (e.g. estuarine wetlands, freshwater marshes and meadows) and ecosystems that may depend on the subsurface presence of groundwater (e.g. lowland forests/heathy woodland mosaics, riparian scrub, lowland forests). **Att 4, Figure 5.5, pg 36** shows the potential location of GDEs in the onshore referral 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	No	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. *

No World Heritage Properties were identified by the PMST within 10 km of the referral area. No direct or indirect impacts to World Heritage Properties are expected.

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.

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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. *

No National Heritage places were identified by the PMST within 10 km of the referral area. The nearest National Heritage place identified is the Australian Alps National Parks and Reserves, located approximately 84 km to the northwest of the Project. No direct or indirect impacts to National Heritage places are expected.

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	No	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? *

No

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

No Ramsar wetlands are located within the referral area and therefore direct impacts are not expected. The nearest Ramsar wetlands are the Gippsland Lakes Ramsar site located approximately 9 km north-east of the referral area and the Corner Inlet Ramsar site, located approximately 21 km south-west of the referral area.

Review of the West Gippsland Catchment Management Authority (CMA) Flood Portal 1% AEP flood mapping shows hydrological disconnect between the main waterway within the referral area and wetlands of the Gippsland Lakes to the northeast and wetlands of the Jack Smith Lake State Game Reserve to the south.

The following mitigation measures will be implemented to avoid impacts on wetlands, including those listed under the Ramsar Convention:

- Situate Project infrastructure outside of key areas of habitat for migratory and other bird species that may also use these Ramsar sites – such as coastal wetlands and the Lake Denison estuary that are key habitat areas for shorebirds and other wetland birds.
- Situate Project infrastructure away from any waterways that flow into the Ramsar sites.
- Minimise impacts associated with any waterway crossings using measures such as trenchless construction (HDD or direct pipe) where practicable and erosion and sediment control to manage indirect impacts to these values.
- Implementation of a CEMP and OEMP containing measures to minimise impacts to native vegetation and water quality (onshore and offshore), including measures such as:
    - Vessel discharges to be managed in accordance with Australian and international maritime legislation (e.g. Marine Orders, MARPOL)
    - Limit lighting on vessels during construction, maintenance and decommissioning to that required for safe operations
    - Appropriate storage of products on vessels, refuelling/bunkering procedures, spill clean-up kits on vessels to mitigate the risk of impact from unexpected spills.
    - Compliance with *Biosecurity Act 2015* requirements, Australian ballast water management requirements and national biofouling management guidance
    - Secure storage of equipment tools and waste onboard vessels, recovery of overboard materials if practicable, and waste management plan and record book (in accordance with Australian Marine Orders and MARPOL).

Further mitigation measures are provided in **Att 3 Table 6.2, pg 141-148** and **Att 4, Table 6.1, pg 80-81**.

The Project is not expected to result in impacts to the ecological character of Ramsar wetlands given the distance (9 to 21 km) and proposed implementation of legislated and standard management 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
Yes	Yes	Amphibromus fluitans	River Swamp Wallaby-grass, Floating Swamp Wallaby-grass
No	No	Antechinus minimus maritimus	Swamp Antechinus (mainland)
No	No	Anthochaera phrygia	Regent Honeyeater
Yes	Yes	Ardenna grisea	Sooty Shearwater
Yes	Yes	Arenaria interpres	Ruddy Turnstone
Yes	Yes	Balaenoptera borealis	Sei Whale
Yes	Yes	Balaenoptera musculus	Blue Whale
Yes	Yes	Balaenoptera physalus	Fin Whale
Yes	Yes	Botaurus poiciloptilus	Australasian Bittern
Yes	Yes	Caladenia tessellata	Thick-lipped Spider-orchid, Daddy Long-legs
Yes	Yes	Calidris acuminata	Sharp-tailed Sandpiper
Yes	Yes	Calidris canutus	Red Knot, Knot
Yes	Yes	Calidris ferruginea	Curlew Sandpiper
Yes	Yes	Calidris tenuirostris	Great Knot
Yes	Yes	Callocephalon fimbriatum	Gang-gang Cockatoo
Yes	Yes	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo
Yes	Yes	Carcharodon carcharias	White Shark, Great White Shark
Yes	Yes	Caretta caretta	Loggerhead Turtle
Yes	Yes	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
Yes	Yes	Charadrius mongolus	Lesser Sand Plover, Mongolian Plover
Yes	Yes	Chelonia mydas	Green Turtle

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
Yes	Yes	Commersonia prostrata	Dwarf Kerrawang
Yes	Yes	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)
Yes	Yes	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
Yes	Yes	Dianella amoena	Matted Flax-lily
Yes	Yes	Diomedea antipodensis	Antipodean Albatross
Yes	Yes	Diomedea antipodensis gibsoni	Gibson's Albatross
Yes	Yes	Diomedea epomophora	Southern Royal Albatross
Yes	Yes	Diomedea exulans	Wandering Albatross
Yes	Yes	Diomedea sanfordi	Northern Royal Albatross
Yes	Yes	Dodonaea procumbens	Trailing Hop-bush
Yes	Yes	Eubalaena australis	Southern Right Whale
No	No	Falco hypoleucos	Grey Falcon
Yes	Yes	Fregetta grallaria grallaria	White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian)
No	No	Galaxiella pusilla	Eastern Dwarf Galaxias, Dwarf Galaxias
Yes	Yes	Galeorhinus galeus	School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Glycine latrobeana	Clover Glycine, Purple Clover
Yes	Yes	Grantiella picta	Painted Honeyeater
No	No	Halobaena caerulea	Blue Petrel
No	No	Heleioporus australiacus australiacus	Giant Burrowing Frog, Eastern Owl Frog
Yes	Yes	Hirundapus caudacutus	White-throated Needletail
Yes	Yes	Isoodon obesulus obesulus	Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern)
Yes	Yes	Lathamus discolor	Swift Parrot

Direct impact	Indirect impact	Species	Common name
No	No	Lepidium hyssopifolium	Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed
Yes	Yes	Limosa lapponica baueri	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit
Yes	Yes	Limosa limosa	Black-tailed Godwit
Yes	Yes	Lissolepis coventryi	Swamp Skink, Eastern Mourning Skink
Yes	Yes	Litoria aurea	Green and Golden Bell Frog
Yes	Yes	Litoria raniformis	Southern Bell Frog, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog
Yes	Yes	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
Yes	Yes	Macronectes halli	Northern Giant Petrel
Yes	Yes	Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)
Yes	Yes	Neophema chrysogaster	Orange-bellied Parrot
Yes	Yes	Neophema chrysostoma	Blue-winged Parrot
Yes	Yes	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
Yes	Yes	Pachyptila turtur subantarctica	Fairy Prion (southern)
Yes	Yes	Petauroides volans	Greater Glider (southern and central)
Yes	Yes	Petaurus australis australis	Yellow-bellied Glider (south-eastern)
Yes	Yes	Phoebetria fusca	Sooty Albatross
Yes	Yes	Pluvialis squatarola	Grey Plover
Yes	Yes	Prasophyllum spicatum	Dense Leek-orchid
No	No	Prostanthera galbraithiae	Wellington Mintbush
Yes	Yes	Prototroctes maraena	Australian Grayling
Yes	Yes	Pseudomys novaehollandiae	New Holland Mouse, Pookila
Yes	Yes	Pterodroma leucoptera leucoptera	Gould's Petrel, Australian Gould's Petrel
Yes	Yes	Pteropus poliocephalus	Grey-headed Flying-fox

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Pterostylis chlorogramma	Green-striped Greenhood
Yes	Yes	Pycnoptilus floccosus	Pilotbird
Yes	Yes	Rhincodon typus	Whale Shark
Yes	Yes	Rostratula australis	Australian Painted Snipe
No	No	Senecio psilocarpus	Swamp Fireweed, Smooth-fruited Groundsel
Yes	Yes	Seriolella brama	Blue Warehou
Yes	Yes	Stagonopleura guttata	Diamond Firetail
Yes	Yes	Sternula albifrons	Little Tern
Yes	Yes	Sternula nereis nereis	Australian Fairy Tern
Yes	Yes	Thalassarche bulleri	Buller's Albatross, Pacific Albatross
Yes	Yes	Thalassarche bulleri platei	Northern Buller's Albatross, Pacific Albatross
Yes	Yes	Thalassarche carteri	Indian Yellow-nosed Albatross
Yes	Yes	Thalassarche cauta	Shy Albatross
Yes	Yes	Thalassarche chrysostoma	Grey-headed Albatross
Yes	Yes	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
Yes	Yes	Thalassarche melanophris	Black-browed Albatross
Yes	Yes	Thalassarche salvini	Salvin's Albatross
Yes	Yes	Thalassarche steadi	White-capped Albatross
Yes	Yes	Thelymitra epipactoides	Metallic Sun-orchid
No	No	Thesium australe	Austral Toadflax, Toadflax
Yes	Yes	Thinornis cucullatus cucullatus	Eastern Hooded Plover, Eastern Hooded Plover
Yes	Yes	Tringa nebularia	Common Greenshank, Greenshank
Yes	Yes	Uperoleia martini	Martin's Toadlet
Yes	Yes	Xenus cinereus	Terek Sandpiper
No	No	Xerochrysum palustre	Swamp Everlasting, Swamp Paper Daisy

Ecological communities

Direct impact	Indirect impact	Ecological community
Yes	Yes	Natural Damp Grassland of the Victorian Coastal Plains
Yes	Yes	Subtropical and Temperate Coastal Saltmarsh

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 Preliminary Marine Ecology Assessment (**Att 3, Section 6.1.2, pg 140-148, Section 7, pg 149-205**) and Preliminary Onshore Ecology Assessment (**Att 4, Section 6, pg 78 to 90**) identify a number of species as known, likely or may occur within the referral area. Therefore, there is potential for these threatened species and ecological communities to occur. Detailed site investigations will be undertaken to confirm the presence of threatened species and/or ecological communities, or suitable habitat for them. Assessments will be completed to determine the potential for direct and/or indirect impacts on these matters and to inform the development of measures to avoid and minimise impacts.

