Navigator North Offshore Wind Farm – Early Marine Survey Investigations

Application Number: **02172** Commencement Date: **14/12/2023** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Navigator North Offshore Wind Farm – Early Marine Survey Investigations

1.1.2 Project industry type *

Energy Generation and Supply (renewable)

1.1.3 Project industry sub-type

Wind Farm

1.1.4 Estimated start date *

01/07/2025

1.1.4 Estimated end date *

01/07/2028

1.2 Proposed Action details

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

The Navigator North Project Pty Ltd (ACN 667 467 496, ABN 96 923 084 022) was granted feasibility license FL-011 under section 33 of the OEI Act on 15 July 2024 for declared Area OEI-01-2022 (Gippsland, Victoria declared offshore wind area). Navigator North Project Pty Ltd (NNPPL) is jointly owned by Origin Energy Ltd (ACN 000 051 696) and RES Australia Pty Ltd (ACN 106 637 754).

The area subject to this referral (referred to as the 'study area') encompasses all options for offshore substations, offshore turbines, offshore array and export cable up to the shore crossings which has not yet been determined (see Attachment A – Study Area). The final development envelope is subject to outcomes of the environmental assessment and engineering design considerations. Consideration of other marine users including fisheries and oil and gas assets alongside the that location of other proposed offshore wind developments will affect various engineering considerations.

The coastal section of the study area extends from McGaurans Beach to south of the Honeysuckles. The study area extends up to approximately 92 km offshore into Commonwealth waters. No project activities will take place within Ninety Mile Beach marine National Park.

The proposed action is to undertake early offshore marine surveys to support the preliminary investigation for the feasibility assessment and development of the proposed Navigator North Offshore Wind Farm (NNOWF). The actual construction, operation and decommissioning of the NNOWF and associated infrastructure are excluded from this referral and will be the subject of a separate referral. The information gathered by the activities proposed under this referral will inform the project design and the project's environmental impact assessment.

The EPBC Early Marine Surveys study area (Attachment A - Study Area) is located within the NNOWF Feasibility Licence Area and the cable corridor search area. The NNOWF Feasibility Licence area is approximately 700 km2 and the survey activities proposed by this referral will occur within this 700 km2 area to assess potential export cable corridors between the Licence area and the shore.

This study area itself is approximately 2281 km2 in total, with approximately 2130 km2 in Commonwealth waters and 151 km2 within State waters. The study area does not include any onshore / terrestrial locations.

The geophysical surveys and geotechnical investigations will investigate the project's Feasibility Licence area where wind turbine foundations and offshore sub-stations are proposed, as well as the potential export cable or transmission corridors between the proposed turbine array area and shore. The study area will be investigated by geophysical surveys during a broad survey approach. Proposed geotechnical sample locations will be informed by the initial geophysical survey campaign within a more refined area.

The early marine surveys proposed as part of the action of this referral include:

- Geotechnical and geophysical data collection to provide preliminary understanding of the study areas' shallow geology and any associated constraints and hazards. The survey results will also provide data for benthic habitat characterisation
- Meteorological and wind measurements, using Floating-LiDAR (FLiDAR) buoy(s)/platform(s)
- Marine water quality data collection, using in situ loggers may be undertaken in conjunction with FLiDAR.

Below is a brief description of the proposed actions, for further detail on sampling design see attached Early Marine Surveys Plan (See Attachment B – NavigatorNorth_Early Marine Surveys SAP (Section 4, Pages 8-9, Section 7-9, Pages 14-25).

Geophysical Investigations

Geophysical data is required to be able to understand the seabed's physical characteristics. Geophysical surveys within the study area will inform the location of geotechnical investigations. Key tools to be used include:

- Multi-beam echo sounder (MBES) & Single-beam echo sounder (SES) – used to measure bathymetry and benthic habitat. Frequencies vary from mid-range (10kHz to 1 MHz) in deeper waters to higher frequencies (70-100+ kHz) in shallower systems.
- Side scan sonar (SSS) – an acoustic technique used to detect hazards on the seafloor, such as Rock outcrops, debris, wrecks etc, and also for seabed characterisation. Will operate between frequencies of 100-500 kHz.
- Sub-bottom profilers (SBPs) - used to survey the shallow geology of an area, and as such have a lower acoustic energy output compared to reflection seismic surveys. Will be undertaken in conjunction with the SES/MBES and SSS.
- Magnetometer - used for detecting ferromagnetic infrastructure and objects (typically iron or steel) exposed at the seabed or buried in the top few metres of sediment, including unexploded ordnance (UXO). UXO survey will be carried out where and if it is deemed necessary and might be carried out simultaneously with the geophysical survey.
- Mini Airgun (ultra-high resolution shallow seismic and/or continuous refraction seismic profiling) - may be required to obtain information on the soil and rock profile below the seabed (up to 100 m). Shallow seismic technology typically operates in a frequency range of 20 Hz to 500 kHz. The sound source is a small, compressed air unit ranging between 6 and 160 cubic inches (cui). The source level is typically 226 dB re 1 µPa @ 1 m.

Of these methods, only the sub-bottom profiler and mini air gun have the potential to produce sound levels with potential to cause behavioural disturbance to threatened / migratory cetacean species, in particular large baleen whales that have hearing sensitivity in the lower frequency ranges. To mitigate the risk of these potential impacts, mitigation measures proposed to be implemented during the proposed geophysical survey activity are further detailed in Attachment B – NavigatorNorth_Early Marine Surveys SAP (Section 7, Pages 14-20, Section 11, Pages 29-32).

Geotechnical Investigations

Geotechnical data is a critical input to the design of the foundations for the offshore wind turbines and the offshore substations, the optimisation of the wind farm layout and the export cable route and cable burial depth.

Proposed methods include:

- Grab sampling – for assessment of physio-chemical properties of sediments (only to a maximum of 1 m depth), with an estimated footprint on the seabed of 1m x 1m.
- Core sampling – commonly used methods include Gravity/piston coring, vibrocoring, box coring. Provides samples > 3 m below the seafloor. Used for characterisation of the shallow geology and especially useful along cable routes.
- Piezocone/cone penetration testing (PCPT/CPT) - to establish the geotechnical properties of the sediment.
- Exploratory boreholes for soil sampling and rock coring - to establish the geotechnical properties of the superficial sediments and rock strata. Boreholes will typically be drilled at depths of up to 70 m from a frame positioned on the seabed (approximately 5m x 5m footprint). However, the actual target depth will be confirmed subject to the geological conditions encountered. In any case, the boreholes will not exceed 150 m depth.

The exact number and location of samples / tests will be informed by geophysical data which is captured as part of the proposed surveys but is estimated to comprise the following extent of geotechnical activity across the study area:

- Approximately one grab sample vibrocore and piston core each 5 km2
- Approximately 20 to 40 exploratory boreholes for soil sampling and rock coring
- Approximately 60 to 120 PCPT / CPT tests

For specific information on sampling frameworks and instrument deployment strategies see Attachment B – NavigatorNorth_Early Marine Surveys SAP (Section 8 pages 21-22, Section 10, Pages 26-28, Section 11 Pages 29-32).

Floating LiDAR

- Floating-LiDAR (FLiDAR) buoy(s)/platform(s) will be installed (e.g. moored/anchored to the seabed) for a period of approximately two years to collect meteorological and wind measurement data.
- Physical oceanographic, coastal measurements and water quality, i.e., water currents, wave and water level, water temperature and pressure conditions will also be collected using the same buoy/platform.

For specific information on sampling frameworks and instrument deployment strategies see Attachment B – NavigatorNorth_Early Marine Surveys SAP (Section 9, Pages 23-25, Section 10, Pages 26-28, Section 11 Pages 29-32).

Geophysical and geotechnical surveys will be phased, with the key focus of Phase 1 to collect data for input into project design, preliminary turbine layout and array cables layout, potential locations for offshore substation and preliminary export cable route. The geophysical data will also significantly inform subsequent assessment of submerged landscapes / cultural heritage. The key focus of Phase 2 will be a detailed geophysical and geotechnical survey at identified turbine and substation locations and along preferred array cable and export cable route(s), to further support detailed design and offshore construction activities. Phase planning is generally as follows:

Phase 1 – initial geophysical and geotechnical survey scheduled to begin from Q3-2025 onwards, dependent on the weather and contractor availability. Geophysical survey: duration up to 12 weeks; Geotechnical survey: duration up to 12 weeks. FLiDAR is also planned to be installed during this phase from Q3-2025 for a period of up to two years.

Phase 2 – scheduled from Q3-2026, dependent on weather and contractor availability. Geophysical survey: duration approximately up to 16 weeks (note mini-air gun will be used in this phase for approximately 40% of the time); Geotechnical survey: duration approximately up to 16 weeks.

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

Yes

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

Yes

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

The Early Marine Surveys proposed in this referral are required to further inform the project's detailed design, later marine environmental baseline survey design, and ultimately the siting of the NNOWF development.

The NNOWF will include wind turbine generators (WTGs), associated offshore infrastructure including offshore sub-stations and export cables from the turbine array that connect to the National Electricity Grid. The project's grid connection is expected to be in an onshore location at a terminal station location to be coordinated and developed by VicGrid. VicGrid has identified an area near Giffard as the proposed location of a terminal station to facilitate offshore wind connections, with the associated shore crossing(s) expected between the Honeysuckles and Reeves Beach. NNOWF proposes up to 110 WTGs will be constructed over a portion of the Feasibility License area (i.e. not all the 700km2 will be developed). The project may also be delivered in phases.

Actions associated with the construction, operation and decommissioning of the NNOWF will be the subject of a separate EPBC referral, planned to be lodged in Q1 2025.

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

Key Commonwealth and Victorian legislation, planning frameworks or policy documents are summarised below. As noted above, this referral only relates to the Early Marine Surveys and in that regard, the list of key legislation only applies to those survey activities. A separate referral will be lodged for the construction, operation and decommissioning of the offshore wind farm and associated infrastructure.

Commonwealth

***Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)**

In addition to the determination of whether or not the proposed Early Marine Surveys are a 'controlled action' requiring assessment and approval under the EPBC Act (via this referral), there are other relevant provisions of the EPBC Act. These include:

- **Section 229** - an offence is committed if the proponent causes 'death or injury of a cetacean in the Australian Whale Sanctuary', or waters beyond the outer limits of the Australian Whale Sanctuary.
- **Section 254E** - it is an offence if the proponent 'trades, keeps or moves a member of a marine species', the member is a member of a listed marine species and the member has been taken in or on a Commonwealth area.

The Early Marine Surveys will comply with all relevant provisions of the EPBC Act.

Survey works will also be undertaken in accordance with relevant national guidelines including the:

- EPBC Act Policy Statement 2.1 – Interaction between offshore seismic exploration and whales (Attachment C - EPBC Act Policy Statement 2.1)

Offshore Electricity Infrastructure Act 2021

The *Offshore Electricity Infrastructure Act 2021* (OEI Act) and associated regulations provide a licensing scheme to enable the construction, operation, and decommissioning of offshore renewable energy projects in Commonwealth waters. Under this Act prior to surveys that require fixed or tethered infrastructure that has a primary purpose (inter alia) of assessing the feasibility of exploiting a renewable energy resource (refer Section 10 (1) of the Act), a Feasibility Licence and an approved management plan is also required. A Feasibility Licence for the NNOWF was issued in July 2024. Navigator North will comply with all requirements of the OEI Act and the Licence in carrying out the Early Marine Surveys proposed by this referral.

Underwater Cultural Heritage Act 2018

The purpose of the *Underwater Cultural Heritage Act 2018* (UCH Act) is to protect Australia's shipwrecks, sunken aircraft, and other types of underwater cultural heritage, including Australia's Aboriginal and Torres Strait Islander Underwater Cultural Heritage in Commonwealth waters. Four shipwrecks have been identified in the offshore study area, and a permit is required under the UCH Act to conduct marine surveys near these wrecks. Navigator North will comply with all relevant requirements of the UCH Act in carrying out the Early Marine Surveys.

Native Title Act 1993

The grant of tenure to, or works carried out by, Navigator North Project Pty Ltd in areas where native title exists or may exist will require compliance with the provisions of the *Native Title Act 1993* ('NTA') and in particular, the 'future act' provisions.

The Early Marine Surveys will be conducted in areas of Sea Country of the Gunaikurnai People. The Gunaikurnai are represented by the Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC) who are also the holders of Native Title for over around 22,000 km2 of land in Gippsland (National Native Title

Tribunal no. VI2010/003). Whilst the surveys proposed by this referral are wholly within the offshore environment, Navigator North will comply with any relevant requirements of the NTA in carrying out the Early Marine Surveys.

Navigation Act 2012

This Act regulates ship-related activities in Australian waters, including elements of several international agreements. As the Early Marine Surveys are vessel-based and in Australian waters, they are subject to and will comply with the Act.

Protection of the Sea (Prevention of Pollution from Ships) Act 1983, Protection of the Sea (Harmful Antifouling Systems) Act 2006 **and relevant Australian Maritime Safety Authority (AMSA) Marine Orders**

These Acts regulate ship-related operational activities and invokes certain requirements of the International Convention on the Control of Harmful Anti-Fouling Systems on Ships and the International Convention for the Prevention of Pollution from Ships (MARPOL convention) (Annexes I, II, III, IV, V and VI) respectively. The latter, relates to discharges such as oil, noxious substances, packaged harmful substances, sewage, garbage, and air pollution. As the proposed surveys are vessel-based and in Australian waters, they are subject to and will comply with these Acts.

Sea Installations Act 1987

The installation of metocean buoys is required to comply with the requirements of this Act. Actions proposed by this referral will comply with this Act.

Biosecurity Act 2015

In accordance with this Act, the design and completion of surveys will follow protocols that prevent the introduction, establishment or spread of invasive marine species and diseases. The Biosecurity Act allows authorities to detain goods, vessels and people to prevent impacts from potential diseases or pests.

Victorian Government

Victorian Legislation will apply to any survey activities conducted within three nautical miles of the Victorian low water mark. The following key legislation is considered relevant to the surveys proposed by this referral.

Marine and Coastal Act 2018

Provides for the management and protection of marine and coastal environment. Consent is required from the Victorian Minister for Energy, the Environment and Climate Change (or delegate) under the Act to use or develop marine and coastal Crown land. An application for consent will be made as required for activities within State waters associated with the Early Marine Surveys.

Heritage Act 2017

This Act provides principal legislation covering the assessment, management, and protection of non-Aboriginal heritage in Victoria included on the Victorian Heritage Register (VHR). The Act also protects underwater cultural heritage in Victorian waters. The assessment for heritage and social values for Navigator North (see Attachment D – Heritage & Social Assessment, Section 5.12, Pages 26-27) identified no sites listed on the Victorian Heritage Inventory in the offshore environment where survey works are proposed.

Marine Safety Act 2010

The Act provides for safe marine operations in Victoria and enforcement provisions of Police Officers and the Transport Safety Victoria staff. This Act reflects the requirements of international conventions – Convention on the International Regulations for Preventing Collisions at Sea and International Convention for the Safety of Life at Sea. The Act requires the reporting of marine incidents to the Victorian Director of Transport Safety. Surveys undertaken in Victorian State waters will comply with this Act.

Aboriginal Heritage Act 2006

This Act protects Aboriginal cultural heritage within Victoria including the State's coastal waters. The Aboriginal Heritage Regulations 2018 (the Regulations) give effect to the Act and requires a mandatory Cultural Heritage Management Plan (CHMP) to be prepared and approved for 'high impact activities' and 'areas of cultural heritage sensitivity' subject to some expectations. Field surveys and a detailed Aboriginal heritage assessment are still needed to verify heritage and social values, but a preliminary assessment has been completed in Attachment D – Heritage & Social Assessment (Section 5.8, Pages 24-25). A CHMP will be prepared for NNOWF concurrent with approvals processes for the project's construction, operations and decommissioning but is not required for the Early Marine Surveys.

Flora and Fauna Guarantee (FFG) Act 1988

Provides for the protection of rare and threatened species and the preparation of action statements to protect and conserve the species and community. As part of the project area is within Victorian State waters, information on rare and threatened species and their conservation status has been reviewed and informed this referral. The Victorian Biodiversity Atlas does not record any FFG listed marine benthic species within the study area.

Pollution of Waters by Oil and Noxious Substances Act 1986

This Act implements the MARPOL convention in Victorian waters and protects the sea from pollution by oil and other noxious substances. The Act requires reporting of marine pollution incidences and restricts the discharge of oil and noxious substances as defined by the Act into Victorian state waters. The surveys proposed by this referral will comply with this Act.

Wildlife Act 1975

The Wildlife Act promotes the protection and conservation of wildlife in Victoria. Relevant to this activity, it establishes the Wildlife (Marine Mammal) Regulations 2019 which describe minimum distances that must be maintained from whales and seals/ seal colonies (unless authorised under the Act) and restriction of noise within a caution zone of marine mammals. Vessels used for the surveys proposed by this referral will adhere to the provisions of the *Wildlife Act 1975* and associated regulations.

National Parks Act 1975

Under this Act, Victoria's National Parks and reserves are established, including Marine National Parks and Marine Sanctuaries. Any development proposal over national parks enacted under this Act requires Ministerial approval. NNOWF will avoid any direct impacts to the Ninety Mile Beach Marine National Park and is not proposing the Early Marine Surveys proposed by this referral within this protected area.

Environment Protection Act 1970

This Act provides for the Environment Protection Authority (EPA) to impeach against those who are not following discharge/emission regulations. Vessels operating in Victorian waters for surveys associated with this referral will be subject to this Act.

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

A Community and Stakeholder Engagement Plan (CSEP) for Navigator North Offshore Wind Farm development has been prepared (Attachment E - CSEP Navigator North. This document is not publicly available due to sensitive information relating to identified stakeholder organisations). This plan outlines the proposed public communications and government stakeholder engagement plan for this offshore wind project in Australia. The objectives of the CSEP are to:

- Build and maintain strong relationships with local stakeholders to establish a socially sustainable project
- Facilitate early engagement with local stakeholders to understand potential social impacts and opportunities that may arise from the project
- Guide and support a strategic and coordinated approach to engagement, including specific tools, timeframes and responsibilities during the feasibility, development and operational phases of the project
- Support the understanding of local context and identify key stakeholders, including vulnerable community groups, stakeholder expectations and project alignment with local aspirations
- Facilitate the genuine involvement of stakeholders in the planning and assessment process and develop effective and meaningful responses, as far as practicable, to any identified impacts
- Ensure that community and stakeholder inputs are effectively integrated into the technical, environmental, and planning assessments for the project and, as far as practicable, to inform refinements to project design and to support the overall development of the project
- Collaborate with identified stakeholders on potential local benefit sharing opportunities to ensure they are co-designed, targeted, and appropriate to the project's operating context
- Meet and exceed (as far as practicable) regulatory requirements for public, stakeholder and community consultation
- Facilitate early engagement with identified Traditional Owners and Native Title Holders to maximise the opportunity for the project to be developed with cultural sensitivity, giving consideration to any tangible and intangible heritage values relevant to the project site and to focus on the avoidance of potential impacts to any Aboriginal and Torres Strait Islander cultural values or heritage.

A register of relevant stakeholders has been established and discussions have commenced and are on-going with the following parties:

- Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC)
- National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA)
- Offshore Infrastructure Regulator (OIR)
- National Offshore Petroleum Titles Administrator (NOPTA)
- Department of Climate Change, Energy, the Environment and Water (DCCEEW)
- Victorian Department of Energy, Environment and Climate Action (DEECA, previously DELWP)
- Victorian Department of Transport and Planning, (DTP, previously Department of Environment, Water, Lands and Planning (DEWLP))
- Department of Industry, Science, Energy and Resources (DISER)
- South East Trawl Fishing Industry Association (SETFIA) and the broader fisheries sector
- Clean Energy Council (Origin is a corporate member and RES is a sponsoring member)
- Australian Maritime Safety Authority (AMSA) and Australian Hydrographic Office (AHO)
- Committee for Gippsland (C4G)
- Local Gippsland Councils: Latrobe City, South Gippsland Shire, Wellington Shire

All stakeholder consultations are tracked in the project's consultation database (Borealis).

1.3.1 Identity: Referring party

Privacy Notice:

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

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

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

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

See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint.