This section provides a summary of the potential impact pathways.

The Preliminary Marine Ecology Assessment (**Att 3, Table 5.3, pg 31-96**) and Preliminary Onshore Ecology Assessment (**Att 4, Appendix B and Appendix C**) reviewed all of the threatened species and ecological communities identified by the PMST, and assessed several as unlikely to occur. These matters are not expected to be directly or indirectly impacted by the Project.

Offshore

Potential sources of direct impacts to threatened species associated with activities in the offshore referral area include:

- Vessel discharges to the marine environment. Vessel routine discharges such as sewage and waste oily water from Project vessels (installation, maintenance and support vessels) may result in highly localised changes in water quality and temporary localised food source for birds, whose numbers may increase as a result.
- Physical presence of infrastructure above water. Presence of Project infrastructure such as turbines and offshore substations may alter the natural movements and behaviours of marine fauna or deter species from using areas of the marine environment that they currently use (breeding, resting, and foraging areas) and result in collision risk and barotrauma causing injury or mortality to avifauna.
- Physical presence of infrastructure below water. Presence of Project infrastructure such as turbines and offshore substations may result in the removal or disturbance to benthic habitat, changes to benthic habitat communities, suspended sediments and sediment deposition, changes to natural patterns of ocean water movement (currents, waves, and mixing dynamics), changes to natural patterns of marine sediment transport which may result in burial, erosion and modification, smothering and fragmentation of benthic habitats and communities, smothering and scour effects on benthic habitats, or barrier effects altering the natural movements and behaviours of marine fauna or deterring species from using areas of the marine environment they currently use.
- Underwater noise and vibration from Project activities such as use of vessels, piling, installation of infrastructure and scour protection, may result in behavioural avoidance/disturbance; temporary or permanent hearing impairment to some sensitive species; and masking/interference of biologically important sounds (including vocal communication and echolocation).
- Artificial lighting from Project vessels, aviation obstruction lighting, and marine navigational lighting may result in attraction of some species, attraction of prey species, or disorientation effects.
- Electro-magnetic fields (EMF) from operation of export cables may result in highly localised interference with detection of prey and predators for sensitive species such as sharks and rays.

Unplanned events (i.e. risks) with potential to directly impact threatened species in the offshore referral area include:

- Vessel strikes (unplanned) to marine fauna can cause physical injury or death.
- Dropped objects and waste from vessels (unplanned) can result in changes in water and sediment quality, pollution and contamination of shoreline habitats and wetlands, fouling, injury or mortality of marine fauna and cause toxic effects to fishes.
- Fuel/chemical spills/hydraulic spills (unplanned) from minor deck spills, refuelling spills, vessel collisions and discharge of hydraulic fluids from turbines during operation can cause changes in

water and sediment quality, pollution and contamination of shoreline habitats and wetlands, fouling, injury or mortality of marine fauna and toxic effects to marine fauna.

Potential sources of indirect impacts to threatened species associated with activities in the offshore referral area include:

- Physical presence of infrastructure below water may result in changes to benthic habitats that may change marine mammal prey availability or alter the spatial distribution of biological productivity in the water column which may indirectly impact marine fauna.
- Underwater noise and vibration may result in behavioural disturbances which may indirectly result in the reduction in prey species.
- Unplanned introduction of invasive marine species (IMS) (risk event) may result in changes to benthic habitat and the ecological community composition which may indirectly impact marine mammal prey availability and competition for prey species.
- Unplanned fuel/chemical spills/hydraulic spills (risk event) may indirectly impact marine fauna via the ingestion of contaminated prey species.

The threatened species that have the potential to occur in the offshore referral area and are therefore potentially impacted are listed below:

- Critically Endangered or Endangered bird species:
    - Seabirds: Northern Royal Albatross, Southern Giant Petrel, Gould's Petrel, Shy Albatross, Grey-headed Albatross
    - Shorebirds: Curlew Sandpiper, Eastern Curlew, Lesser Sand Plover, Bar-tailed Godwit, Black-tailed Godwit, Australian Painted Snipe, Common Greenshank
    - Terrestrial birds: Swift Parrot, Orange-bellied Parrot
- Critically Endangered fish: Blue Warehou
- Endangered marine mammals: Antarctic Blue Whale, Pygmy Blue Whale, Southern Right Whale
- Endangered marine reptiles: Loggerhead Turtle, Leatherback Turtle
- Vulnerable bird species:
    - Seabirds: Sooty Shearwater, Antipodean Albatross, Gibson's Albatross, Southern Royal Albatross, Wandering Albatross, White-bellied Storm Petrel, Northern Giant Petrel, Fairy Prion (southern), Sooty Albatross, Buller's Albatross, Indian Yellow-nosed Albatross, Campbell Albatross, Black-browed Albatross, Salvin's Albatross, White-capped Albatross, Little Tern, Australian Fairy Tern
    - Shorebirds: Ruddy Turnstone, Sharp-tailed Sandpiper, Red Knot, Great Knot, Greater Sand Plover, Latham's Snipe, Grey Plover, Eastern Hooded Plover, Terek Sandpiper
    - Terrestrial birds: Grey Falcon, White-throated Needletail, Blue-winged Parrot
- Vulnerable marine mammals: Sei Whale, Fin Whale
- Vulnerable marine reptiles: Green Turtle
- Vulnerable fish: White Shark, Australian Grayling, Whale Shark
- Conservation Dependent: School Shark

Onshore

There is the potential for impacts to onshore ecological values known, or considered as having the potential, to occur in the onshore referral area. Mitigation measures have been proposed to avoid and minimise direct and indirect impacts to onshore ecological values during the route selection and detailed design phase, as well as during the construction and operation stages of the Project. However, in the absence of such mitigation the potential impacts to onshore ecological values are expected to be mostly associated with:

Direct impacts to onshore threatened species and TECs including:

- Direct loss of vegetation and fauna habitat:

    - Loss and disturbance of native vegetation and associated vegetation communities and listed threatened flora
    - Loss, degradation and/or fragmentation of habitat for listed threatened fauna species
    - Loss, degradation, barrier effects and/or fragmentation of intertidal, wetland, freshwater or terrestrial habitat
- Direct loss of fauna
    - Injury, mortality or displacement of fauna during construction or operation
    - Physical and toxicity effects to fauna populations, including breeding/roosting/foraging habitats from construction activities or unplanned events

Indirect impacts to onshore threatened species and TECs including:

- Loss or degradation of vegetation and fauna habitat including ground disturbance, sedimentation and erosion, changes in surface water quality, hydrological and groundwater changes, dust and noise
- Indirect effects on fauna due to potential reduction in prey availability as a result of impacts on prey species
- Introduction and/or spread of weeds, pathogens and other pest plants and animals
- Dewatering of groundwater during construction resulting in changes to groundwater dependent ecosystems
- Ground disturbance increasing the risks of acid sulfate soils

Threatened species and TECs that have the potential to occur in the onshore referral area include:

- Critically Endangered shorebirds and coastal birds: Curlew Sandpiper, Eastern Curlew, Swift Parrot
- Endangered shorebirds and coastal birds: Australian Painted Snipe, Bar-tailed Godwit, Common Greenshank, Lesser Sand Plover
- Endangered wetland and terrestrial birds: Australasian Bittern, Gang-gang Cockatoo, Hooded Robin
- Endangered mammals: Southern Brown Bandicoot, Southern Greater Glider, Spot-tailed Quoll
- Endangered reptiles and frogs: Swamp Skink, Martin's Toadlet
- Vulnerable shorebirds and coastal birds: Fairy Tern, Great Knot, Greater Sand Plover, Grey Plover, Eastern Hooded, Latham's Snipe, Little Tern, Red Knot, Ruddy Turnstone, Sharp-tailed Sandpiper
- Vulnerable terrestrial birds: Blue-winged Parrot, Brown Treecreeper, Diamond Firetail, Glossy Black-cockatoo, Painted Honeyeater, Pilotbird, White-throated Needletail
- Vulnerable mammals: Grey-headed Flying-fox, New Holland Mouse, Yellow-bellied Glider
- Vulnerable frogs: Green and Golden Bell Frog, Growling Grass Frog
- Endangered flora: Dwarf Kerrawang, Matted Flax-lily, Metallic Sun-orchid
- Vulnerable flora: River Swamp Wallaby-grass, Thick-lipped Spider-orchid, Trailing Hop-bush, Dense Leek-orchid, Green-striped Greenhood
- TECs: Natural Damp Grassland of the Victorian Coastal Plains (Critically Endangered), Subtropical and Temperate Coastal Saltmarsh (Vulnerable)

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

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

The preliminary marine ecology assessment (**Att 3**) has identified the potential for significant impacts on threatened species from the Project's offshore activities, in accordance with the EPBC Act Significant Impact Guidelines 1.1. The preliminary onshore ecology assessment (**Att 4**) assessed the Project's onshore activities as unlikely to have a significant impact on threatened species or threatened ecological communities in accordance with the Significant Impact Guidelines 1.1 given values are expected to be mostly located in discrete areas and therefore are able to be avoided or impacts to be minimised through route selection and selection of construction methods (e.g., HDD or direct pipe). This is summarised below and described in **Att 3, Section 7.1, pg 149-205** and **Att 4, Section 6.3.1, pg 79-81**.