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

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	54010830421
Organisation name	BMT COMMERCIAL AUSTRALIA PTY LTD
Organisation address	4000 QLD

Referring party details

Name	Kathryn Wheatley
Job title	Associate Principal Scientist
Phone	0448176256
Email	kathryn.wheatley@apac.bmt.org
Address	Level 5, 99 King Street, Melbourne, Victoria, VIC 3000, Australia

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	667467496
Organisation name	Navigator North Project Pty Ltd
Organisation address	Level 6, 165 Walker St, North Sydney, NSW 2060

Person proposing to take the action details

Name	Kim Derriman
Job title	Lead Development Project Manager (Offshore Wind)
Phone	0401 147 359
Email	kim.derriman@res-group.com
Address	Level 6/165 Walker St, North Sydney NSW 2060

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

No

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

Yes

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

The proposed action by the “Navigator North Project Pty Ltd” (ACN 667 467 496) is part of a project which is being developed under “The Trustee for Navigator North Project Trust” (ABN 96 923 084 022). This Trust has been established specifically for this purpose (Attachment F - Navigator North Project Trust - this document has not been made publicly available due to confidential contractual information).

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. *

The Person Proposing to take this Action (PPA) is the Navigator North Project Pty Ltd (NNPPL) with the PPA's shareholders defined as Origin Energy Ltd and RES Australia Pty Ltd.

Navigator North Project Pty Ltd (ACN 667 467 496) was Registered with ASIC on 24 April 2023, with "The Trustee for Navigator North Project Trust" (ABN 96 923 084 022) as project trust, active since 25 April 2023. It is jointly held in trust by Origin and RES Australia and was specifically set up as a special purpose vehicle for this development prior to application for a feasibility license, which was obtained on 15 July 2024.

Navigator North Project Pty Ltd as trustee for the Navigator North Project Trust is a newly established entity. It does not have any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against them and its shareholders, RES Australia and Origin Energy, each have a satisfactory record of environmental management.

Origin Energy

Origin Energy Ltd (ACN: 000 051 696, ABN: 30 000 051 696) is headquartered in Sydney, NSW and is a leading Australian integrated energy company.

Origin has approximately 4.7 million customer accounts supplying electricity, gas, LPG and broadband services to customers across Australia.

Origin has a valuable portfolio of generation assets of 7,800 MW, including around 1,700 MW of owned and contracted renewables and storage.

Origin's ambition is to lead the energy transition through cleaner energy and customer solutions, including accelerating growth in renewables and storage to 4-5 GW by 2030.

As a leading Australian energy company with operations spanning retail, power generation and natural gas production, as well as a major employer with a footprint in many communities across the country, we recognise we have an important role to play in the transition to a low-emissions future.

Origin released its first Climate Transition Action Plan in 2022, outlining the company's ambition to lead the energy transition through cleaner energy and customer solutions. Included in the plan are short and medium-term targets for emissions reduction across Origin, towards its long-term ambition to be net zero in Scope 1, 2 and 3 emissions by 2050. To help achieve these targets, Origin plans to grow its renewables and storage capacity to 4-5 GW by 2030.

Key recent developments that will help Origin deliver on these ambitions include several strategic investments, including the large-scale and advanced Yanco Delta wind farm development, along with the Ruby Hills and Northern Tablelands wind farms and Salisbury Solar Farm projects. Origin is also building a portfolio of 1.5 GW of owned and tolled battery systems through developments at Eraring, Mortlake and the offtake of the Supernode battery.

Origin's Governance & Policies can be accessed from its website (also see Attachment G – Origin Environment Management Approach): https://www.originenergy.com.au/about/investors-media/governance/

RES Group

RES Australia Pty Ltd (ACN: 106 637 754, ABN: 106 637 754) was incorporated in 2003 as a wholly owned subsidiary of Renewable Energy Systems Ltd, headquartered in UK. Since then, it has grown to about 150 employees, with offices in Sydney, Melbourne and Brisbane, and operations across Australia. Globally, RES has 4.500 people over 23 countries. RES – as subsidiary of the Sir Robert McAlpine Group - started in 1981, with a small UK team to innovate wind turbine engineering.

The RES Group has a large development portfolio of solar, wind and energy storage power plants across Australia, North America, Europe, and the Middle East. Over the past 40 years, RES has delivered more than 21 gigawatts (GW) of renewable energy projects across the globe and supports an operational asset

portfolio exceeding 7 GW worldwide. Active in Australia since 2004, RES has a development pipeline of approximately 5GW of new renewable energy projects and a construction and asset management portfolio of over 1.1 GW. RES in Australia has undertaken several projects under the EPBC Act and has satisfactorily implemented all the conditions of its previous Commonwealth and State approvals. RES is committed to transparent and meaningful engagement with planning and environmental authorities with respect to its development project.

RES has a Sustainability Policy that is agreed at its Group Executive level. Oversight of RES' activities and execution of local development projects and business operations as it relates to the RES Group ESG Policy resides with the CEO of RES Australia, the Australian Executive Team, the RES Australia Development Director and the Asset Lead Managers (wind, solar, BESS), and the Australian Environmental Manager. A copy of the RES Group Sustainability Policy and the last annual 'Power for Good' report can be made available to DCCEEW on request. RES has no existing record of having been the subject of any prosecution or civil proceeding under State, Territory or Commonwealth environmental or natural resources legislation which is relevant or material to this referral. RES Group's Sustainability Policy can be made available to DCCEEW on request.

RES details on track record, Policies, EMS, Certifications etc. can be accessed through its' corporate websites: https://www.res-group.com/en/about-us/sustainability/ and https://www.res-group.com/about-us/. Also see Attachment H – Power for Good Report FY23.

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

Origin Energy Ltd assesses the environmental and social risks associated with their operations and projects. Operations are managed using policies and procedures to control remaining environmental and social risks. Projects are developed with precautionary engineering and management measures in place to mitigate or manage key environmental and social risks. Local communities and other stakeholders are consulted through the life cycle of an asset to understand and manage the environmental, economic, and social impacts of activities and to maximise the benefits. Environmental and social risk management is subject to periodic audits and assurance.

RES Australia has a clear vision: to create a future where everyone has access to affordable zero carbon energy. Our vision drives our people to innovate and to transform the way energy is generated, stored, and used. It also informs our desire to improve quality of life and secure a better future for all.

RES' sustainability agenda powers positive change by ensuring all areas of our business make a positive contribution to the environment, society, and industry.

- Environment: Working to enhance the environmental impact of our work in renewable energy, whilst minimising the impact of our operations.
- Social: Providing a safe and healthy work environment, encouraging employee development, and creating opportunities to positively contribute to society.
- Business: Positioning the company for sustainable growth by combining long-term strategic thinking with focused short-term action, to create values for all our stakeholders.
- Responsible business practices are key to RES. They are the guiding principles in how we develop our projects, in how we construct, manage, and optimise our customer assets.
- Sustainability is at the heart of what we do here, from the solutions we provide to how we operate our business. It's the cornerstone of our longstanding vision to create a future where everyone has access to affordable, zero carbon energy.

Responsible business practices are key to RES. They are the guiding principles in how we develop our projects, in how we construct, manage, and optimise our customer assets.

Sustainability is at the heart of what we do at RES, from the solutions we provide, to how we operate our business. It is the cornerstone of our longstanding vision to create a future where everyone has access to affordable, zero carbon energy.

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	667467496
Organisation name	Navigator North Project Pty Ltd
Organisation address	Level 6, 165 Walker St, North Sydney, NSW 2060

Proposed designated proponent details

Name	Kim Derriman
Job title	Lead Development Project Manager (Offshore Wind)
Phone	0401 147 359
Email	kim.derriman@res-group.com
Address	Level 6/165 Walker St, North Sydney NSW 2060

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

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

ABN/ACN	54010830421
Organisation name	BMT COMMERCIAL AUSTRALIA PTY LTD
Organisation address	4000 QLD
Representative's name	Kathryn Wheatley
Representative's job title	Associate Principal Scientist
Phone	0448176256
Email	kathryn.wheatley@apac.bmt.org
Address	Level 5, 99 King Street, Melbourne, Victoria, VIC 3000, Australia

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	667467496
Organisation name	Navigator North Project Pty Ltd
Organisation address	Level 6, 165 Walker St, North Sydney, NSW 2060
Representative's name	Kim Derriman
Representative's job title	Lead Development Project Manager (Offshore Wind)
Phone	0401 147 359
Email	kim.derriman@res-group.com
Address	Level 6/165 Walker St, North Sydney NSW 2060

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

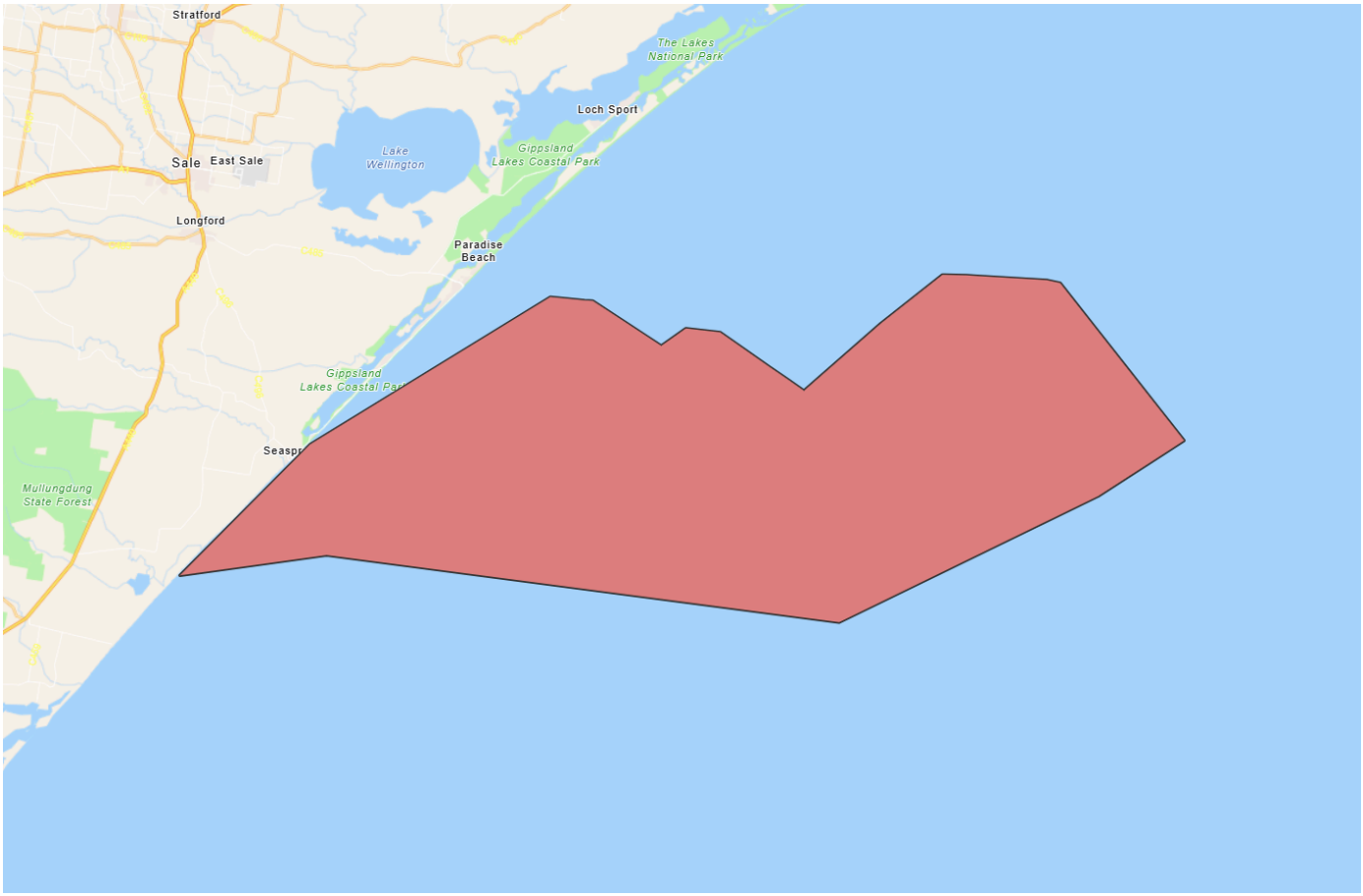
1.4 Payment details: Payment allocation

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

Proposed designated proponent

2. Location

2.1 Project footprint



Project Area: 227460.95 Ha **Disturbance Footprint:** 227460.95 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Offshore of the Ninety Mile Beach in Victoria’s Gippsland region

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 area investigated during the surveys will include an offshore area wholly in Commonwealth waters that covers the potential wind turbine array, as well as an area of Victorian and Commonwealth waters that covers the potential offshore export cable routes.

3. Existing environment

3.1 Physical description

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

Field investigations to determine the condition of the physical and biological marine environment of the study area have not yet been undertaken; however, a preliminary desktop assessment has been prepared for the marine environment (see Attachment I – Marine Desktop Assessment North) to support this referral. No proportion of the proposed field work is anticipated to occur onshore.

Marine Protected Areas - see Attachment I – Marine Desktop Assessment North (Section 6, Pages 75-76).

The study area, in the nearshore environment, borders the Gippsland Lakes Ramsar Wetland site however does not enter the site boundary. No Australian Marine Parks were identified within the study area (Beagle Marine Park ~ 68 km south). There is one Victorian marine national park within the study area:

- The Ninety Mile Beach Marine National Park

Ninety Mile Beach Marine National Park is of significant ecological value as it supports a diverse range of marine invertebrates in addition to other marine fauna (See Attachment I – Marine Desktop Assessment North, Section 6.2.1, Page 75), including biologically important areas (BIAs) for the white shark (*Carcharrodon carcharias*) (see Attachment I – Marine Desktop Assessment North, Section 5.3, Page 32-33).

The offshore study area is located within the south-east marine region and has a benthic environment comprised primarily of sand, silt and gravel. No invasive marine species have been previously identified within the study area.

Water Quality - see Attachment I – Marine Desktop Assessment North (Section 4.2, Page 20).

The study area falls within proximity to Gippsland Lakes. The Victorian Environmental Protection Agency (EPA) has five monitoring locations in the Gippsland Lakes. In the 2022-23 report card, all sites were classified as Good (meets Victorian water quality objectives) except for one (identified as Fair). Locations closer to the entrance to Bass Strait typically have better water quality due to greater tidal exchange than inland monitoring locations. Based on this monitoring, it can be inferred with some confidence that the water quality in the study area is also of good quality.

Benthic Habitat – see Attachment I – Marine Desktop Assessment North (Section 5.1, Pages 27-29).

Seamap Australia (IMAS 2017) is the development of a national benthic marine classification scheme for the Australian continental shelf. The dataset reports 11 records within the study area, including soft substrate, mixed hard/soft substrate and hard substrate.

Seabed material in the Gippsland Basin is predominantly calcium carbonate comprised of calcarenite marls and marine shales (ESSO 2009). The basin is comprised of a series of sediment flats, with small patches of reed, bedrock and consolidated sediment. The sandy plains have small amounts of reef, which are inhabited by red seaweeds and encrusting animals that are resilient in the sandy environment (ESSO 2009). There are two types of benthic infauna present on the soft sediment: epibenthos and infauna.

The nearshore marine habitat ~ 50 km north-east of the study area has been reported to contain a mixture of reef, patchy reef and intertidal rock platforms were mapped along with large areas of sediment habitat (Blake et al. 2010). There is some seagrass and macroalgae within the Ninety Mile Beach MNP (although this is not indicated on the Seamap Australia map but described in the Ninety Mile Beach MNP Management Plan by Parks Victoria, 2006).

Cultural Heritage – see Attachment D – Heritage & Social Assessment (Section 6.5, Pages 61-62, Section 6.6, Page 63).

Further investigations will be undertaken to understand the offshore Aboriginal cultural heritage values, potential submerged landscapes and intangible values of the ocean. There are four records of shipwrecks within the study area according to the Australasian Underwater Cultural Heritage Database (DCCEEW, 2024):

- Colleen Bawn
- Favourite
- Magnolia
- Struan

None of these have a protected zone surrounding them however they are protected under the *Underwater Cultural Heritage Act 2018*.

For further information on the current condition of ecological values in the offshore study area, refer to Attachment I – Marine Desktop Assessment North.

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

A variety of other marine users utilise the proposed study area. These include commercial and recreation fishing, oil and gas extraction, shipping activity and recreational activities. Further discussion on these uses is provided in Attachment D - Heritage and Social Assessment; however, a summary of the key matters is provided below.

State-managed Commercial Fisheries

There are 11 Victorian state managed commercial fisheries with management areas that intersect the study area. However, not all the fisheries are active within the full extents of the management areas based on historical fishing effort data. Based on data received from the VFA (2024), five of the 10 state-managed fisheries report fishing activity within the study area since 2013:

- Abalone Fishery: Unknown
- Eel Fishery: Unknown
- Giant Crab Fishery: Inactive
- Multi-Species Ocean Fisheries: Active
- Octopus Fishery: Active
- Pipi Fishery: Inactive
- Rock Lobster Fisheries: Active
- Scallop Fisheries: Active
- Sea Urchin Fishery: Unknown
- Wrasse Fishery: Active

Additional information can be found – in Attachment D - Heritage and Social Assessment (Section 6.2, Pages 30-31).

Commonwealth Managed Commercial Fisheries - Attachment D - Heritage and Social Assessment (Section 6.3, Pages 43-60).

Thirteen Commonwealth-managed commercial fisheries with management areas intersect the study area. Not all the fisheries are active within the full extent of the management areas based on historical fishing effort data. Ten Commonwealth-managed fisheries (including subsectors of the Southern and Eastern Scalefish and Shark Fishery (SESSF)) report fishing activity within the study area since 2016:

- Bass Strait Central Zone Scallop Fishery (BSCZSF)
- Small Pelagic Fishery (SPF)
- Southern Bluefin Tuna Fishery (SBTF)
- SESSF Commonwealth Trawl Sector Danish-seine subsector (SCDS)
- SESSF Commonwealth Trawl Sector trawl sub-sector (SCTR)
- SESSF Scalefish Hook Sector (SSCK)
- SESSF Gillnet Hook and Trap Sector Shark Hook sub-sector (SSKK)
- SESSF Gillnet Hook and Trap Sector Shark Gillnet sub-sector (SSKN)
- SESSF Commonwealth Trawl Sector squid catch (SCSQ)
- Southern Squid Jig Fishery (SSJF)

Additional information can be found in Attachment D - Heritage and Social Assessment (Section 6.3, Pages 43-60).

Recreational Fishing, Tourism and other activities

Recreational fishing is important to the Gippsland region and also contributes to the regional economy. Parts of Ninety Mile Beach are immediately adjacent to the study area. The Ninety Mile Beach and adjacent Gippsland Lakes system hosts a range of coastal, marine
and onshore recreational and tourism activities including fishing, boating, diving and camping.

Additional information can be found – in Attachment D - Heritage and Social Assessment (Section 6.1, Page 30).

Oil and Gas

Existing oil and gas facilities are located within the study area. Infrastructure located within the area includes pipelines (7), power transmissions, wells (31) and platforms (3). Major pipelines operated by Tasmanian Gas Pty Ltd and Esso Australia Resources Pty Ltd traverse the study area. Additional information regarding oil and gas facilities within the study area can be found in Attachment D – Heritage and Social Assessment (Section 6.7, Pages 64-70).

Shipping and Ports

The south east marine region is one of the busiest shipping regions in Australia, with Bass Strait being one of Australia's busiest shipping routes. Traffic in this area includes international and coastal cargo trading, passenger services, and cargo and vehicular ferry services across Bass Strait Commercial vessels use the route when transiting between ports on the east, south and west coasts of Australia.

The Port of Melbourne is the largest major port in proximity to the study area. The fishing port of Lakes Entrance, and the Port of Corner Inlet, Port Welshpool, and Port Albert encompass waters that are within the vicinity of the study area and cater to a wide range of users. There are no commercial ports within the study area. Major shipping activity is situated approximately 25 km south east of the offshore study area.

Traffic separation schemes (TSS) are implemented to separate opposing streams of traffic and increase navigational safety by reducing the number of head-on situations and improve environmental protection by keeping ships away from the coastline.

There are two TSS within the vicinity of the study area. The South of Wilsons Promontory TSS and the Bass Strait TSS are situated approximately 56 and 58 km respectively form the study area.

The Navigator North Feasibility Licence area lies wholly within the "Area to be Avoided" (ATBA), as defined under Schedule 2 of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*. Vessels over 200 gross tonnages require authorisation to access the ATBA and all other commercial shipping is diverted to pass through the International Maritime Organization (IMO) adopted "Bass Strait Traffic Separation Scheme (TSS) under Rule 10 of the Regulations for Preventing Collisions at Sea, 1972. The TSS lies immediately south of the ATBA.

Additional information can be found – in Attachment D Heritage and Social Assessment (Section 6.9, Page 72).