Additional investigations and detailed assessments will be undertaken to further understand the existing environment and impact pathways associated with the Project. Following refinement of Project design and construction methods, the potential number of threatened species and/or threatened ecological communities affected, areas of disturbance and associated impacts are expected to be reduced. Where impacts cannot be avoided, management measures would be applied and/or Project specific mitigation measures would be developed and applied (where feasible) to reduce these impacts.

Offshore

Potential significant impacts to listed threatened bird species include:

- The physical presence of infrastructure above water has the potential for seabirds, shorebirds and terrestrial migrants that may be present in the offshore referral area during foraging to be at risk of collision with wind turbines
- The physical presence of offshore infrastructure, including wind turbine generator (WTG) foundations, offshore substations, and associated components has the potential to impact listed threatened bird species through influencing biological productivity in the water column, potentially affecting species that feed on plankton or rely on the settlement of planktonic larvae. Changes to benthic habitats may also alter prey availability for seabirds, either through habitat reduction or transformation. Further, presence of infrastructure below water may create additional habitat for fish or increase the number of prey species through creating artificial reefs. This may increase foraging behaviour of seabirds, which may subsequently increase collision risk.
- Five seabird species are listed as Endangered, seven shorebird species are listed as Critically Endangered or Endangered, and two terrestrial migratory land birds may, are likely to, or known to occur in the offshore referral area.
- There are 17 seabirds listed as Vulnerable (11 Albatross, two Tern, two Petrel species, the Fairy Prion, and Sooty Shearwater), nine shorebirds listed as Vulnerable, and three terrestrial birds listed as Vulnerable that have been identified as may occur or likely to occur within the offshore referral area.

Potential significant impacts to listed threatened marine mammals:

- Underwater noise and vibration from piling activities, and other construction and decommissioning activities have the potential to impact marine fauna from behavioural changes to auditory impairment, including Permanent Threshold Shift (PTS), Temporary Threshold Shift (TTS), or physical injury if species are exposed at close range or for extended periods.
- Two Endangered marine mammal species are likely or known to occur within the offshore referral area: the Blue Whale and the Southern Right Whale. Two subspecies of blue whale, the Antarctic Blue Whale and Pygmy Blue Whale are likely or known to occur in the offshore referral area. A foraging BIA for the Pygmy Blue Whale overlaps with the offshore referral area. The Southern Right Whale reproduction and migration BIA also overlaps with the offshore referral area. The implementation of management and mitigation measures is likely to reduce impacts to acceptable levels, but additional investigations are required to understand the use of the offshore referral area by marine fauna. Underwater noise modelling (inclusive of mitigation measures) is also required to assess potential impacts in further detail.

Potential significant impacts to listed threatened fish species:

- Underwater noise and vibration generated during the construction, operation and decommissioning phases of the project (i.e. vessel movements, piling activities, and the operation of WTGs) has the potential to result in behavioural effects to White Sharks within the species nursery BIA.

These impact pathways were assessed as having potential to be significant as they could:

- Lead to a long-term decrease in the size of a population
- Disrupt the breeding cycle of a population
- Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
- Interfere with the recovery of the species.

The Project and these impact pathways are considered unlikely to:

- Reduce the area of occupancy of the species
- Fragment an existing population into two or more populations
- Adversely affect habitat critical to the survival of a species
- Result in invasive species that are harmful to a listed species becoming established in the species' habitat
- Introduce disease that may cause the species to decline.

At the time of submission the magnitude and extent of potential impacts is uncertain. This uncertainty will be reduced through further investigations and detailed environmental assessment. Where impacts cannot be avoided, mitigation and management measures will be implemented to reduce impacts.

Other potential direct and indirect impacts to threatened species considered were assessed as being unlikely to result in significant impacts (e.g. potential impacts resulting from Project vessel routine discharges, artificial lighting, EMF and seabed/shoreline disturbance). Unplanned events and associated impacts such as vessel strikes, IMS, dropped objects and waste from Project vessels, and fuel/chemical spills are considered highly unlikely to occur with the implementation of mitigation and management measures as outlined in **Att 3, Table 6.2, pg 140-148**. As such, these are unlikely to result in significant impacts.

Onshore

Ecological values within the onshore referral area are expected to be mostly located within discrete areas. Based on aerial imagery and DEECA spatial data, most of the onshore referral area (approximately 88%) has been cleared or modified for various land uses, particularly for agriculture and forestry plantations. The Project footprint is relatively limited with the onshore cable construction corridor being approximately 50 m wide (to allow for micro-siting) by 6 to 10 km long. Therefore, direct impacts on threatened species and habitat, or threatened ecological communities are able to be avoided through route selection, and/or minimised through use of appropriate construction methods (i.e., trenchless construction). Further detailed assessments, including on ground assessment, will be carried out to identify onshore ecology values and inform refinement of Project design. Areas of high ecological value including the Darriman H29 Bushland Reserve and Giffard (Rifle Range) Flora Reserves will be avoided. Trenchless construction is proposed for the shore crossing within the McLoughlins Beach – Seaspray Coastal Reserve and other sensitive locations, where feasible. The work site for the shore crossing will be sited to minimise impacts on the coastal environment. A CEMP and OEMP will be used to manage construction and operation, and avoid and/or minimise direct and indirect impacts. Opportunities to employ the mitigation hierarchy are detailed in **Att 4, Section 6.4, pg 86-90**. As a result, significant impacts are unlikely as the Project is expected to be able to avoid and minimise impacts on threatened species and ecological communities.

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

Yes

4.1.4.8 Please elaborate why you think your proposed action is a controlled action. *

As there is potential for significant impacts to MNES, a precautionary approach has been adopted, and the proposed action is considered a ‘controlled action’.

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

The Project is committed to good practice environmental management in design, construction and operation. The referral area allows the Project the flexibility to adopt the principles of avoid, minimise, and offset to minimise the potential of significant impacts to MNES. Where impacts cannot be avoided, best practice environmental management measures in both construction and operations will be detailed in the Project's management plans. Specific mitigation measures may be developed to address any residual effects.

Mitigation measures and management measures applicable to offshore activities would include:

- Micro-siting and selection of cable routes and shore crossing sites to avoid or minimise disturbance to sensitive habitats. The siting of turbines will consider technical feasibility and constructability and will avoid where practicable sensitive environmental, social and cultural values including sensitive habitat such as rocky reef.
- A CEMP and OEMP containing measures such as:
    - Vessel discharges to be managed in accordance with Australian and international maritime legislation (e.g. Marine Orders, MARPOL)
    - Noise management and noise mitigation measures, including marine fauna observers to implement and oversee safety zones where required.
    - Limit lighting on vessels during construction, maintenance and decommissioning to that required for safe operations
    - Application of standard measures for cable burial and/or protection, with details to be informed by a Cable Burial Risk Assessment
    - Application of EPBC Regulation 2000, Part 8, Division 8.1 for vessel speeds and approach distances for marine mammals, including the use of marine mammal observers (MMO) where required
    - Appropriate storage of products on vessels, refuelling/bunkering procedures, spill clean-up kits on vessels to mitigate the risk of impact from unexpected spills.
    - Vessels and crew to be compliant with Australian standards and regulations for safety, navigation and communications systems
    - Compliance with the International Regulations for Preventing Collisions at Sea (COLREGs)
    - Compliance with Biosecurity Act 2015 requirements, Australian ballast water management requirements and national biofouling management guidance
    - Secure storage of equipment tools and waste onboard vessels, recovery of overboard materials if practicable, and waste management plan and record book (in accordance with Australian Marine Orders and MARPOL).