Research and monitoring

The study area does not contain any scientific research stations. The closest is in Corner Inlet, which is used by several institutions for scientific research programs.

Proposed Uses

The proposed use for the study area is the NNOWF and its proposed Early Marine Surveys as detailed in this referral. There are several other proposed offshore wind farm developments located within the Gippsland declared area. Twelve feasibility licences have been granted. The closest windfarm to the study area is the Gippsland Dawn Offshore Wind Farm, proposed by Bluefloat Energy.

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

The Ninety Mile Beach Marine National Park occurs within the study area, which contains an internationally significant sandy environment recognised for exceptionally high diversity of marine invertebrates. The nearshore areas provide important habitat for conservation significant shorebirds including migratory waders as well as aggregation area for juvenile white sharks. Ninety Mile Beach Marine National Park is also significant as a place integral to the Dreaming of the Gunaikurnai people, the traditional owners of the land and sea Country.

The study area intersects a number of biologically important areas (BIAs):

- Birds: Seven foraging and one foraging likely (BIA's) identified (Attachment I – Marine Desktop Assessment North, Section 5.5, Page 43-62).
- Cetaceans: Pygmy Blue Whale (*Balaenoptera musculus brevicauda*) – Foraging, Southern Right Whale (*Eubalaena australis*) – Reproduction and Migration
- Sharks: White Shark (*Carcharodon carcharias*) – Breeding (nursery area)

There are also four shipwrecks identified within the offshore study area which are protected under the *Underwater Cultural Heritage Act 2018* (see Section 3.3.1 below for more details).

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

Depth contours within the study area generally run parallel with the shore from the high-water mark. No obvious pinnacles, channels or other seabed features were noted in the bathymetric data within the study area, which extends to approximately 68 m water depth (see Attachment I – Marine Desktop Assessment North, Section 4.4, Page 23-24).

The Bass Canyon System lies immediately to the south-east of the study area, where water depths exceed 2 km, (e.g., J. K. Mitchell, G.R. Holdgate, M.W. Wallace, S.J. Gallagher (2007). *Marine geology of the Quaternary Bass Canyon system, southeast Australia: A cool-water carbonate system*. Marine Geology 237, Issues 1–2, p 71-96).

3.2 Flora and fauna

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

Ecological Communities

There are no listed threatened ecological communities that occur within the study area.

Key Ecological Features

There are no Key Ecological Features (KEFs) that overlap directly with the study area. However, the Upwelling East of Eden KEF lies adjacent, within 100 m east of the study area. The upwelling is an area of high primary productivity that supports fisheries and biodiversity. Nutrient enrichment events and episodic mixing drives phytoplankton blooms that are the basis of food chains including zooplankton, copepods, krill and small pelagic fish. It is a feeding area for blue whales and humpback whales due to significant krill aggregations. It is also important for cetaceans, sharks and seabirds.

Flora

Detailed flora surveys have not yet been conducted and are pending further survey design. Desktop assessment was undertaken to determine benthic habitats. Numerous algae species were identified in the area (see Attachment I – Marine Desktop Assessment North, Section 5.1, Pages 27-28). All identified species were found within coastal waters (see Figure 5 in Attachment I – Marine Desktop Assessment North, Page 29).

Fauna

A desktop assessment was undertaken using the protected matters search tool (PMST) to identify threatened and migratory species protected under the EPBC Act that may occur within (or in the vicinity of) the study area.

The PMST report (study area with a 5 km buffer) identified a number of threatened and/or migratory species including 14 fish and shark species, 11 whale species, three (3) marine reptiles, and 71 bird species under the EPBC Act (see Attachment I – Marine Desktop Assessment North, Section 5).

BIAs for the following species intersect the study area:

- Black-browed Albatross (*Thalassarche melanophris*) (Vulnerable): foraging
- Buller's Albatross (*Thalassarche bulleri*) (Vulnerable): foraging
- Campbell Albatross (*Thalassarche impavida*) (Vulnerable): foraging
- Common Diving-petrel (*Pelecanoides urinatrix*): foraging
- Indian Yellow-nosed Albatross (*Thalassarche carteri)* (Vulnerable)*:* foraging
- Short-tailed Shearwater (*Ardenna tenuirostris*): foraging
- Shy Albatross (*Thalassarche cauta*) (Endangered): foraging likely
- Wandering Albatross (*Diomedea exulans*) (Vulnerable): foraging
- Southern Right Whale (*Eubalaena australis*) (Endangered): migration and reproduction
- Pygmy Blue Whale (*Balaenoptera musculus*) (Endangered): distribution, foraging
- White Shark (*Carcharodon carcharias*) (Vulnerable): breeding (nursery area)

The common diving-petrel and short-tailed shearwater are listed marine species under the EPBC Act.

The study area also intersects areas designated as non-breeding range, probable migration and infrequent non-breeding range for the Critically Endangered Orange-bellied Parrot (*Neophema chrysogaster*). Further information is provided in Attachment I – Marine Desktop Assessment North (Section 5.5.3, Pages 61-62).

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

Given the study area is in the marine environment, no native terrestrial or coastal vegetation will be impacted by the survey activities.

Marine flora in the nearshore is described in 3.2.1. Less is known for the deeper offshore ecosystem. Given the water depth (up to approximately 68 m) it is not expected that marine flora is prevalent in the majority of the study area.

3.3 Heritage

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

There are no World, Commonwealth, National or Victorian Heritage listed places recorded within the study area. The nearest Heritage site listed being approximately 2 km south from the Navigator North Project Area FL-011.

Within the offshore environment, desktop assessments identified four shipwrecks, which are protected under the UCH Act (see Attachment D – Heritage and Social Assessment North, Section 6.5, Pages 61-62). The identified shipwrecks included:

- Colleen Bawn – Victorian Heritage Register Number: S155; Underwater Cultural Heritage Database ID: 6077
- Favourite - Victorian Heritage Register Number: S256; Underwater Cultural Heritage Database ID: 6191
- Magnolia - Victorian Heritage Register Number: S437; Underwater Cultural Heritage Database ID: 6386
- Struan - Victorian Heritage Register Number: S6633; Underwater Cultural Heritage Database ID: 6629

In addition to the general protection provided to underwater heritage sites, the UCH Act also provides that an area containing protected underwater heritage may be declared to be a protected zone. Activities prohibited in this zone include: (i) Allowing a vessel to become stationary; (ii) Underwater activities; (iii) Anchoring or mooring vessels; and (iv) Fishing including trawling, netting, dredging and pot or trap fishing.

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

There are no World, Commonwealth, National heritage places or Aboriginal heritage value listed within the study area (see Attachment D – Heritage and Social Assessment North, Sections 4.8-4.11, Pages 24-26).

The land and seascapes of Ninety Mile Beach Marine National Park and surrounding land and waters are culturally and spiritually significant to the Gunaikurnai people of Gippsland who are the Traditional Owners of Country within the study area and have cultural obligations to care for Sea Country within the Gippsland region (GLaWAC 2015).

In 2021, the Australian Government committed funding for 10 Sea Country Indigenous Protected Areas along Australian coastal area (IPA) Program. The Sea Country IPA program seeks to increase the area of Sea Country in IPAs to strengthen the conservation and protection of Australia's unique marine and coastal environments, while creating employment and economic opportunities for First Nations people (DCCEEW 2022).

The Nanjit to Mallacoota Sea Country IPA consultation area is located in coastal waters of the Gippsland region in Victoria and managed by GLaWAC. The IPA consultation area comprises of numerous marine and coastal parks and includes the Ramsar listed Gippsland Lakes and Raymond Island, a highly significant cultural site. The program includes a Junior Sea Country Ranger program which will bring young Gunaikurnai Traditional Owners to work with and learn from senior Gunaikurnai rangers and Elders. The IPA program will include managing culturally significant species including a Mulloway monitoring program to learn migratory patterns and the health condition of this culturally important fish species, as well as undertake research to identify opportunities to protect and enhance habitat for the culturally significant Australian bass and estuary perch. GLaWAC is committed to continuing to identify and map sites of cultural significance to build on the historical accounts of First Nations people in the region (DCCEEW 2022).

As recognition of Sea Country rights is evolving, early consultation with First Nations regarding Sea Country values is required to understand the significance of potential impacts to Sea Country values and sensitivities.

Further engagement with Traditional Owners and a detailed assessment to identify Aboriginal heritage places will be undertaken as a priority during the feasibility phase of the project.

The Nanjit to Mallacoota Sea Country Indigenous Protected Area consultation area is also located in the coastal waters of the Gippsland region in Victoria.

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 study area is located offshore, within the Gippsland Basin, part the continental shelf at the eastern end of Bass Strait. The Navigator North Feasibility License Area has a depth of between 52 – 68m (average 59.1 m). The Bass Canyon System lies immediately to the South-East, where the continental shelf rapidly drops to 1,000 m (at Anemone and Blackback Canyons), before reaching a depth exceeding 4,000 m. The Big Horseshoe Canyon KEF (Key Ecological Feature) is part of the Everard canyon (the eastern most arm of the Bass Canyon System).

The study area includes a planned shore crossing along Ninety Mile Beach between McGauran Beach and The Honeysuckles, to connect to a proposed hub near Giffard. Lake Reeve lies to the north of the study area, Merriman's Creek lies immediately south of Seaspray, followed by Bruthen and Little Monkey Creek. Carrs Creek is connected to Lake Reeves, Warrigal Creek feeds into Jack Smith Lake, to the south of the study area. Nearby Ramsar sites include the Gippsland Lakes (including lake Wellington, Lake Victoria and Lake Tyers) to the north, and the Corner Inlet Ramsar Site to the south, adjacent to the Nooramunga Marine and Coastal Park. Beagle Marine Park, part of the Kent group of islands, is located about 50 km South East of Wilsons Promontory.

The study area is part of the Southeast Marine Region (SEMR) and more specifically within the South East Shelf Transition (SEST) provincial bioregion. The SEST is physically homogeneous relative to other provincial bioregions, with only two geomorphic features identified. These are shelf which covers 92 % of the bioregion and slope which covers the remaining eight per cent. This provincial bioregion extends over the continental shelf from Shellharbour to Bermagui.

Upwellings caused by the East Australian Current crossing the continental shelf and river sediments influence biological productivity. The Current's movement along and away from the shelf causes upwelling of nutrient-rich, cool water onto the shelf, resulting in phytoplankton growth and increased primary production.

Future surveys (not part of this application) will seek to better characterise the hydrodynamics of the marine environment for the proposed wind farm development.

4. Impacts and mitigation

4.1 Impact details

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

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

4.1.1 World Heritage

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

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

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

—

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

No

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

There are no world heritage areas within or in proximity to the study area, in which surveys and investigations will occur.

4.1.2 National Heritage

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

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

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

—

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

No

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

There are no National heritage places recorded within the study area.

4.1.3 Ramsar Wetland

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

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

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

Direct impact	Indirect impact	Ramsar wetland
No	Yes	Gippsland Lakes

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

Yes

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

The Early Marine Surveys will not occur within the Ramsar Wetland and will largely be carried out within the FLA (or Commonwealth Waters). Some works may occur within state waters, but would not be expected to have any direct or indirect impact on the Wetland with the possible exception of impacts to water quality if there should be a vessel collision or spill. With control measures in place however, this is highly unlikely, and the size of the vessel(s) means that any spill would be readily controlled.

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

No

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

With control measures in place such as spill kits/booms it is highly unlikely that a large spill event would occur. Combined with the relatively small size of the geotechnical/geophysical vessel, any spill would be expected to be minor in volume and would be readily controlled.

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

No

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

As above, this potential risk can be readily controlled with standard environmental controls in place and is considered highly unlikely to occur.

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

Control measures include:

- regular vessel inspections and maintenance to check seals etc.
- appropriately sized spill kits/booms etc on board in the event of a fuel or other fluid leak
- training of all staff in how to use spill equipment in the event of occurrence
- all refueling will be undertaken at a licensed bunkering facility with appropriate spill management procedures in place; no refueling is to be undertaken at sea.

Further information is available in Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan, Section 11, Pages 27-29

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

No offsets are proposed.

4.1.4 Threatened Species and Ecological Communities

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

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

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

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	Amphibromus fluitans	River Swamp Wallaby-grass, Floating Swamp Wallaby-grass
No	No	Antechinus minimus maritimus	Swamp Antechinus (mainland)
No	No	Anthochaera phrygia	Regent Honeyeater
No	Yes	Ardenna grisea	Sooty Shearwater
Yes	Yes	Balaenoptera borealis	Sei Whale
Yes	Yes	Balaenoptera musculus	Blue Whale
Yes	Yes	Balaenoptera physalus	Fin Whale
No	Yes	Botaurus poiciloptilus	Australasian Bittern
No	No	Caladenia tessellata	Thick-lipped Spider-orchid, Daddy Long-legs
No	Yes	Calidris acuminata	Sharp-tailed Sandpiper
No	Yes	Calidris canutus	Red Knot, Knot
No	Yes	Calidris ferruginea	Curlew Sandpiper
No	No	Callocephalon fimbriatum	Gang-gang Cockatoo
No	No	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	Centrophorus harrissoni	Harrisson's Dogfish, Endeavour Dogfish, Dumb Gulper Shark, Harrison's Deepsea Dogfish
Yes	Yes	Centrophorus uyato	Little Gulper Shark
No	Yes	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
Yes	Yes	Chelonia mydas	Green Turtle

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

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

Direct impact	Indirect impact	Species	Common name
No	No	Pycnoptilus floccosus	Pilotbird
Yes	Yes	Rexea solandri (eastern Australian population)	Eastern Gemfish
Yes	Yes	Rhincodon typus	Whale Shark
No	Yes	Rostratula australis	Australian Painted Snipe
No	No	Senecio psilocarpus	Swamp Fireweed, Smooth-fruited Groundsel
Yes	Yes	Seriolella brama	Blue Warehou
No	No	Stagonopleura guttata	Diamond Firetail
No	Yes	Sternula nereis nereis	Australian Fairy Tern
No	Yes	Thalassarche bulleri	Buller's Albatross, Pacific Albatross
No	Yes	Thalassarche bulleri platei	Northern Buller's Albatross, Pacific Albatross
No	Yes	Thalassarche carteri	Indian Yellow-nosed Albatross
No	Yes	Thalassarche cauta	Shy Albatross
No	Yes	Thalassarche chrysostoma	Grey-headed Albatross
No	Yes	Thalassarche eremita	Chatham Albatross
No	Yes	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	Yes	Thalassarche melanophris	Black-browed Albatross
No	Yes	Thalassarche salvini	Salvin's Albatross
No	Yes	Thalassarche steadi	White-capped Albatross
No	No	Thelymitra epipactoides	Metallic Sun-orchid
No	No	Thesium australe	Austral Toadflax, Toadflax
No	Yes	Thinornis cucullatus cucullatus	Eastern Hooded Plover, Eastern Hooded Plover
Yes	Yes	Thunnus maccoyii	Southern Bluefin Tuna
No	Yes	Tringa nebularia	Common Greenshank, Greenshank
No	No	Uperoleia martini	Martin's Toadlet
No	No	Xerochrysum palustre	Swamp Everlasting, Swamp Paper Daisy

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Natural Damp Grassland of the Victorian Coastal Plains
No	No	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 following EPBC Act-listed threatened and/or migratory species have been identified as being potentially impacted by the geophysical and geotechnical activities:

- Fifteen fish and shark species
- Three marine reptile species
- Seventy-seven bird species
- Eleven cetacean species

Further information on these species and their likelihood to be present within the study area is provided in Attachment I – Marine Desktop Assessment North, Sections 5.3-5.7, Pages 30-64 and Attachment K - Threatened and Migratory Species Impact Assessment.

Potential direct and indirect impacts for listed threatened species including entanglement with anchorages, underwater noise from vessel traffic and geophysical surveys, vessel strike are defined below. These impacts are described in detail in the See Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan (Section 10, Pages 26-28).

Some key impacts to threatened species include:

- Underwater noise associated with the geophysical and geotechnical surveys may cause localized and temporary behavioural disturbance, to marine fauna, and specifically to whales.
- The higher frequency source levels from the proposed SSS and SES/MBES equipment are outside the auditory range for baleen and toothed whales, marine turtles, fish, and sharks. Therefore, potential impacts are limited and not expected. However, there is potential for short-term behavioural impacts occurring as a result of the activity over an accumulated period of time. But given the relatively short duration of survey activities, potential impacts are considered temporary and localized.
- Sub-bottom Profilers have the potential to cause localized behavioural impacts to high frequency migratory cetaceans. Noise impacts to other marine organisms are also possible but restricted to a relatively small range (see Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan, Section 10.1.1, Page 27 and Annex B).
- Survey vessels will adhere to MARPOL requirements to minimise the risk or spills, follow agreed waste management procedures, and minimize biosecurity risks by following Australian Ballast Water Management Requirements (DAFF 2017), adhere to requirements under the *Biosecurity Act 2015* and National Biofouling Management Guidance (Commonwealth of Australia 2009).Deployment of towed equipment, tethered buoys, water quality and hydrodynamic instruments, and FLiDAR instruments, may result in risk of entanglement of marine fauna, including fishes, marine mammals, and birds. However, the risk of entanglement is relatively low, especially where moorings avoid slack lines.
- Vessel collision with cetaceans or other marine fauna may result in injury or death.
- Presence, and lighting from vessel movements may lead to changes in fauna behaviour, through attraction of light-sensitive species such as the fish.
- There is potential for small spills, leaks, or onboard waste to enter the marine environment from survey vessels. Equipment or monitoring infrastructure may also be lost to the environment as a result of adverse weather or poor equipment management.
- Localised seabed disturbance from sediment grab sampling, borehole sampling and CPT. Small scale habitat disturbance from benthic sampling is unlikely to have measurable impact on foraging seabirds or on the pelagic foraging habitat of threatened whales. Sediment sampling will not be undertaken within areas of high ecological value (seagrass beds etc.). Localised decreases in water quality from borehole sampling may impact marine fauna including fishes and sharks but will be temporary, localised and are expected to disperse quickly.

All activities relating to the geophysical and geotechnical investigations will be subject to an approved Management Plan required under the OEI Act.

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

No

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

The proposed survey techniques are temporary and localised in scale and so the potential direct and indirect impacts would be limited in intensity, magnitude, and duration and are therefore unlikely to result in a significant impact to threatened species.

Previous acoustic modelling on a review of geophysical equipment used in seabed surveys showed that the thresholds for onset of PTS and TTS vary between species. For example, thresholds for pinnipeds and low and high frequency cetaceans are not likely to be reached but may be reached for very-high frequency cetaceans. Distances from the source for these effects were found to be quite small (e.g. ~9 m). for more information see (Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan (Section 10.11, Pages 23-25).

The potential impacts identified to listed threatened species are localised and temporary and can be greatly reduced through the proposed mitigation measures:

- Deployment of instrumentation will minimise the disturbance of benthic habitat or the risk of entanglement (avoid slack lines through use of midwater flats etc.).
- The collection of sediment samples will avoid high biodiversity locations. Phase 1 activities will assist identification of any sensitive locations to be avoided during phase 2 activities, in particular detailed geotechnical sampling.
- Survey vessels will implement procedures to minimise collision risk and will follow the “EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans” and the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017).
- Survey vessels will adhere to MARPOL requirements to minimise the risk or spills, follow agreed waste management procedures,
- Minimise biosecurity risks by following Australian Ballast Water Management Requirements (DAFF 2017), adhere to requirements under the *Biosecurity Act 2015* and National Biofouling Management Guidance (Commonwealth of Australia 2009).
- Marine noise impacts will be minimised and confined to localised areas
    - Implementation of EPBC Act Policy Statement 2.1 - Part A Standard Management Procedures (DEWHA 2008), for whales while operating any sub-bottom profiler, mini-airgun or dynamic positioning system
    - MMOs will survey a 3km observation zone prior to any dynamic positioning systems being started. Works shall not commence if a whale is observed within this zone.
    - Marine Fauna Observers will need to be trained and experienced
- Lox-toxicity drilling muds/fluids will be utilised

Further detail on the projects management and mitigation measures can be found in Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan (Section 11, Pages, 27-29).

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

No

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

The risk of impacts can be adequately managed through the application of management and mitigation measures (detailed in 4.1.4.6).

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. *

Impacts of survey works are well understood with mitigation measures in place throughout the project to reduce impacts. For more detailed explanations of mitigation methods see Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan (Section 11, Pages 27-19).