Mitigation measures and management measures applicable to onshore activities would include:

- Avoid impacts to native vegetation, populations and habitat for threatened communities and threatened and/or migratory species through project siting, design and construction methods (i.e., situate Project infrastructure outside of key areas of habitat and apply appropriate buffer zones). Where possible, locate Project infrastructure in areas with existing disturbance or low ecological value. If areas of native vegetation and habitat cannot be avoided, limit impacts to areas of lower quality and to the smallest extent that is reasonably practicable. Key areas that will be avoided, or impacts minimised through use of trenchless technologies, route alignment and micro-siting to prevent impact to ecological values include:
    - Giffard (Rifle Range) Flora Reserve
    - Darriman H29 Bushland Reserve
    - Lake Denison and associated estuarine habitats
    - McLoughlins Beach – Seaspray Coastal Reserve
    - DEECA mapped wetlands
    - High value waterways

    - Areas of roadside native vegetation along Giffard Road, Giffard West Road, McGaurans Beach Road and Owens Lane, where practicable.
- Use construction techniques, such as horizontal directional drilling (HDD) or direct pipe, to minimise impacts to native vegetation, environmentally sensitive locations such as waterway crossings, habitat and/or populations of threatened species, migratory species or communities
- Prepare a CEMP and Operation Environmental Management Plan (OEMP) containing measures to minimise impacts to threatened species and TECs. The CEMP and OEMP will include measures addressing issues such as:
    - Erosion and sediment control, and works to stabilise exposed soil to minimise impacts to waterways
    - Conducting earthworks in a manner that mitigates the risk of acid sulfate soil disturbance
    - Minimising removal of riparian vegetation to maintain bank stability and prevent erosion
    - Retaining and/or replacing woody debris in aquatic and terrestrial habitats
    - Measures to manage and mitigate noise and vibration impacts
    - Applying biosecurity procedures for equipment and machinery to minimise the risk of spreading pathogens (e.g., vehicle hygiene protocols)
    - Management and proper handling of fuels and other chemicals/contaminants to prevent spills (e.g., bunded storage areas, refuelling away from waterways, spill response protocols)
    - Pest plants and animal management (e.g., vehicle hygiene, proper handling and disposal of litter and wastes)
    - Any gravel or other materials required for construction will be sourced from certified Phytophthora-free suppliers or sterilised prior to use (e.g. heat treatment or chemical disinfection)
    - Requirements for restoration of landform and stability such as through recontouring disturbed land to safe and stable conditions, preventing erosion and supporting long-term geotechnical stability and managing drainage and hydrology to avoid future degradation.
    - Revegetation and habitat recovery
    - Monitoring and adaptive management including:
        - Regular monitoring to assess progress toward rehabilitation goals
        - Adjusting methods based on performance and environmental feedback
        - Reporting outcomes to regulatory bodies and stakeholders where required
- If residual effects cannot be avoided or mitigated, biodiversity offsets may be needed to compensate for residual impacts in accordance with the requirements of applicable Victorian and Commonwealth guidelines.

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

The Project may have residual biodiversity impacts that are unable to be avoided and therefore may require State and Commonwealth offsets. Further detailed assessment and surveys will determine the need for offsets which will depend on the location of the preferred onshore and offshore transmission cable corridors. Significant residual impacts to Commonwealth MNES would need to be offset in accordance with DCCEEW's EPBC Act Environmental Offsets Policy (DSEWPC, 2012). Native vegetation clearance would require offsets in accordance with Victoria's Guidelines for the removal, destruction or lopping of native vegetation (DELWP, 2025).

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
Yes	Yes	Actitis hypoleucos	Common Sandpiper
Yes	Yes	Apus pacificus	Fork-tailed Swift
Yes	Yes	Ardenna carneipes	Flesh-footed Shearwater, Fleshy-footed Shearwater
Yes	Yes	Ardenna grisea	Sooty Shearwater
Yes	Yes	Arenaria interpres	Ruddy Turnstone
Yes	Yes	Balaena glacialis australis	Southern Right Whale
Yes	Yes	Balaenoptera borealis	Sei Whale
Yes	Yes	Balaenoptera musculus	Blue Whale
Yes	Yes	Balaenoptera physalus	Fin Whale
Yes	Yes	Calidris acuminata	Sharp-tailed Sandpiper
Yes	Yes	Calidris alba	Sanderling
Yes	Yes	Calidris canutus	Red Knot, Knot
Yes	Yes	Calidris ferruginea	Curlew Sandpiper
Yes	Yes	Calidris melanotos	Pectoral Sandpiper
Yes	Yes	Calidris ruficollis	Red-necked Stint
Yes	Yes	Calidris tenuirostris	Great Knot
Yes	Yes	Caperea marginata	Pygmy Right Whale
Yes	Yes	Carcharias taurus	Grey Nurse Shark
Yes	Yes	Carcharodon carcharias	White Shark, Great White Shark
Yes	Yes	Caretta caretta	Loggerhead Turtle
Yes	Yes	Charadrius bicinctus	Double-banded Plover
Yes	Yes	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Charadrius mongolus	Lesser Sand Plover, Mongolian Plover
Yes	Yes	Charadrius veredus	Oriental Plover, Oriental Dotterel
Yes	Yes	Chelonia mydas	Green Turtle
Yes	Yes	Chlidonias leucopterus	White-winged Tern, White-winged Black Tern
Yes	Yes	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
Yes	Yes	Diomedea antipodensis	Antipodean Albatross
Yes	Yes	Diomedea epomophora	Southern Royal Albatross
Yes	Yes	Diomedea exulans	Wandering Albatross
Yes	Yes	Diomedea sanfordi	Northern Royal Albatross
Yes	Yes	Eubalaena australis	Southern Right Whale
Yes	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
Yes	Yes	Gallinago megala	Swinhoe's Snipe
Yes	Yes	Gallinago stenura	Pin-tailed Snipe
Yes	Yes	Gelochelidon nilotica	Gull-billed Tern
Yes	Yes	Hirundapus caudacutus	White-throated Needletail
Yes	Yes	Hydroprogne caspia	Caspian Tern
Yes	Yes	Isurus oxyrinchus	Shortfin Mako, Mako Shark
Yes	Yes	Lagenorhynchus obscurus	Dusky Dolphin
Yes	Yes	Lamna nasus	Porbeagle, Mackerel Shark
Yes	Yes	Limosa lapponica	Bar-tailed Godwit
Yes	Yes	Limosa limosa	Black-tailed Godwit
Yes	Yes	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
Yes	Yes	Macronectes halli	Northern Giant Petrel
Yes	Yes	Megaptera novaeangliae	Humpback Whale
No	No	Motacilla flava	Yellow Wagtail
Yes	Yes	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew

Direct impact	Indirect impact	Species	Common name
Yes	Yes	Numenius minutus	Little Curlew, Little Whimbrel
Yes	Yes	Numenius phaeopus	Whimbrel
Yes	Yes	Orcinus orca	Killer Whale, Orca
Yes	Yes	Pandion haliaetus	Osprey
Yes	Yes	Philomachus pugnax	Ruff (Reeve)
Yes	Yes	Phoebetria fusca	Sooty Albatross
Yes	Yes	Plegadis falcinellus	Glossy Ibis
Yes	Yes	Pluvialis fulva	Pacific Golden Plover
Yes	Yes	Pluvialis squatarola	Grey Plover
Yes	Yes	Rhincodon typus	Whale Shark
Yes	Yes	Sterna hirundo	Common Tern
Yes	Yes	Sternula albifrons	Little Tern
Yes	Yes	Thalassarche bulleri	Buller's Albatross, Pacific Albatross
Yes	Yes	Thalassarche carteri	Indian Yellow-nosed Albatross
Yes	Yes	Thalassarche cauta	Shy Albatross
Yes	Yes	Thalassarche chrysostoma	Grey-headed Albatross
Yes	Yes	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
Yes	Yes	Thalassarche melanophris	Black-browed Albatross
Yes	Yes	Thalassarche salvini	Salvin's Albatross
Yes	Yes	Thalassarche steadi	White-capped Albatross
Yes	Yes	Thalasseus bergii	Greater Crested Tern
Yes	Yes	Tringa brevipes	Grey-tailed Tattler
Yes	Yes	Tringa glareola	Wood Sandpiper
Yes	Yes	Tringa nebularia	Common Greenshank, Greenshank
Yes	Yes	Tringa stagnatilis	Marsh Sandpiper, Little Greenshank

Direct impact	Indirect impact	Species	Common name
Yes	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 Preliminary Marine Ecology Assessment (**Att 3, Section, pg 6.1.2, pg 140-148**) and Preliminary Onshore Ecology Assessment (**Att 4, Section 6.3.1, pg 79-81**) identify a number of migratory species as known, likely or may occur within the referral area. Therefore, there is potential for these migratory species to occur. Further site investigations and detailed assessments will be undertaken to confirm the presence of migratory species and/or their habitats and assess the potential for impacts on migratory species and inform development of measures to avoid and minimise impacts.

This section provides a summary of the potential impact pathways.

The Preliminary Marine Ecology Assessment (**Att 3, Table 5.3, pg 31-96**) and Preliminary Onshore Ecology Assessment (**Att 4, Appendix B and Appendix C**) reviewed all of the migratory species identified by the PMST and assessed several species as unlikely to occur. These species are not expected to be directly or indirectly impacted by the Project.