Key mitigation efforts are as follows:

- Underwater survey techniques and equipment have been selected in order to minimise potential for impacts to nearby fauna. The EPBC Act Policy Statement 2.1 Part A Standard Management Procedures (see Attachment C - EPBC Act Policy Statement 2.1) will be implemented during all activities that may result in noise disturbance to whales (sub-bottom profiling and shallow seismic, if required and dynamic positioning).
- Survey Techniques will be completed in line with all relevant regulations including the EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans.
- Survey vessels will follow “EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans” and “Australian National Guidelines for Whale and Dolphin Watching” in order to minimize impacts to marine megafauna.
- Where instrumentation is deployed, it will be done in a manner to minimised risk of entanglement (e.g. taut lines)
- All artificial lighting is reduced to minimum levels, wherever practicable, whilst maintaining safe working conditions and navigation. Specifically, outwards facing lighting will be reduced to minimum levels, wherever practicable.
- All survey vessels will follow relevant legislation and guidance to manage marine sewage, putrescible waste, and bilge water disposal as per MARPOL Annex IV and AMSA Marine Order 96, 95 and 91.
- Sediment samples are to be taken from areas that do not contain sensitive marine habitat. Phase 1 survey activities will assist to identify any sensitive location and inform the location of phase 2 activities. Any moorings/anchorages are not to be installed in areas containing sensitive marine habitat and are to be removed from the marine environment upon the removal of instrumentation.
- Surveys will not be undertaken within the Ninety Mile Beach Marine National Park.
- All survey vessels and equipment will be managed in line with relevant legislation and guidelines (*Sea (Harmful Antifouling Systems) Act 2006,* National Biofouling Management Guidelines for Non-trading vessels etc) to prevent unintentional transfer of invasive species into the survey areas.

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

No offsets are proposed.

4.1.5 Migratory Species

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

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

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

Direct impact	Indirect impact	Species	Common name
No	Yes	Actitis hypoleucos	Common Sandpiper
No	Yes	Apus pacificus	Fork-tailed Swift
No	Yes	Ardenna carneipes	Flesh-footed Shearwater, Fleshy-footed Shearwater
No	Yes	Ardenna grisea	Sooty Shearwater
Yes	Yes	Balaenoptera bonaerensis	Antarctic Minke Whale, Dark-shoulder Minke Whale
Yes	Yes	Balaenoptera borealis	Sei Whale
Yes	Yes	Balaenoptera edeni	Bryde's Whale
Yes	Yes	Balaenoptera musculus	Blue Whale
Yes	Yes	Balaenoptera physalus	Fin Whale
No	Yes	Calidris acuminata	Sharp-tailed Sandpiper
No	Yes	Calidris canutus	Red Knot, Knot
No	Yes	Calidris ferruginea	Curlew Sandpiper
No	Yes	Calidris melanotos	Pectoral Sandpiper
No	Yes	Calidris ruficollis	Red-necked Stint
Yes	Yes	Caperea marginata	Pygmy Right Whale
Yes	Yes	Carcharhinus longimanus	Oceanic Whitetip Shark
Yes	Yes	Carcharias taurus	Grey Nurse Shark
Yes	Yes	Carcharodon carcharias	White Shark, Great White Shark
Yes	Yes	Caretta caretta	Loggerhead Turtle
No	Yes	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
Yes	Yes	Chelonia mydas	Green Turtle
Yes	Yes	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth

Direct impact	Indirect impact	Species	Common name
No	Yes	Diomedea antipodensis	Antipodean Albatross
No	Yes	Diomedea epomophora	Southern Royal Albatross
No	Yes	Diomedea exulans	Wandering Albatross
No	Yes	Diomedea sanfordi	Northern Royal Albatross
Yes	Yes	Eubalaena australis	Southern Right Whale
No	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	Yes	Gallinago megala	Swinhoe's Snipe
No	Yes	Gallinago stenura	Pin-tailed Snipe
No	Yes	Hirundapus caudacutus	White-throated Needletail
Yes	Yes	Isurus oxyrinchus	Shortfin Mako, Mako Shark
Yes	Yes	Lagenorhynchus obscurus	Dusky Dolphin
Yes	Yes	Lamna nasus	Porbeagle, Mackerel Shark
No	Yes	Limosa lapponica	Bar-tailed Godwit
No	Yes	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
No	Yes	Macronectes halli	Northern Giant Petrel
Yes	Yes	Megaptera novaeangliae	Humpback Whale
No	No	Monarcha melanopsis	Black-faced Monarch
No	No	Motacilla flava	Yellow Wagtail
No	No	Myiagra cyanoleuca	Satin Flycatcher
No	Yes	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	Yes	Numenius minutus	Little Curlew, Little Whimbrel
Yes	Yes	Orcinus orca	Killer Whale, Orca
No	Yes	Pandion haliaetus	Osprey
No	Yes	Phoebetria fusca	Sooty Albatross
Yes	Yes	Physeter macrocephalus	Sperm Whale
Yes	Yes	Rhincodon typus	Whale Shark

Direct impact	Indirect impact	Species	Common name
No	No	Rhipidura rufifrons	Rufous Fantail
No	Yes	Sternula albifrons	Little Tern
No	Yes	Thalassarche bulleri	Buller's Albatross, Pacific Albatross
No	Yes	Thalassarche carteri	Indian Yellow-nosed Albatross
No	Yes	Thalassarche cauta	Shy Albatross
No	Yes	Thalassarche chrysostoma	Grey-headed Albatross
No	Yes	Thalassarche eremita	Chatham Albatross
No	Yes	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	Yes	Thalassarche melanophris	Black-browed Albatross
No	Yes	Thalassarche salvini	Salvin's Albatross
No	Yes	Thalassarche steadi	White-capped Albatross
No	Yes	Tringa nebularia	Common Greenshank, Greenshank

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

Yes

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

There is the potential for direct and indirect impacts for migratory species, similar to those for threatened species described in 4.1.4.2 above. Key impacts include entanglement with equipment, underwater noise from vessel traffic and survey operations and vessel strike.
These potential impacts and associated mitigations are explained further in the Navigator North Early Marine Surveys (see Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan, Section 10, Pages 26-28, Section 11, Pages 29-32).

It is unlikely that the early marine surveys would have a significant impact on any threatened species or other protected matters. There is no important habitat for a listed migratory species that will be materially impacted as a result of the surveys.

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

No

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

The proposed survey techniques are temporary and localised in scale and so the potential direct and indirect impacts would be limited in intensity, magnitude, and duration and are therefore unlikely to result in a significant impact to threatened species.

Previous acoustic modelling on a review of geophysical equipment used in seabed surveys showed that the thresholds for onset of PTS and TTS vary between species. For example, thresholds for pinnipeds and low and high frequency cetaceans are not likely to be reached but may be reached for very-high frequency cetaceans. Distances from the source for these effects were found to be quite small (e.g. ~9 m). for more information see (Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan (Section 10.11, Pages 23-25).

The potential impacts identified to listed threatened species are localised and temporary and can be greatly reduced through the proposed mitigation measures:

- Deployment of instrumentation will minimise the disturbance of benthic habitat or the risk of entanglement (avoid slack lines through use of midwater flats etc.).
- The collection of sediment samples will avoid high biodiversity locations. Phase 1 activities will assist identification of any sensitive locations to be avoided during phase 2 activities, in particular detailed geotechnical sampling.
- Survey vessels will implement procedures to minimise collision risk and will follow the “EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans” and the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth Government, 2017).
- Survey vessels will adhere to MARPOL requirements to minimise the risk or spills, follow agreed waste management procedures,
- Minimise biosecurity risks by following Australian Ballast Water Management Requirements (DAFF 2017), adhere to requirements under the *Biosecurity Act 2015* and National Biofouling Management Guidance (Commonwealth of Australia 2009).
- Marine noise impacts will be minimised and confined to localised areas
    - Implementation of EPBC Act Policy Statement 2.1 - Part A Standard Management Procedures (DEWHA 2008), for whales while operating any sub-bottom profiler, mini-airgun or dynamic positioning system
    - MMOs will survey a 3km observation zone prior to any dynamic positioning systems being started. Works shall not commence if a whale is observed within this zone.
    - Marine Fauna Observers will need to be trained and experienced
- Lox-toxicity drilling muds/fluids will be utilised

Further detail on the projects management and mitigation measures can be found in Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan (Section 11, Pages, 27-29).

Listed migratory marine mammal and shark species found within the study area are also considered less likely to be impacted as their large home ranges mean they are likely to be transient or travelling through in the study area. It is therefore unlikely proposed actions will seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species (see Attachment K - Threatened and Migratory Species Impact Assessment).

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

No

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

As significant impacts on listed migratory species and communities are unlikely, and industry standard mitigation measures would be implemented for the proposed activities, the proposed action is not 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. *

Section 4.1.4.10 above describes some common mitigation actions put in place during proposed survey actions that will also be relevant for migratory species.

For more information see Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan (Section 11, Pages 27-29).

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

No offsets are proposed.

4.1.6 Nuclear

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

No

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

No nuclear action is proposed.

4.1.7 Commonwealth Marine Area

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

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

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

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

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

Yes

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

Potential direct and indirect impacts to the Commonwealth Marine Area largely reflect those described in Section 4.1.4.2 for threatened species.

- Underwater noise associated with the geophysical and geotechnical surveys may cause localised and temporary behavioural disturbance to marine fauna, and specifically to whales.
- Vessel collision with cetaceans or other marine fauna may result in injury or death.
- Sediment sampling may cause temporary and localised turbidity.
- Sediment plumes created by soil sampling is also anticipated to be minimal and are expected to dissipate quickly.
- Deployment of equipment may result in risk of entanglement of marine fauna.
- There is potential for small spills, leaks, or onboard waste to enter the marine environment from survey vessels.
- Introduction of pest species on vessels and/or equipment to the marine environment.

A preliminary impact assessment for Threatened and Migratory species did not identify any substantial impacts to the Commonwealth area (see Attachment K – Threatened and Migratory Species Impact Assessment for details) while indirect impacts can be adequately mitigated.

Potential impacts are further discussed in Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan (Section 10, Pages 26-28).

Any currently unknown values or potential heritage sites or submerged landscapes are anticipated to be identified by proposed geophysical surveys and if so, can then be avoided.

The low impact nature of the surveys proposed means that the risk of harm to any previously unidentified cultural heritage is low. If any heritage is identified, the Project will comply with its obligations under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and/or the *Underwater Cultural Heritage Act 2018*, as applicable.