Offshore

Potential sources of direct impacts to migratory species associated with activities in the offshore referral area include:

- Vessel discharges to the marine environment. Vessel routine discharges such as sewage and waste oily water from Project vessels (installation, maintenance and support vessels) may result in highly localised changes in water quality and temporary localised food source for birds, whose numbers may increase as a result.
- Physical presence of infrastructure above water. Presence of Project infrastructure such as turbines and offshore substations may alter the natural movements and behaviours of marine fauna or deter species from using areas of the marine environment that they currently use (breeding, resting, and foraging areas) and result in collision risk and barotrauma causing injury or mortality to avifauna.
- Physical presence of infrastructure below water. Presence of Project infrastructure such as turbines and offshore substations may result in the removal or disturbance to benthic habitat, changes to benthic habitat communities, suspended sediments and sediment deposition, changes to natural patterns of ocean water movement (currents, waves, and mixing dynamics), changes to natural patterns of marine sediment transport which may result in burial, erosion and modification, smothering and fragmentation of benthic habitats and communities, smothering and scour effects on benthic habitats, or barrier effects altering the natural movements and behaviours of marine fauna or deterring species from using areas of the marine environment they currently use.
- Underwater noise and vibration from Project activities such as use of vessels, piling, installation of infrastructure and scour protection, may result in behavioural avoidance/disturbance; temporary or permanent hearing impairment to some sensitive species; and masking/interference of biologically important sounds (including vocal communication and echolocation).
- Artificial lighting from Project vessels, aviation obstruction lighting, and marine navigational lighting may result in attraction of prey species or attraction, disorientation effects.
- Electro-magnetic fields (EMF) from operation of export cables may result in highly localised interference with detection of prey and predators for sensitive species such as sharks and rays

Unplanned events (i.e. risks) with potential to directly impact migratory species include:

- Vessel strikes (unplanned) to marine fauna can cause physical injury or death.
- Dropped objects and waste from vessels (unplanned) can result in changes in water and sediment quality, pollution and contamination of shoreline habitats and wetlands, fouling, injury or mortality of marine fauna and cause toxic effects to fishes.
- Fuel/chemical spills/hydraulic spills (unplanned) from minor deck spills, refuelling spills, vessel collisions and discharge of hydraulic fluids from turbines during operation can cause changes in water and sediment quality, pollution and contamination of shoreline habitats and wetlands, fouling, injury or mortality of marine fauna and toxic effects to marine fauna.

Potential sources of indirect impacts to migratory species associated with activities in the offshore referral area include:

- Physical presence of infrastructure below water may result in changes to benthic habitats that may change marine mammal prey availability or alter the spatial distribution of biological productivity in the water column which may indirectly impact marine fauna.
- Underwater noise and vibration may result in behavioural disturbances which may indirectly result in the reduction in prey species.
- Unplanned introduction of IMS (risk event) may result in changes to benthic habitat and the ecological community composition which may indirectly impact marine mammal prey availability and competition for prey species.
- Unplanned fuel/chemical spills/hydraulic spills (risk event) may indirectly impact marine fauna via the ingestion of contaminated prey species.

The potentially impacted migratory species that have the potential to occur in the offshore referral area include:

- 17 migratory marine species (7 whale, 1 dolphin, 5 shark and 3 marine turtle species)
- 19 species of migratory seabirds (2 shearwater, 13 albatross, 2 petrel, 2 other)
- 28 migratory shorebirds (7 sandpipers, 6 plover, 3 snipes, 2 curlew, 2 godwit, 8 others)
- 4 migratory terrestrial birds

Onshore

There is the potential for impacts to migratory species known or considered as having the potential to occur in the onshore referral area. All 31 of the potentially impacted migratory species that have the potential to occur in the onshore referral area are migratory birds. Mitigation measures have been proposed to avoid and minimise direct and indirect impacts to onshore ecological values during the route selection and detailed design phase, as well as during the construction and operation stages of the Project. However, in the absence of such mitigation the potential impacts to migratory species using the onshore referral area are expected to be mostly associated with:

Direct impacts to migratory species associated with activities in the onshore referral area including:

- Direct loss of vegetation and fauna habitat:
    - Loss, degradation and/or fragmentation of habitat for migratory species
    - Loss, degradation, barrier effects and/or fragmentation of intertidal, wetland, freshwater or terrestrial habitat
- Direct loss of fauna:
    - Injury, mortality or displacement of fauna during construction or operation
    - Physical and toxicity effects to fauna populations, including breeding/roosting/foraging habitats from construction activities or unplanned events

Indirect impacts to migratory species associated with activities in the onshore referral area including:

- Loss or degradation of vegetation and migratory fauna habitat including ground disturbance, sedimentation and erosion, changes in surface water quality, hydrological and groundwater changes, dust, noise and electromagnetic field (EMF)
- Indirect effects on fauna due to potential reduction in prey availability as a result of impacts on prey species
- Introduction and/or spread of weeds, pathogens and other pest plants and animals
- Dewatering of groundwater during construction resulting in changes to groundwater dependent ecosystems
- Ground disturbance increasing the risks of acid sulfate soils

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

Yes

4.1.5.5 Describe why you consider this to be a Significant Impact. *

The preliminary marine ecology assessment (**Att 3**) has identified the potential for significant impacts on migratory species from the Project's offshore activities, in accordance wiwth the EPBC Act Significant Impact Guidelines 1.1. The preliminary onshore ecology assessment (**Att 4**) assessed the Project's onshore activities as unlikely to have a significant impact on migratory species in accordance with the Significant Impact Guidelines 1.1 given habitat for migratory species is expected to be mostly located in discrete areas and therefore able to be avoided or impacts to be minimised through route selection and selection of construction methods (e.g., HDD or direct pipe). These assessments are described in **Att 3, Section 7.1, pg 168-171,182-183, 192-193, & 204-205** and **Att 4, Section 6.3.1, pg 79-81**.

Additional investigations and detailed assessments will be undertaken to further understand the existing environment and impact pathways associated with the Project. Following refinement of Project design and construction methods, the potential number of species affected, areas of disturbance and associated impacts are expected to be reduced. Where impacts cannot be avoided, management measures would be applied and/or Project specific mitigation measures would be developed and applied (where feasible) to reduce these to acceptable levels.

Offshore

The offshore referral area and wider offshore study area support 18 migratory seabirds, 31 migratory shorebirds and four migratory terrestrial birds, many of which are also listed threatened species and considered in the section above.

The presence of operating turbines may pose a barrier to movement and a collision risk for these species.

Migratory bird species that migrate across the Bass Strait to breeding grounds in Tasmania may overfly the Commonwealth waters of the offshore referral area, where there is potential for the proposed activities to significantly impact the breeding cycle of a population. While individuals of transient or foraging seabirds occurring within the offshore referral area may be impacted by the proposed activities, the disruption of the breeding cycle of a population of the listed migratory bird species is unlikely.

The offshore referral area and wider offshore study area support 8 migratory marine mammal species, including the Blue Whale and Southern Right Whale that have BIAs for foraging and reproduction that intersect with the offshore referral area. Project activities may temporarily affect habitat quality and availability for migratory marine mammals, particularly during sensitive life stages, and temporarily disrupt key lifecycle behaviours, including migration, foraging, and resting. However, these species are highly mobile and do not rely exclusively on habitat within the offshore referral area. The spatial footprint of activities is small, and changes to hydrological regimes are expected to be negligible and not ecologically significant. The ability of these migratory species to travel large distances reduces the likelihood that temporary or localised disturbances would seriously disrupt an ecologically significant proportion of the population.

Five migratory fish species were identified as having potential to occur within the offshore referral area. These species are highly mobile, and their habitats are widespread. However, there is the potential for disturbance to the White Shark nursery BIA during construction of the offshore wind farm.

These impact pathways were assessed as having potential to be significant for migratory birds, mammals and fish as they could:

- Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species
- Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.

The Project and its impact pathways were assessed as being 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

At this stage, it is not possible to determine which specific species may be affected or to quantify the magnitude of potential impacts. To address this uncertainty, baseline bird surveys are currently underway to better understand the seasonal use of the offshore referral area by migratory bird species. The data collected, along with collision risk modelling, will inform a detailed assessment of potential population-level impacts and guide the development of appropriate mitigation strategies.

Given uncertainty about the presence, numbers and behaviours of listed migratory seabirds and shorebirds and terrestrial species within the offshore referral area, the Project is conservatively assessed as having the potential for significant impact.

Other potential direct and indirect impacts to migratory species considered were assessed as being unlikely to result in significant impacts (e.g. potential impacts resulting from routine discharges from vessels, seabed disturbance from construction, artificial lighting on vessels and turbines, and EMF from cables).

Unplanned events and associated impacts such as introduction of IMS, collision between a Project vessel and marine fauna, dropped objects and waste from vessels, and vessel fuel/chemical spills are considered highly unlikely to occur with the implementation of mitigation and management measures as outlined in **Att 3, Table 6.2, pg 141-148**. As such, these are unlikely to result in significant impacts.

Onshore

The majority of the onshore referral area is comprised of disturbed areas used for agriculture and forestry, with discrete areas of ecological value, including coastal, estuarine and other wetland habitats that are known or likely to provide habitat for and/or support migratory bird species. Further assessment is proposed to characterise the extent and location of important habitat for migratory species within the onshore referral area. Project infrastructure will be sited and designed to avoid and minimise impacts on these values where possible. Areas of high ecological value including coastal wetlands and the Lake Denison estuary will be avoided. Trenchless construction is proposed for the shore crossing within the McLoughlins Beach – Seaspray Coastal Reserve and other sensitive locations, where feasible. The work site for the shore crossing will be sited to minimise impacts on the coastal environment. A CEMP and OEMP will be used to manage construction and operation, and avoid and/or minimise direct and indirect impacts. Further assessment will be carried out to assess the potential for significant impacts on migratory species, however, with adoption of the proposed mitigation measures and avoidance of areas where known or potential EPBC Act listed migratory species may occur, it is unlikely the Project's onshore activities will result in significant impacts to EPBC Act listed migratory bird species.

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

Yes

4.1.5.8 Please elaborate why you think your proposed action is a controlled action. *

As there is potential for significant impacts to MNES, a precautionary approach has been adopted, and the proposed action is considered a 'controlled action'.

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

The Project is committed to good practice environmental management in design, construction and operation. The referral area allows the Project the flexibility to adopt the principles of avoid, minimise, and offset to minimise the potential of significant impacts to MNES. Where impacts cannot be avoided, best practice environmental management measures in both construction and operations will be detailed in the Project's management plans. Specific mitigation measures may be developed to address any residual effects.

Mitigation measures and management measures applicable to offshore activities would include:

- Micro-siting and selection of cable routes and shore crossing sites to avoid or minimise disturbance to sensitive habitats. The siting of turbines will consider technical feasibility and constructability and will avoid where practicable sensitive environmental, social and cultural values including sensitive habitat such as rocky reef.
- A CEMP and OEMP containing measures such as:
    - Vessel discharges to be managed in accordance with Australian and international maritime legislation (e.g. Marine Orders, MARPOL)
    - Noise management and noise mitigation measures, including marine fauna observers to implement and oversee safety zones where required
    - Limit lighting on vessels during construction, maintenance and decommissioning to that required for safe operations
    - Application of standard measures for cable burial and/or protection, with details to be informed by a Cable Burial Risk Assessment
    - Application of EPBC Regulation 2000, Part 8, Division 8.1 for vessel speeds and approach distances for marine mammals, including the use of a marine mammal observer (MMO) where required
    - Appropriate storage of products on vessels, refuelling/bunkering procedures, spill clean-up kits on vessels to mitigate the risk of impact from unexpected spills.
    - Vessels and crew to be compliant with Australian standards and regulations for safety, navigation and communications systems
    - Compliance with the International Regulations for Preventing Collisions at Sea (COLREGs)
    - Compliance with Biosecurity Act 2015 requirements, Australian ballast water management requirements and national biofouling management guidance
    - Secure storage of equipment tools and waste onboard vessels, recovery of overboard materials if practicable, and waste management plan and record book (in accordance with Australian Marine Orders and MARPOL).

Mitigation measures and management measures applicable to onshore activities would include:

- Avoid impacts to native vegetation, populations and habitat for threatened communities and threatened and/or migratory species through project siting, design and construction methods (i.e., situate Project infrastructure outside of key areas of habitat and apply appropriate buffer zones). Where possible, locate Project infrastructure in areas with existing disturbance or low ecological value. If areas of native vegetation and habitat cannot be avoided, limit impacts to areas of lower quality and to the smallest extent that is reasonably practicable. Key areas that will be avoided, or impacts minimised through use of trenchless technologies, route alignment and micro-siting to prevent impact to ecological values include:
    - Giffard (Rifle Range) Flora Reserve
    - Darriman H29 Bushland Reserve
    - Lake Denison and associated estuarine habitats
    - McLoughlins Beach – Seaspray Coastal Reserve
    - DEECA mapped wetlands
    - High value waterways

    - Areas of roadside native vegetation along Giffard Road, Giffard West Road, McGaurans Beach Road and Owens Lane, where practicable.
- Use construction techniques, such as horizontal directional drilling (HDD) or direct pipe, to minimise impacts to native vegetation, environmentally sensitive locations such as waterway crossings, habitat and/or populations of threatened species, migratory species or communities
- Prepare a CEMP and Operation Environmental Management Plan (OEMP) containing measures to minimise impacts to threatened species and TECs. The CEMP and OEMP will include measures addressing issues such as:
    - Erosion and sediment control, and works to stabilised exposed soil to minimise impacts to waterways
    - Conducting earthworks in a manner that mitigates the risk of acid sulfate soil disturbance
    - Minimising removal of riparian vegetation to maintain bank stability and prevent erosion
    - Retaining and/or replacing woody debris in aquatic and terrestrial habitats
    - Measures to manage and mitigate noise and vibration impacts
    - Applying biosecurity procedures for equipment and machinery to minimise the risk of spreading pathogens (e.g., vehicle hygiene protocols)
    - Management and proper handling of fuels and other chemicals/contaminants to prevent spills (e.g., bunded storage areas, refuelling away from waterways, spill response protocols)
    - Pest plants and animal management (e.g., vehicle hygiene, proper handling and disposal of litter and wastes)
    - Any gravel or other materials required for construction will be sourced from certified Phytophthora-free suppliers or sterilised prior to use (e.g. heat treatment or chemical disinfection)
    - Requirements for restoration of landform and stability such as through recontouring disturbed land to safe and stable conditions, preventing erosion and supporting long-term geotechnical stability and managing drainage and hydrology to avoid future degradation.
    - Revegetation and habitat recovery
    - Monitoring and adaptive management including:
        - Regular monitoring to assess progress toward rehabilitation goals
        - Adjusting methods based on performance and environmental feedback
        - Reporting outcomes to regulatory bodies and stakeholders where required
    - If residual effects cannot be avoided or mitigated, biodiversity offsets may be needed to compensate for residual impacts in accordance with the requirements of applicable Victorian and Commonwealth guidelines.

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

Further detailed assessment and surveys will determine the need for offsets which will depend on the location of the preferred onshore and offshore transmission cable corridors. Significant residual impacts to Commonwealth MNES would need to be offset in accordance with DCCEEW's EPBC Act Environmental Offsets Policy (DSEWPC, 2012).

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 proposed action does not involve a nuclear action.

4.1.7 Commonwealth Marine Area

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

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

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

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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 Project is located within and therefore has potential to impact a Commonwealth marine area, as described in the Preliminary Marine Ecology Assessment (**Att 3, Section 6.1.2, pg 140-148, Section 7.2, pg 206**). This section provides a summary of potential impacts.

Further site investigations and detailed assessments will be undertaken to assess potential impacts on the Commonwealth marine area and inform development of measures to avoid and minimise impacts.

Potential sources of direct impacts to the Commonwealth marine area are associated with activities in the offshore referral area and include:

- Vessel discharges to the marine environment. Vessel routine discharges such as sewage and waste oily water from Project vessels (installation, maintenance and support vessels) may result in highly localised changes in water quality and temporary localised food source for birds, whose numbers may increase as a result, and impact fisheries.
- Underwater noise and vibration from Project activities such as use of vessels, piling, installation of infrastructure and scour protection, may result in behavioural avoidances and changes, temporary or permanent hearing impairment to some organisms, masking or interference of biologically important sounds (including vocal communication and echolocation), and may affect fisheries.
- Physical presence of infrastructure above water. Presence of Project infrastructure such as turbines and offshore substations may alter shipping and navigation routes in the area and alter the visual landscape. The preliminary review of SLVIA considerations concludes that at distances of 11 to 14 km offshore the turbines will be noticeable but not dominant elements in views from the onshore environment (**Att 6, Section 9, pg 30**). Inland visibility is limited due to dunes, vegetation and local landform.
- Physical presence of infrastructure below water and seabed disturbance. Installation and presence of Project infrastructure such as turbines and offshore substations may result in the removal or disturbance to benthic habitat, changes to benthic habitat communities, suspended sediments and sediment deposition, changes to natural patterns of ocean water movement (currents, waves, and mixing dynamics), changes to natural patterns of marine sediment transport which may result in burial, erosion and modification, smothering and fragmentation of benthic habitats and communities, smothering and scour effects on benthic habitats, or barrier effects altering the natural movements and behaviours of marine fauna or deterring species from using areas of the marine environment they currently use, potentially affecting fisheries. Seabed disturbance also has the potential to impact on archaeological sites present within the referral area.
- Artificial lighting from Project vessels, aviation obstruction lighting, and marine navigational lighting may result in impacts to listed marine, listed cetacean or ecological function of the Commonwealth marine environment.
- Electro-magnetic fields (EMF) from operation of export cables may result in highly localised interference with detection of prey and predators for species of sharks, rays or other sensitive species.

Unplanned events (i.e. risks) with potential to directly or indirectly impact Commonwealth marine area include:

- Unplanned vessel strikes (risk event) could impact cetaceans or listed marine species.
- Unplanned dropped objects and waste from vessels (risk event) can result in changes in water and sediment quality, pollution and contamination of shoreline habitats and wetlands, fouling, injury or mortality of marine fauna and cause toxic effects to fishes and fisheries.
- Unplanned fuel/chemical spills/hydraulic spills (risk event) from minor deck spills, refuelling spills, vessel collisions and discharge of hydraulic fluids from turbines during operation can cause changes in water and sediment quality, pollution and contamination of shoreline habitats and wetlands, fouling, injury or mortality of marine fauna and toxic effects to marine fauna and fisheries

These potential risks to the Commonwealth marine area are considered highly unlikely. Mitigation and management measures, as outlined in Section 4.1.7.10, would be implemented to prevent unplanned events and address these risks.

Potential sources of indirect impacts to Commonwealth marine area associated with activities in the offshore referral area include:

- Physical presence of infrastructure below water may result in changes to benthic habitats and the spatial distribution of biological productivity in the water column which may indirectly impact marine fauna and fisheries.
- Underwater noise and vibration may result in behavioural disturbances to listed marine, cetaceans or other species, which may indirectly impact ecological function in the Commonwealth marine area.
- Unplanned introduction of IMS (risk event) may result in changes to benthic habitat and the ecological community composition which may indirectly impact marine mammal prey availability and fisheries
- Unplanned fuel/chemical spills/hydraulic spills may indirectly impact fisheries via the ingestion of contaminated prey species.