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

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

No

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

The works are minor in nature and each survey will take place over a very short timeframe. All survey vessels and equipment will be managed accordance with management and mitigation measures (Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan), in line with relevant legislation and guidelines and agreed methods also accepted under Offshore Petroleum and Greenhouse Gas Storage Environment Regulations by NOPSEMA, e.g.:

- Beach (2023) Offshore Gas Victoria Geophysical and Geotechnical Seabed Survey Environment Plan V-1000-P1-MP-0011
- Esso (2017, 2018, 2019, 2024) “Gippsland Basin geophysical and geotechnical investigations Environment Plan AUGO-EV-EMM-015

The surveys are not anticipated to cause any lasting impacts to any Commonwealth areas and all equipment will be removed upon completion of the surveys. Any samples taken from the seafloor will be small in scale and targeted to avoid any areas of high ecological value as identified through desktop assessments and thus should not impact substantially on any associated marine species foraging activities.

Sediment plumes created by soil sampling are also anticipated to be minimal and are expected to dissipate quickly. Any vessel discharge will be managed under the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* and relevant Australian Maritime Safety Authority (AMSA) Marine Orders to prevent any harmful chemicals from entering the marine environment. Any heritage sites identified within the study area will be managed in line with the *Underwater Cultural Heritage Act of 2018*. Survey actions are therefore considered unlikely to result in a substantial change to the population of a marine species, important habitat, air quality, water quality or heritage values of the Commonwealth marine environment.

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

No

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

The proposed surveys have a relatively short duration and are either non-intrusive or will directly impact small areas of the seafloor. The potential impacts of all surveys will be mitigated by applying control measures throughout the survey program. Any indirect impacts are expected to be readily addressed through standard mitigation measures as described in Section 4.1.4.6 above.

The action is therefore unlikely to result in a discernable change to the population of a marine species, important habitat, air quality, water quality or heritage values. All relevant guidelines and Acts will be followed to mitigate any potential impacts to Commonwealth ecosystems.

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. *

Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan (Section 11, Pages 29-32) provides a description of environmental management and mitigation measures to be undertaken during the proposed surveys.

In addition, mitigation measures as described in Section 4.1.4.10 above will be followed to mitigate potential impacts to the Commonwealth marine environment.

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

No offsets are proposed, as the mitigation measures proposed are considered sufficient to reduce potential impacts to acceptably low levels.

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 located more than 1600 km from the Great Barrier Reef.

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

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

No

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

The proposed action is not related to a large coal mining development or coal seam gas.

4.1.10 Commonwealth Land

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

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

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

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

No

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

Survey work will occur in offshore waters with no impacts on Commonwealth Land.

4.1.11 Commonwealth Heritage Places Overseas

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

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

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

—

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 area is located off the Gippsland region in Victoria and will not impact Commonwealth heritage places overseas.

4.1.12 Commonwealth or Commonwealth Agency

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

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

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

None

Conclusion on the likelihood of unlikely significant impacts

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

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

4.3 Alternatives

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

No

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

The proposed timing and envelope for the Early Marine Surveys was constrained for the following reasons:

- The Early Marine Surveys are required to assess the feasibility of a future offshore wind farm and ancillary infrastructure, such including the location and design of turbines, offshore substations and cables (noting that the construction, operations and decommissioning of wind farm and is not in scope of this referral and will be the subject of a separate referral planned to be lodged in Q1 2025).
- An offshore wind farm can only be constructed within the Gippsland Declared Area, and the Australian Government has issued Navigator North a feasibility licence to explore the feasibility of an offshore wind project in a defined part of the Gippsland Declared Area. The action proposed by this referral include this defined area and a potential export cable corridor to shore
- A feasibility licence has been issued for a term of 7 years.
- Navigator North has a proposed project construction timeframe which aligns with key Victorian Government offshore wind targets (achieving at least 2GW by 2032, 4GW by 2035 and 9GW by 2040). On this basis, the project timetable aims to achieve first power in the early 2030s.
- The Victorian Government is currently investigating an area onshore in Victoria for a proposed onshore coordinated offshore wind connection point, which will influence the location of project infrastructure, particularly cable shore crossings.

For the above reasons, alternatives timeframes and envelopes for the Early Marine Surveys are not possible. Additionally, the 'no activity' alternative is not possible or appropriate, as the activities proposed are essential for the project's design and environmental assessments. Furthermore, the timing proposed is required to meet the 7-year term of the Feasibility Licence and Victorian Government's offshore wind targets.

The proposed Early Marine Survey methodologies represent a careful review of numerous possible survey techniques (see Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan) wherein the least intrusive methodology was chosen wherever possible. All surveys are also to be performed in accordance with relevant guidelines and mitigation measures to minimise potential impacts as far as practicable. As such alternative actions have not been considered as they would represent a less favourable survey methodology.

Existing assessments for geophysical equipment such as acoustic modelling in the Otway Basin by JASCO were also used to determine the suitability of sub-bottom profilers as well as their potential impacts.

This information and other literature was used to identify what options represented the lowest risk profile for impacted species to better inform decisions made for this survey plan.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment A - Study Area.pdf Study area figure	07/10/2024	No	High
#2.	Document	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment C - EPBC Act Policy Statement 2.1.pdf Commonwealth Policy Statement	31/08/2008	No	High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment E - CSEP Navigator North.pdf Community & Stakeholder Engagement Plan	17/09/2024	Yes	High

1.3.2.16 (Person proposing to take the action) Nature of the trust arrangement in relation to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment F - Navigator North Project Trust.pdf	24/04/2023	Yes	

1.3.2.17 (Person proposing to take the action) Proposer's history of responsible environmental management

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment G - Origin Environment Management Approach.pdf Environment Managament Approach	29/08/2024	No	High
#2.	Document	Attachment H - Power for Good Report FY23.pdf Sustainability Report	29/08/2024	No	High
#3.	Link	About us - RES https://www.res-group.com/about-us/			High
#4.	Link	Governance & Policies - Origin https://www.originenergy.com.au/about/investors-..			High

#5.	Link	Sustainability - RES https://www.res-group.com/about-us/sustainability/		High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment D - Heritage & Social Assessment.pdf Heritage & social desktop assessment of study area with buffer	17/12/2024	No	High
#2.	Document	Attachment I - Marine Desktop Assessment North.pdf Marine environment desktop assessment of study area with buffer	17/12/2024	No	High
#3.	Link	Annual Report Card https://www.epa.vic.gov.au/about-epa/publication..			High
#4.	Link	Australian Underwater Cultural Heritage Database https://www.dcceew.gov.au/parks-heritage/heritag..			High
#5.	Link	IMAS Seamap https://seamapaustralia.org/map/			High
#6.	Link	Ninety Mile Beach NP Management Plan 2006 https://www.parks.vic.gov.au/-/media/project/pv/..			Low or uncertain

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment D - Heritage & Social Assessment.pdf Heritage & social desktop assessment of study area with buffer	17/12/2024	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment I - Marine Desktop Assessment North.pdf	17/12/2024	No	High

Marine environment desktop
assessment of study area with buffer

3.1.4 Gradient relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment I - Marine Desktop Assessment North.pdf Marine environment desktop assessment of study area with buffer	17/12/2024	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment I - Marine Desktop Assessment North.pdf Marine environment desktop assessment of study area with buffer	17/12/2024	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	Attachment D - Heritage & Social Assessment.pdf Heritage & social desktop assessment of study area with buffer	17/12/2024	No	High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment D - Heritage & Social Assessment.pdf Heritage & social desktop assessment of study area with buffer	17/12/2024	No	High
#2.	Link	Indigenous Protected Areas https://www.dcceew.gov.au/environment/land/indig..			High

4.1.3.10 (Ramsar Wetland) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	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	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	No	High
#2.	Document	Attachment I - Marine Desktop Assessment North.pdf Marine environment desktop assessment of study area with buffer	17/12/2024	No	High
#3.	Document	Attachment K - Threatened and Migratory Species Impact Assessment.pdf Impact assessment	19/12/2024	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	No	High
#2.	Document	Attachment C - EPBC Act Policy Statement 2.1.pdf Commonwealth Policy Statement	31/08/2008	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	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	No	High

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

	Type	Name	Date	Sensitivity	Confidence

#1.	Document	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	No	High
#2.	Document	Attachment K - Threatened and Migratory Species Impact Assessment.pdf Impact assessment	19/12/2024		High
#3.	Link	Commercial Vessels Biofouling Guidelines https://view.officeapps.live.com/op/view.aspx?sr..			High
#4.	Link	Federal Register of Legislation https://www.legislation.gov.au/F2000B00190/lates..			High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	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	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	No	High
#2.	Document	Attachment K - Threatened and Migratory Species Impact Assessment.pdf Impact assessment	19/12/2024		High

4.1.7.6 (Commonwealth Marine Area) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Link	A1044228 Environment Plan https://docs.nopsema.gov.au/A1044228			High

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

	Type	Name	Date	Sensitivity	Confidence

#1.	Document	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	No	High

4.3.8 Why alternatives for your proposed action were not possible

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment B - NavigatorNorth_Marine Environmental Sampling and Analysis Plan.pdf Sampling and Analysis Plan	19/12/2024	No	High

5.2 Declarations

Completed Referring party's declaration

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

ABN/ACN	54010830421
Organisation name	BMT COMMERCIAL AUSTRALIA PTY LTD
Organisation address	4000 QLD
Representative's name	Kathryn Wheatley
Representative's job title	Associate Principal Scientist
Phone	0448176256
Email	kathryn.wheatley@apac.bmt.org
Address	Level 5, 99 King Street, Melbourne, Victoria, VIC 3000, Australia

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

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

☑ By checking this box, I, **Kathryn Wheatley of BMT COMMERCIAL AUSTRALIA PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

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

Completed Person proposing to take the action's declaration

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

ABN/ACN	667467496
Organisation name	Navigator North Project Pty Ltd
Organisation address	Level 6, 165 Walker St, North Sydney, NSW 2060
Representative's name	Kim Derriman

Representative's job title	Lead Development Project Manager (Offshore Wind)
Phone	0401 147 359
Email	kim.derriman@res-group.com
Address	Level 6/165 Walker St, North Sydney NSW 2060

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

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

☑ I, **Kim Derriman of Navigator North Project Pty Ltd**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

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

✔ Completed Proposed designated proponent's declaration

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

Same as Person proposing to take the action information.

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

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

☑ I, **Kim Derriman of Navigator North Project Pty Ltd**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

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