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

Yes

4.1.7.5 Describe why you consider this to be a Significant Impact. *

The Preliminary Marine Ecology Assessment Report (**Att 3, Section 7.2 page 206-208**) and Cultural Heritage Desktop Assessment (**Att 5, Section 6.3, pg 94-95**) assess the potential for significant impacts to the Commonwealth marine area with consideration of the significant impact criteria. The Preliminary Marine Ecology Assessment concludes there to be potential for significant impact on habitat and marine species, noting that the introduction of management and mitigation measures are likely to reduce impacts. The Preliminary Marine Ecology Assessment concludes potential impacts from the establishment of pest species, changes in air quality or water quality or potentially harmful chemical accumulation are unlikely to be significant and therefore are not discussed below. Refer to **Att 3, Section 7.2, pg 206-208** for further information.

The Cultural Heritage Desktop Assessment concludes the Project is unlikely to result in a significant impact on Commonwealth marine area in relation to heritage matters, however it is noted that impacts on cultural values can only be determined through the completion of a cultural values assessment. Therefore this referral assumes that there is the potential for impacts on Commonwealth marine area in relation to heritage matters.

Habitat modification

Habitat modification may occur due to seabed disturbance resulting from the installation and presence of offshore infrastructure. This includes WTGs installed on foundations secured into the seabed, a network of subsea inter-array cables laid on the seafloor, one or two offshore substation platforms installed on seabed-secured foundations, and export cables laid on the seafloor and protected through armouring or burial.

While these components will result in a physical footprint on the seabed, the overall area of disturbance is expected to be limited relative to the broader marine environment. To minimise impacts, geophysical, geotechnical, and benthic habitat surveys will be undertaken to inform infrastructure siting. These studies will support micro-siting of Project components to avoid sensitive habitats and reduce the extent of disturbance wherever practicable.

Based on current knowledge, there is potential for the proposed activities to modify, destroy, fragment, isolate, or disturb an important or substantial area of habitat in a manner that could adversely affect marine ecosystem functioning or integrity within a Commonwealth marine area. However, with the introduction of best industry practice management and mitigation measures, these impacts are expected to be reduced.

Marine population

The proposed activities have the potential to impact marine species and cetaceans through a range of pathways. As referenced in Section 4.1.7.2, the key potential impacts include:

- Underwater noise and vibration (particularly relevant to cetaceans and other marine mammals)
- Physical presence of infrastructure (above and below water) (including collision risk to birds)
- Vessel movements and routine discharges
- Seabed disturbance
- Light emissions
- EMF

For cetaceans, the most significant risks relate to marine traffic (project vessels), underwater noise and the physical presence of infrastructure, which may temporarily disrupt behaviours such as migration, foraging, and resting.

To minimise potential impacts on marine species and cetaceans, a comprehensive suite of management and mitigation measures will be implemented. These include the development of an EMP, vessel compliance with Australian maritime safety, navigation, and environmental regulations such as COLREGs and MARPOL, and applying protocols for refuelling, bunkering, and spill response. Lighting will be managed to reduce disturbance to fauna and sensitive habitats, while safety zones, navigational aids, and traffic separation schemes will be established to support safe marine operations. Infrastructure will be clearly

marked on nautical and aeronautical charts, and micro-siting will be used to avoid sensitive benthic habitats, cultural heritage sites, and third-party assets. Standard cable burial and scour protection measures will be applied, and biosecurity protocols will be followed to prevent the introduction of marine pests. Stakeholder engagement with relevant authorities and marine users will be ongoing to support coordinated and informed implementation of these measures.

In addition to these controls, further studies and investigations will be undertaken as part of the detailed environmental impact assessment to refine understanding of potential impacts and guide adaptive management. These studies include geophysical, geotechnical, and benthic habitat surveys to inform infrastructure siting, targeted marine fauna surveys to characterise species presence and habitat use, and acoustic modelling to assess underwater noise propagation. Where appropriate, additional mitigation measures, and adaptive protocols for sensitive species and life stages will be considered.

Based on current knowledge, there is potential that the proposed activities will have a substantial adverse effect on the lifecycle, population viability, or spatial distribution of marine species or cetaceans, but with management and mitigation measures, these impacts are likely to be reduced.

Heritage

The proposed activities that include seabed disturbance have the potential to impact heritage values of the Commonwealth marine area.

Current knowledge based on publicly available information, conditions during and since inundation of the landscape due to sea-level rise are heavily weighted towards the dissolution of submerged Aboriginal terrestrial sites. There is a possibility that in very localised areas under favourable conditions, more robust site types may have survived with some degree of integrity. For the most part it can be expected that the artefacts that comprised these sites are present within lag (secondary) deposits within depressions such as former drainage lines and paleovalleys within the study area. Locations with cultural heritage significance other than archaeological deposits can only be established following additional consultation with GunaiKurnai through a cultural values assessment.

Database searches have identified one known shipwreck site in or in the vicinity of the Commonwealth marine area, the SS Glenelg. A further 60 vessels are listed on registers and databases as having a wrecking location on Ninety Mile Beach, Eastern Bass Strait, or an unknown location on a route traversing the Bass Strait. Many of these vessels were wrecked during the 19th century while transporting coal from Newcastle to Melbourne or were wrecked in routes around Tasmania and Bass Strait. While the likelihood of any of these wrecks occurring within the referral area is small, there is a possibility that material from these vessels could have drifted into the referral area. The location of the SS Glenelg has been established.

Based on current knowledge, there is potential that the proposed activities will have an effect on underwater heritage, noting that further underwater cultural heritage investigations will be undertaken to inform management and mitigation measures, and impacts are therefore likely to be reduced.

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

Yes

4.1.7.8 Please elaborate why you think your proposed action is a controlled action. *

The preliminary assessment has identified the potential for the Project to result in significant impacts to the Commonwealth marine area and its habitat and marine species and therefore triggers the criteria to be a controlled action.

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

The Project is committed to good practice environmental management in design, construction and operation. The referral area allows the Project the flexibility to adopt the principles of avoid, minimise, and offset to minimise the potential of significant impacts to Commonwealth marine areas. Where impacts cannot be avoided, best practice environmental management measures in both construction and operations will be detailed in the Project's management plans. Specific mitigation measures may be developed to address any residual effects.

Mitigation measures and management measures applicable to activities within the Commonwealth marine area would include:

- Micro-siting and selection of cable routes and shore crossing sites to avoid or minimise disturbance to sensitive habitats. The siting of turbines will consider technical feasibility and constructability and will avoid where practicable sensitive environmental, social and cultural values including sensitive habitat such as rocky reef. The siting will avoid the S.S Glenelg shipwreck. Route selection for the cable corridors will consider geotechnical conditions, locations of existing infrastructure (e.g. Tas Gas pipeline, Basslink, Saline Wastewater Outfall Pipeline) and any identified habitat or cultural values.
- A CEMP and OEMP containing measures such as:
    - Vessel discharges to be managed in accordance with Australian and international maritime legislation (e.g., Marine Orders, MARPOL)
    - Noise management and noise mitigation measures, including marine fauna observers to implement and oversee safety zones where required
    - Limit lighting on vessels during construction, maintenance and decommissioning to that required for safe operations
    - Application of standard measures for cable burial and/or protection, with details to be informed by a Cable Burial Risk Assessment
    - Application of EPBC Regulation 2000, Part 8, Division 8.1 for vessel speeds and approach distances for marine mammals, including the use of a marine mammal observer (MMO) where required
    - Appropriate storage of products on vessels, refuelling/bunkering procedures, spill clean-up kits on vessels to mitigate the risk of impact from unexpected spills.
    - Vessels and crew to be compliant with Australian standards and regulations for safety, navigation and communications systems
    - Compliance with the International Regulations for Preventing Collisions at Sea (COLREGs)
    - Compliance with Biosecurity Act 2015 requirements, Australian ballast water management requirements and national biofouling management guidance
    - Secure storage of equipment tools and waste onboard vessels, recovery of overboard materials if practicable, and waste management plan and record book (in accordance with Australian Marine Orders and MARPOL).
- An Underwater Cultural Heritage Management Plan would be required in relation to all identified underwater cultural heritage (including the SS Glenelg). An underwater cultural heritage assessment will be undertaken in consultation with DCCEEW and GLaWAC to determine the extent of underwater cultural heritage that may be impacted by the Project.

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

Further detailed assessment and surveys will determine the need (if any) for offsets based on the residual impacts of the Project. Significant residual impacts to Commonwealth MNES would need to be offset in accordance with DCCEEW's EPBC Act Environmental Offsets Policy (DSEWPC, 2012).

4.1.8 Great Barrier Reef

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

No

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

The Project is not within proximity to the Great Barrier Reef. The Great Barrier Reef will not be impacted by the Project.

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 proposed action does not involve the construction or operation of coal seam gas wells; and does not involve the extraction of coal seam gas.

4.1.10 Commonwealth Land

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

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

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

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

No

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

No Commonwealth Land was identified by the PMST within 10 km of the referral area. The proposed action will avoid direct and/or indirect impact to any Commonwealth Land.

4.1.11 Commonwealth Heritage Places Overseas

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

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

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

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

No

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

The Project activities do not intersect any areas of Commonwealth Heritage Places Overseas and therefore impacts to Commonwealth Heritage Places Overseas are not anticipated.

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:

- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Commonwealth Marine Area (S23)

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)
- Nuclear (S21)
- 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. *

In December 2022 the Minister for Climate Change and Energy declared the Gippsland offshore wind area (OEI-01-2022) which spans approximately 15,000 km2 in the Bass Strait, extending offshore from Lakes Entrance to south of Wilsons Promontory. This declaration followed consultation with local communities, Commonwealth, state and local governments, First Nations people and existing industries including shipping, defence, fishing and other marine users. The waters west of Wilsons Promontory were excluded following consultation due to environmental concerns, including the migration path of the Orange-Bellied Parrot and whale migration routes, and community concerns about visual impact.

BMN was awarded the first feasibility licence (FL-001) on 29 April 2024 to allow them to begin the assessment work needed to determine the feasibility of the Project within an area of approximately 163 km2. This offshore wind farm proposed within this referral is located within the feasibility licence area. No alternative offshore locations are therefore considered possible.

As described in Section 1.2.5, the Victorian government is pursuing the Gippsland Offshore Wind Transmission 2 GW project (EPBC 2024/09980) which includes a connection hub near Giffard. The Blue Mackerel Offshore Wind Project would be required to connect to Victoria's electricity network via this connection hub, within VicGrid's proposed Gippsland Shoreline Renewable Energy Zone as defined in the 2025 Victorian Transmission Plan. No alternative onshore locations are possible.

The Project's aim is to generate one GW of clean, renewable energy to contribute to Commonwealth and Victorian climate action goals, specifically the Victorian Government's legislated offshore wind energy generation target for Victoria of at least 2 GW by 2032. Therefore, no alternative timeline is considered possible.

The Project is investigating options for the location of the trenchless shore crossing and cable construction corridors within the referral area. This will take into consideration technical feasibility, environmental, social and cultural impacts, and engagement with GLaWAC and relevant landholders. This referral presents broad cable investigation areas to enable the assessment of options to avoid and minimise impacts.

Similarly, the siting and layout of individual infrastructure components (i.e., turbines, subsea cables and offshore substation/s) within the feasibility licence area will be determined considering design and constructability requirements, efficient use of the site and to avoid and minimise environmental impacts.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1_Figures.pdf Attachment 1 - Figures	22/12/2025	No	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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att2 _HSSE Policy.pdf Attachment 2 - HSSE Policy	22/12/2025	No	High

2.2.5 Tenure of the action area relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1_Figures.pdf Attachment 1 - Figures	22/12/2025	No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1_Figures.pdf Attachment 1 - Figures	22/12/2025	No	High
#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6	22/12/2025	No	High
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#7.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf	22/12/2025	No	High

		Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6			
#8.	Document	Att4_Preliminary Onshore Ecology Assessment.pdf Attachment 4 - Preliminary Onshore Ecology Assessment	22/12/2025	No	High
#9.	Document	Att5_Cultural Heritage Desktop Assessment.pdf Attachment 5 - Cultural Heritage Desktop Assessment	22/12/2025	Yes	High

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1_Figures.pdf Attachment 1 - Figures	22/12/2025	No	High
#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6	22/12/2025	No	High
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#7.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6	22/12/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1_Figures.pdf Attachment 1 - Figures	22/12/2025	No	High

#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6	22/12/2025		High
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#7.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6	22/12/2025	No	High
#8.	Document	Att4_Preliminary Onshore Ecology Assessment.pdf Attachment 4 - Preliminary Onshore Ecology Assessment	22/12/2025	No	High
#9.	Document	Att6_Preliminary Visual Assessment.pdf Attachment 6 - Preliminary Visual Assessment	22/12/2025	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6	22/12/2025	No	High
#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf	22/12/2025	No	High

Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6					
#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6	22/12/2025	No	High
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6	22/12/2025	No	High
#7.	Document	Att4_Preliminary Onshore Ecology Assessment.pdf Attachment 4 - Preliminary Onshore Ecology Assessment	22/12/2025	No	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1_Figures.pdf Attachment 1 - Figures	22/12/2025	No	High
#2.	Document	Att4_Preliminary Onshore Ecology Assessment.pdf Attachment 4 - Preliminary Onshore Ecology Assessment	22/12/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1_Figures.pdf Attachment 1 - Figures	22/12/2025	No	High
#2.	Document	Att5_Cultural Heritage Desktop Assessment.pdf Attachment 5 - Cultural Heritage Desktop Assessment	22/12/2025	Yes	High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att5_Cultural Heritage Desktop Assessment.pdf Attachment 5 - Cultural Heritage Desktop Assessment	22/12/2025	Yes	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4_Preliminary Onshore Ecology Assessment.pdf Attachment 4 - Preliminary Onshore Ecology Assessment	22/12/2025	No	High

4.1.3.3 (Ramsar Wetland) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6	22/12/2025	No	High
#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6	22/12/2025	No	High
#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6	22/12/2025	No	High
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6	22/12/2025	No	High
#7.	Document	Att4_Preliminary Onshore Ecology Assessment.pdf Attachment 4 - Preliminary Onshore Ecology Assessment	22/12/2025	No	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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf	22/12/2025	No	High

		Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6			
#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6	22/12/2025	No	High
#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6	22/12/2025	No	High
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6	22/12/2025	No	High
#7.	Document	Att4_Preliminary Onshore Ecology Assessment.pdf Attachment 4 - Preliminary Onshore Ecology Assessment	22/12/2025	No	High

4.1.4.5 (Threatened Species and Ecological Communities) Why you consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6	22/12/2025	No	High
#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6	22/12/2025	No	High
#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf	22/12/2025	No	High

Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6					
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6	22/12/2025	No	High
#7.	Document	Att4_Preliminary Onshore Ecology Assessment.pdf Attachment 4 - Preliminary Onshore Ecology Assessment	22/12/2025	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6	22/12/2025	No	High
#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6	22/12/2025	No	High
#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6	22/12/2025	No	High
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6	22/12/2025	No	High
#7.	Document	Att4_Preliminary Onshore Ecology Assessment.pdf Attachment 4 - Preliminary Onshore Ecology Assessment	22/12/2025	No	High

4.1.5.5 (Migratory Species) Why you consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6	22/12/2025	No	High
#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6	22/12/2025	No	High
#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6	22/12/2025	No	High
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6	22/12/2025	No	High
#7.	Document	Att4_Preliminary Onshore Ecology Assessment.pdf Attachment 4 - Preliminary Onshore Ecology Assessment	22/12/2025	No	High

4.1.7.2 (Commonwealth Marine Area) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6	22/12/2025	No	High
#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6	22/12/2025	No	High

#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6	22/12/2025	No	High
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6	22/12/2025	No	High
#7.	Document	Att6_Preliminary Visual Assessment.pdf Attachment 6 - Preliminary Visual Assessment	22/12/2025	No	High

4.1.7.5 (Commonwealth Marine Area) Why you consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3_Preliminary Marine Ecology Assessment_Part1.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 1 of 6	22/12/2025	No	High
#2.	Document	Att3_Preliminary Marine Ecology Assessment_Part2.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 2 of 6	22/12/2025	No	High
#3.	Document	Att3_Preliminary Marine Ecology Assessment_Part3.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 3 of 6	22/12/2025	No	High
#4.	Document	Att3_Preliminary Marine Ecology Assessment_Part4.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 4 of 6	22/12/2025	No	High
#5.	Document	Att3_Preliminary Marine Ecology Assessment_Part5.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 5 of 6	22/12/2025	No	High
#6.	Document	Att3_Preliminary Marine Ecology Assessment_Part6.pdf Attachment 3 - Preliminary Marine Ecology Assessment Part 6 of 6	22/12/2025	No	High
#7.	Document	Att5_Cultural Heritage Desktop Assessment.pdf	22/12/2025	Yes	High

Attachment 5 - Cultural Heritage
Desktop Assessment

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	32667056439
Organisation name	BLUE MACKEREL NORTH PTY LTD
Organisation address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006
Representative's name	Kim Downs
Representative's job title	Manager - Environmental Planning and Approvals - Blue Mackerel
Phone	+61 3 9021 0602
Email	kim.downs@jnbp.com
Address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006

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

☑ Check this box to confirm these are the correct identification details. *

☑ By checking this box, I, **Kim Downs of BLUE MACKEREL NORTH 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. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

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	32667056439
Organisation name	BLUE MACKEREL NORTH PTY LTD
Organisation address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006
Representative's name	David Ghaly

Representative's job title	Project Director
Phone	+61 3 9021 0602
Email	info@bluemackerel.com.au
Address	Level 7, 40 City Road, Southbank, Melbourne VIC 3006

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

☑ Check this box to confirm these are the correct identification details. *

☑ I, **David Ghaly of BLUE MACKEREL NORTH 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. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

✔ 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. *

☑ Check this box to confirm these are the correct identification details. *

☑ I, **David Ghaly of BLUE MACKEREL NORTH 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. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.